


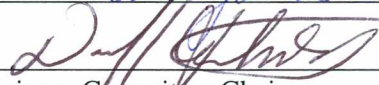
VISUALIZING SECOND LANGUAGE LEARNING: A MICROGENETIC CASE STUDY
USING PANTOMIME COMICS FOR ADULT ESL STUDENTS

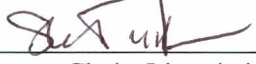
By

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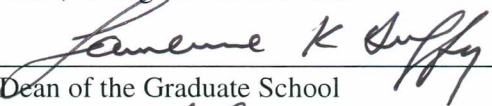
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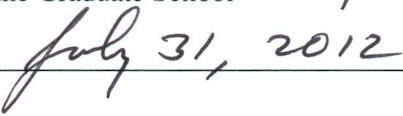
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VISUALIZING SECOND LANGUAGE LEARNING: A MICROGENETIC CASE STUDY
USING PANTOMIME COMICS FOR ADULT ESL STUDENTS

A
THESIS

Presented to the Faculty
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By

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Abstract

Comics are regularly used in language classrooms. Most language teachers and researchers in applied linguistics justify the use of comics through individual characteristics such as motivation, humor, and aiding comprehension. Some studies use comics in social settings, but do not consider the images as a significant factor in language development. This study investigates the effectiveness of instruction using pantomime comics on both language acquisition and language development for adult English as second language (ESL) students. A mixed methods approach is employed to investigate individual acquisition and language development during a collaborative task. Analyses of written tests, transcriptions, and audio/video data using analytical foci, deixis, and transcription conventions following conversation analysis ascertains how comic images affect individual learners and contribute to language development between learners. Results suggest that comics can benefit the language learner individually and act as a powerful, mediational tool for language development and co-construction of knowledge between peers.

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Chapter 1

Introduction

Comic images have been a part of pop-culture in the United States for well over two-hundred years. The beginnings of comic art in this country started mainly with political cartoons printed in newspapers to help galvanize American colonists to rebel against England (see Figure 1-1). Paul Revere and Benjamin Franklin were not only notable revolutionaries, but political cartoonists (Richardson, 1972).

The medium gained in popularity during the rise of the newspaper industry in the late 19th century. Comic strips were promoted as a strategy for competition by attracting readers to newspapers (McCloud, 1993). Comics evolved from this newspaper beginning to comic books such as super hero comics, action comics, crime, fantasy, adult, internet based, alternative, and graphic novels (McCloud, 1993; Harvey, 2010).

The definition of comics is believed to be derived from the combination of the words *comic images*. In this manner, the word *comics* is used to encompass other comic art forms such as graphic novels, comic books, and comic strips (Harvey, 2010). McCloud (1993)

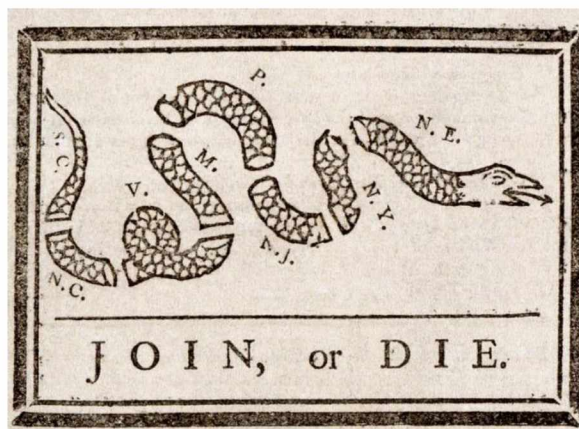


Figure 1-1: Political cartoon example by Benjamin Franklin

defines comics as “juxtaposed pictorial and other images in deliberate sequence” (p. 9). The medium is popular world-wide with comics conventions held for fans annually in places like San Diego, New York, Portland, Toronto, Barcelona, and Paris. Although the medium began in the United States as a form of raising political awareness and as entertainment, power was seen in the fact that comic images could transmit meaning without words or in combination (McCloud, 1993; O’Neil, 2001; Eisner, 2008; Harvey, 2010). This power was particularly apparent in political cartoons of the early twentieth century where one political figure purportedly said, “Stop them damned pictures! I don’t care so much what the papers say about me. My constituents don’t know how to read, but they can’t help seeing them damned pictures!” (Speel, 2011). Figure 1-2 depicts one of these “damned pictures.”

This study investigates the effectiveness of instruction using pantomime comics on both language acquisition and language development in adult English as a second language (ESL) classroom setting. In this introductory chapter the present study is outlined. First, the



Figure 1-2: “The brains” a caricature of William “Boss” Tweed featured in Harper’s Weekly (Library of Congress)

background for the study is detailed in order to understand the research perspective the study takes. Comic images are powerful tools whose potential for language acquisition and development are rarely investigated. Comics are typically used in classroom praxis as a tool for individual learning. Aside from how comics are used in the language classroom, the present study explores theoretical justification for using comics in the next section. The importance of the present study is presented in the subsequent section. The final sections consist of the preview of the outcomes, some limitations of the study, and a summary. Definitions of terms are defined as they arise.

Background

Comics are a topic of debate in the artistic and literary world (Eisner, 2008; McCloud, 1993). Comics artists and writers historically struggle to gain acceptance and not be labeled as child or alternative forms of entertainment. This struggle manifests in classroom-based research and praxis by calling the medium “a pathway to literacy.” Although not intended to demean comics, this term implies that by reading comics it creates individual desire to read acceptable literacy. In the language classroom, comics are also used as a form of multiple literacy, a means of motivating young (typically male) students to read, and a way to help young, special education students improve reading skills (Williams, 1995; Morrison et. al., 2002; Norton, 2003; Bitz, 2004; Carter, 2007; Versaci, 2001).

Some research using comics exist that take a more serious approach and acceptance of the medium. Studies are apparent that use comics to highlight social issues (critical literacy); in narrative studies; and psychological testing (Tversky & Baratz, 1985; Lefèvre, 2000; Nistov, 2001; Bitz, 2004; Liu, 2004). Two studies in applied linguistics research employ comics to test theories. Norton (2003) investigated individual motivation and identity in a

middle-school ESL class and Liu (2004) used comics to test ESL students reading comprehension at the university level. Other linguistic studies take a more theoretical approach. This research points to comics serving as a system of syntax, semantics, and how comic images form its own system of language (McCloud, 1993; Forceville, 1999; Groensteen, 2007; Cohn, 2009). These studies, however, accept comics as benefitting the individual learner. Even comics aficionados such as McCloud (1993) assume that the medium's only place is within the realm of the individual by evoking comics as iconic that make meaning to the individual (pp. 26-28). The research above focuses on individual learning and cognitive processes¹. The present research considers these processes as important and explores individual learning and the process of internalization with the first research question.

Some studies in applied linguistics make use of comics as a part of social learning processes. These studies typically use comic images as prompts in collaborative tasks to elicit language for analysis (Swain & Lapkin, 1998, 2000; Gutiérrez, 2007; Fernández Dobao, 2011). However, comics are not considered as a significant factor in peer interaction, but simply an elicitation device. The present study takes this important aspect (using comics in social interaction) into account with the second research question.

The present study accepts the previously mentioned, approaches to using comics. It is not denied that comics are a powerful learning tool for the human mind. However, by simply referring to its individual character or its effectiveness as a prompt for discussion, the medium is sidelined in language classroom research and praxis. Other approaches embracing both the

¹ Except for Norton's (2003) study which looks at motivation and identity in a social light.

individual and social should be explored to improve the theoretical justifications for using comics specifically for second language learning endeavors.

Rationale

The theme in the literature focusing on comics use in language learning has a common thread: comic images are not considered an essential factor in the language classroom, in psychological processes, and in collaborative dialogue. The rationale for using comics in the present study is derived by how the medium is typically used in the language classroom, how it is used in linguistic research investigating cognitive processes, how it is used in linguistic research investigating collaborative dialogue, and how comics have helped the author in his personal life and teaching.

Comic images are becoming a common tool in the language classroom. In praxis and educational research it is accepted that comics provide a sense of motivation for students through humor (Norton, 2003; Carter, 2008; Bitz, 2004; Versaci, 2001). The medium is also lauded for providing meaning to all students regardless of their native language because of its visual nature (Eisner, 2008; McCloud, 1993; Harvey, 2010). Essentially, these arguments place the use of comics solidly with the individual. Students are the prime beneficiary of using comics in the language classroom. The comics as visual images create instantaneous meaning to language students and acts as symbolic and physical mediational devices enhancing internalization (according to sociocultural theory of mind). Another benefit comics afford students is through social mediation. Language learners can use comics to assist dialogue in collaborative tasks in the language classroom. The use of the comic images to elicit assistance, direct attention, and elaborate features during social interaction can be a powerful mediational tool promoting co-construction of knowledge.

Also in the language classroom, comics are commonly referred to as a stepping stone to higher literacy or a “pathway to literacy” (Williams, 1995; Morrison et al., 2002). The present study considers comics a legitimate form of literacy in its own right, similar to the notion of comics being a form of multiliteracy as per the New London Group (1996) and Kress (2000). By considering the medium legitimate, comics are not marginalized or simply considered effective prompts, but indispensable for cognitive development and an essential aspect of collaborative dialogue during a task using comics.

One study was found in applied linguistics literature using comics to explain cognitive processes. Liu (2004) provides the study using comic images to explain their effect on reading comprehension justified by cognitive processes stimulated by the comics. This study places the use of comics as an aside to the processes themselves and concludes that images most benefits the reading comprehension (cognitive, individual) of beginning learners while hinders the reading comprehension of more advanced learners. This is discussed further in Chapter 2.

On the other hand, some studies in applied linguistics have used comics under social theories of language learning. Comics and similar pen and ink images have been used to promote language that is subsequently analyzed (Donato, 1994; Swain & Lapkin, 1998, 2000; Gutiérrez, 2007; Fernández Dobao, 2011). These studies look at the language produced from comics prompts using concepts such as analytical foci, transcription conventions following conversation analysis, and whether or not the language follows certain principles of sociocultural theory of mind, a social theory of language learning (Donato, 1994; Wood, Bruner & Ross, 1976). None of these studies consider the comic images as a significant variable in collaborative dialogue. These studies also do not take into account that the comic

images might be used as a form of intramental mediation² in a similar manner that private speech and use of the first language (L1) are used.

Other than Norton's (2003) study, the literature places comics use in individual terms and as an effective prompt to elicit language for analysis in a social setting. The present study takes these findings into account, but argues that comics are more than motivational tools or helpful prompts. Comic images without text offer meaning to all language learners. Language learners then can use this already internalized meaning to help negotiate a language-centered task with others in collaborative dialogue. In essence, comics provide mediational support to all students both intramentally and intermentally. Because of collaborative dialogue using comic images as a mediational tool, internalization of new language can take place during a brief moment in time.

Finally, the author's point of view provides further rationale for the present study. The author can be considered a comics aficionado and has grown up to the present day reading comics. *Mad Magazine* in particular sparked the author's interest in the medium and was the impetus for his desire to be a cartoonist. *Spy vs. Spy* (Prohias, 2001) is the author's favorite comic strip and has continued to amaze through its use of pantomime which transcends language and culture. Because of these influences, the author began drawing at a very young age and eventually became an illustrator and political cartoonist for local newspapers. The ease of drawing has also been incorporated by the author during his teaching in rural Alaska and as a volunteer tutor of ESL in the local adult learning center. The author found that

² •In sociocultural theory of mind (SCT), intramental depicts what is happening inside a person's mind. Mediation can take intramental properties and manifest itself as private speech. Intermental, on the other hand, is the sharing of information between people. Typical mediation in SCT occurs in the intermental (between minds).

explanations of difficult words and concepts could be drawn out for ESL students which create instant meaning for these students. By watching the look of understanding and joy of comprehension on the faces of these ESL students, the author realized that comics are more than simple prompts for individual tasks, more than a “pathway to literacy,” more than a means to study cognitive processes, and more than a prompt eliciting collaborative dialogue. Comics are an essential and powerful tool that deserves better justification in language learning. This fundamentally is the gist of the rationale for the present study.

Theoretical Framework

The present study broadly follows both qualitative research and quantitative research methods. Mackey and Gass (2005) refer to this as split or multiple methods approach (p. 164). Multiple methods approaches use both qualitative and quantitative data. The current study is more specifically, applied research-research used in the language classroom. This form of research is defined by Mackey and Gass (2005) as classroom-based research (pp. 185-186). Combined approaches using “experimental and observational techniques” can be used within classroom research (Mackey & Gass, 2005, p. 186).

In line with this type of research, applied research offers an alternative to basic research, which employs solely quantitative analysis measures. Applied research also seeks to offer genuine solutions to common problems. It also demonstrates how the findings can be applied to certain instances in time, place, and context (McKay, 2006). Questions and conclusions tend to be limited in this form of research.

More specifically, the present research follows the tenets of sociocultural theory of mind (SCT). Opposing other second language acquisition theories, SCT takes the view that “all cognitive development is first and foremost interpsychological; that is, it arises as a result

of the interaction that occurs between individuals engaged in concrete interaction” (Wertsch, 1985 in Donato, 1994). Sociocultural theory of mind offers an ideal approach for present study because its primary notion relies on the concept of mediation. Mediation is the concept of humans using both physical and symbolic tools allowing us to change the world and our relationships with other humans indirectly (Lantolf, 2008). Essentially, SCT suggests that all learning is mediated and language is one important tool in the plethora of tools humans use to learn.

Mediation in SCT contrasts with the cognitivist³ idea of humans having an innate ability to learn language. Instead, SCT posits that a child learns her first language and adults subsequent languages through a process of interaction with an expert speaker (typically expert-novice relationship, but also peer to peer mediation) and then internalizes or appropriates the learned language into her own mind. Internalization is the end-product in SCT (Lantolf, 2000; Wertsch, 1991). According to Lantolf (2000), internalization is the “reconstruction on the inner, psychological plane, of socially mediated external forms of goal-directed activity” (p. 13). In other words, it is appropriated learning through the use of mediation. Other forms of mediation within SCT exist, but two that are important to the present study are artifact mediation and peer mediation.

Research Questions

The present study’s intent is to address the positions most applied linguistics research and classroom practices take in using comic images as previously described in the rationale section. The overriding stance justifying comic images in the classroom, linguistics studies,

³ Cognitivism assumes that the mind is the site of all human thought and learning. Information processing results from thought and learning (Atkinson, 2011, p. 3).

and psychological testing is that the images serve an individual learning purpose. The present study embraces this individual focus by exploring how comics help language acquisition through the SCT concept of internalization. The first question accepts comic images as legitimate tools for cognitive development and attempts to explore further how comics help language students internalize specific and complex grammatical concepts. Specifically, this question addresses how comic images help a language student acquire spatial prepositions during an activity in a brief moment in time. The first question is thus stated.

1. How does the use of pantomime comics contribute to the acquisition of the prepositions in, on, and at for adult English language learners?

Pantomime comics or comics without text (or minimal use of text), are employed in the present research. The prepositions *in*, *on*, and *at* were purposefully chosen as measures of acquisition because of their difficulty to ESL students (Celce-Murcia & Larsen-Freeman, 1999; Lindstromberg, 1996). The difficulty of these particular prepositions is a result of their multiple meanings- spatial, temporal, and idiomatic (Lindstromberg, 1996). The present study only uses the spatial meanings of these prepositions because they are easier to depict in comic images. Language acquisition is the general term in applied linguistics that signifies an internalization of language learned. Internalization or appropriation is sociocultural theory specific and means language that has been internalized through mediation. This question employs the word *acquisition* because the data are analyzed using mixed-methods (which are not indicative of SCT research) and because it is a conventional term in the field.

The second research question investigates the use of comics as a mediational artifact for collaborative dialogue during a task. Research detailed in the rationale that uses comics to elicit peer dialogue tends to overlook the comic images as an important factor in language

development. The present study suggests that comic images are a significant variable for language learners to tap both intramentally and intermentally to assist in their language development.

2. How does the use of peer interaction mediated by pantomime comics affect language development?

In this question, peer interaction takes the form of collaborative dialogue.

Collaborative dialogue is the talk between learners involving the negotiation of a classroom task. Swain (2000) states that collaborative dialogue is “knowledge-building dialogue... It is where language use and language learning can co-occur. It is language use mediating language learning. It is cognitive activity and it is social activity” (p. 97). Language development is a process. It is language learning, growth, or change in the moment. Language development can take a positive or negative direction meaning that proper language is learned and used or improper language is learned/used (Tomlinson, 2007).

The present study therefore investigates how comic images can affect a language student’s individual acquisition of specific grammatical features of the English language. It also explores how comic images act as a psychological and social tool during collaborative dialogue during a classroom task.

Summary and Organization

This chapter detailed a general overview of the present research. The background and statement of the problem were provided to show that comics use is typically justified on an individual learning basis. Comic images are also not considered an important element in applied linguistics research, but simply a prompt to elicit language. The present study assumes a combined approach in a language classroom to conduct the investigation. The overriding

rationale for this study is that comic images are commonly left out of the equation in research. They provide a form of semiotic mediation within the human mind and further act as a mediational tool for peer interaction. Semiotic mediation is another term for symbolic mediation, which is mediation happening within the human mind as opposed to physical mediation-or use of physical tools (Wells, 2007).

The subsequent chapters for the present study follow. The second chapter investigates the literature using comic images in research and the theoretical stance of the present study: sociocultural theory of mind. The third chapter details the methodology for the project. This chapter describes the setting for the study, the data collected, and how the data is analyzed. The fourth chapter is about the analyses. Each research question the present study proposed is answered in turn. The final chapter summarizes the entire study and offers conclusions as to whether or not the questions were supported by the data, implications of the study, and directions for future research.

Chapter 2

Literature Review

This study investigates the efficacy of using pantomime comics in the adult English as a second language (ESL) classroom. The intent of this chapter is twofold: 1) to provide a rationale for the current study based on the literature; and 2) to offer theoretical justification by investigating the cognitive and social processes involved in using comics for the present study. The literature review is thus divided into five sections.

The rationale is provided by the first section which investigates the use of comic images found in education, psychological and applied linguistics research. How the comic images are used and the justifications for their use are of particular interest to the present research. Connections to the present study and gaps in the literature are specified throughout each topic area.

The next two sections investigate theoretical models of second language acquisition⁴ and language development⁵. This investigation endeavors to provide theoretical justification for using comic images in the present research. The first of these two sections explores language acquisition through the discussion of sociocultural theory's concept of internalization. Internalization is explained specifically through the theory of semiotics and the dual coding theory. The next section examines language development as offered by

⁴ The present research uses *acquisition* and *internalization* synonymously even though both words imply different paradigmatic origins. *Acquisition* in the present study is used as the general idea of language that was already learned, while the word *internalization* is used for discussing ideas related to sociocultural theory of mind. VanPatten and Benati's (2010) definition is appropriate, "Acquisition is a general term in SLA research used to mean the internalization of a linguistic system" (p. 60).

⁵ The present research considers language development as the process of change, growth, or "a stage of gaining ability to use the language successfully" of according to Tomlinson (2007, p. 2).

sociocultural theory of mind. Particularly, mediation, the zone of proximal development, collaborative dialogue during a task, and an appropriate unit of analysis are considered.

Connections to the present study are made throughout these sections.

The two research questions driving the current study are discussed in the subsequent section of this chapter. The first question prompts investigation into how wordless comic images impact language acquisition (specifically the prepositions *in*, *on*, and *at*). The second question focuses on social interaction between students using language and comic images as mediational tools during language development. The research questions follow.

1. *How does the use of pantomime comics contribute to the acquisition of the prepositions in, on, and at for adult English language learners?*
2. *How does the use of peer interaction mediated by pantomime comics affect language development?*

This section applies the previous two sections directly to the current study by making the case that the cognitive⁶ rationale for the use of comics as typified in the research is in its own right a powerful tool; however, the application of comics using both cognitive and social approaches (both of which manifest through sociocultural theory) makes its employment more effective and fills specific gaps in research. These gaps in particular are: comic images are used to explain only cognitive processes; comic images are not used as a part of a larger story in psychological research and grammar instruction; and in socially-oriented linguistics research, comic images are used as prompts that elicit language for analysis and not

⁶ The present study follows Mitchell and Myles (2004) explanation by using *cognitive* as language in an individual process whereas *social* is between individuals. Sociocultural theory distinguishes both as *intramental* (cognitive) and *intermental* (social) (Lantolf, 2000).

considered as mediational tools in of themselves. The research questions are presented again and explained setting the stage for the methodology used to answer these questions in the next chapter. The final section summarizes the chapter.

Comic Images in the Literature

This section highlights the existing literature that uses comics in the language classroom. The goal of this section is to review how comics use is typically rationalized in the literature, especially how they are used in the language classroom, in psychological testing, and in applied linguistic research. The literature is not rife with comics as the basis of research for adult ESL students. Therefore, the present study also considers the research in K-12 education (L1 and L2), university-level foreign language research, psychological testing, and applied linguistics research in collaborative dialogue. This section is subdivided into those categories: the language classroom; psychological testing; and linguistics research. Gaps that exist in this research justifying comics in these areas point principally to their use as motivational tools; as a pathway to literacy; as aids in comprehension of written text (when used in conjunction), as stand-alone images testing recall, speed of recognition; and retention; and as an example of critical and multi-literacies. These gaps are inherently individual in character. That is, the process of learning language through comics is a personal, individual action and not social in nature. The linguistics research that incorporates comic images to elicit interactive dialogue does not take the images as an essential variable in their analyses.

The language classroom. Comic images have been a part of pop-culture in the United States for well over a hundred years. The medium started in this country with increase affordability of printing presses and growth of newspapers (McCloud, 1993; Richardson, 1972; Speel, 2011). Comic origins in the United States began to fulfill political needs- first

during the French and Indian War and then during the American Revolution (Richardson, 1972). Comics evolved from this political beginning to comic strips that were used in the late 19th century as a business ploy to attract readership (Speel, 2011). Other comic forms thus evolved: books such as super hero comics, action comics, crime, fantasy, adult, internet based, alternative, and graphic novels and are popular world-wide (McCloud, 1993). Although the medium began as a form of political awareness and entertainment, power was seen in the combination of images and words and its attraction to a wide range of audiences (McCloud, 1993; O'Neil, 2001; Horrocks, 2001; Eisner, 2008; Harvey, 2010). This subsection details comics research in the language classroom by investigating their common uses: motivation; special education and reading; multiliteracies and critical literacy; as artifacts; and in grammar instruction.

Motivation. Tapping into the entertainment and motivational value of comics, many teachers generically validate comics in the classroom because children enjoy reading comics. This enjoyment is typically established as an individual motivation for each student (Norton, 2003; Morrison et al., 2002; Versaci, 2001; Bitz, 2004; Ranker, 2007; Carter, 2008; Guilloteaux & Dörnyei 2008). Dörnyei and Skehan (2003) define motivation as “the direction and magnitude of human behavior... In broad terms, motivation is responsible for why people decide to do something, how long they are willing to sustain the activity, and how hard they are going to pursue it” (p. 614).

Motivation is a psychological process that explains human thought and actions (Guilloteaux & Dörnyei, 2008, p. 55). It is researched in applied linguistics and normally falls under the cognitivist paradigm in that the studies look at individual motivation (Morrison et al., 2002; Norton, 2003; Guilloteaux & Dörnyei, 2008). Norton Peirce (1995) however, brings

motivation, identity and investment into a more social orientation by suggesting that motivation is not solely cognitive in nature, but a social construct (p. 12). Norton (2003) also provides research of a linguistic basis in a classroom context using comics as an instrument promoting individual motivation. In her study, *Archie Comics* motivated elementary students by enabling them to complete tasks and participate in classroom discussions (Norton, 2003, p. 140). Particularly, she found that these students show a sense of collective ownership in the medium because of its sense of non-legitimacy to many educators and adults, forbidden literacy in the classroom, and comics' appeal to adolescent pop-culture (p. 146). She concludes her study with a call for further investigation in the motivating power of comics (p. 146).

Morrison et al. (2002) promote comics as stimuli in the classroom, students having a sense of ownership, and pedagogies that "enliven the classroom" environment (p. 759). The authors further suggest that ownership occurs through students' connection to pop-culture. This sense of ownership also promotes comics use in the classroom for its motivating power to keep children on task (Carter, 2008).

Motivation is the ubiquitous impetus for using comics in education. Humor, identity, ownership, and connection to pop culture are commonly mentioned. The present study also considered motivation as an important factor in the beginning of the research, but changed course as questions came up and gaps were found. The gap in motivation research is that all the studies mentioned here take a cognitive and individual stance on how comics motivate an individual student. Morrison et al. (2002) offer a more broad application in that comics invigorate the classroom, but they do not go into any depth of how the medium can be used socially.

Special education and reading. Another area in the literature where comics are used in education comes from studies investigating its effect on special education. Even though this is not a variable in the adult ESL research of the present study, the research here details a visual component that affects cognition. This is noteworthy for the present research because it is suggested that the wordless comics immediately transmit meaning to each student before they have to convey that meaning to another. Most studies using comics in this cognitive basis stop where meaning is transferred individually (Krashen, 1985; Magnussen, 2000; Liu, 2004).

One approach to using comics in the classroom comes from Smetana et al. (2009). This study takes the visual nature of comics as the basis for visual language that is useful for teaching reading to deaf students (which the authors posit, sign language is in essence a visual language). Smetana et al (2009) conclude that the significant factor in using comics with deaf students returns to motivation in students and not the correlation of two forms of visual language.

Frequently the literature points to comics assisting with reading. Williams (1995) stresses that comic images in conjunction with dialogue, help ELL students improve their vocabulary. The author points to comics helping put English into context which eases acquisition by the comic strip's use of English that is in between written and spoken forms (Williams, 1995, p. 3-4). This research does not address the value of wordless comics. The literature also points to comics used to build reading fluency by focusing on dialogue in read aloud activities (Ranker, 2007). The research points to the idea that comics used first as a read-aloud for younger students, turns into the desire to write about them (Ranker, 2007, p. 296). Schwarz (2006) adds that the use of graphic novels to aids in reading comprehension in a similar manner to television and the Internet (Schwarz, 2006, p. 59). In this sense, the

research here is implying that reading comics requires complex thought, reading, and the significance of visual elements not found in text alone.

Comics are also used to explain comprehension in reading activities. Carter (2007) includes the works of Krashen (2004) and Liu (2004) to explain how comic images help ESL students through the interplay of the visual and verbal. The justification particularly places the importance of the visual providing comprehensible input and lowering the affective filter in texts using images with words (Carter, 2007, p. 50).

The present study uses pantomime comic images to elicit collaborative dialogue between individual students. It is suggested through the studies mentioned above, that comic images transmit meaning as a visual language; is comprehensible input in reading activities; and allows complex thought processes in individual students. The difference again between the present research and these sources is the lack of the social.

Multiliteracies and critical literacy. Much of the research using comics in the classroom indicates multiliteracies⁷ and critical literacies⁸ as the primary contribution of the genre. Through an activity using comics, Versaci (2001) concludes that comics “energize classes and engage students, teach much needed analytical and critical thinking skills, and-most importantly- invite students to develop meaningful opinions”(p. 62). Bitz (2004) takes a more critical approach to using comics in the classroom. His research brings comics as an

⁷ Multiliteracies is a term created by the New London Group (1996) which includes Cazden, C., Cope, B., Cooke, J., Fairclough, N., Gee, J., Kress, G., Luke, A., Luke, C., Michaels, S., and Nakata, M. One aspect uses multiple modes of representations, typically advocated by education researchers.

⁸ Critical literacy is a concept based on Freire’s (1970) theory of critical pedagogy in that literacy should address social, racial, gender, class, and language differences and exploitation (Negueruela, 2008).

apparatus to make critical issues such as poverty, racism, feminism aware to both teachers and students. Bitz (2004) suggests this critical analysis keeps students engaged and promotes analytical thought for students in underprivileged, urban areas (Bitz, 2004). The *Comic Book Project* was created to highlight critical issues to students and teaches students how to create their own comics addressing these issues (Bitz, 2004).

Similar studies align multiple forms of reading and learning language through multimodality. Jacobs (2007) agrees with McCloud (1993) in that “reading comics involves a complex, multimodal literacy” (p. 19). Multimodal literacy is one aspect of multiliteracies and was theorized by Kress (2000) and the New London Group (1996). Multimodality is essentially multiple forms of communication that is used in one source that enhances comprehensibility. Commonly, the research invokes writing in conjunction with images as being multimodal, but other means of communication align with this concept: gestures, audio, film for example. Kress (2000) gives one disparity between the image and writing (as separate entities), “Image is founded on the logic of display in space; writing (and speech even more so) is founded on the logic of succession in time. Image is spatial and nonsequential; writing and speech are temporal and sequential” (p. 339). By using images and writing (and/or speech) a teacher/researcher is using both space and time mutually, unconsciously, and beneficially to the student. The ideas of multiliteracies and especially multimodality are important to cognitive research.

Multimodality in particular comes from the semiotics tradition in cognitive studies which is detailed in depth in the next section. This is important to the present study because the research acknowledges a cognitive component in language development. The present research employs principles of sociocultural theory of mind, which posits that internalization

takes the form of semiotic mediation (Lantolf, 2000; Wertsch, 1991; Vygotsky, 1978). In this theory, an individual accesses what has been learned through mediation through a system of signs in the person's mind. However, the studies mentioned above do not take a social stance in the research. Again, it is all cognitive in basis.

Comics as physical artifacts. The following subsection details the manner in which comics are used as tools in educational tasks for language classrooms in the literature. Comic images as physical artifacts are used in numerous ways: as prompts in literacy and discussion; as vocabulary building exercises; to test recall; and as a tool for students to focus on form in written language activities. These attributes position comics as cognitive in that the activities used are completed by individual students.

Comics are used in the literature as both writing and discussion prompts in elementary and secondary schools. A similar activity used in the present study is found in Frey and Fisher (2004). They used a wordless graphic novel as a writing prompt for high school students. Each student had to complete the story which was left out and individually wrote the narrative and conclusion for the story using the pictures as a guide (Frey & Fisher, 2004, p. 20). Ranker (2007) used comics for students to read out loud in elementary school. Ranker (2007) argues that these read-alouds helps students associate text with pictures and helps reading fluency for young readers.

Student generated comics are another task that is typical in educational research. Morrison et al. (2002) used student-generated comics to explore vocabulary, dialogue, and grammar for secondary students. Bitz (2004) started the aforementioned *Comic Book Project* where after school programs were created for students to learn how to make comic books. Bitz

(2004) cites motivation, building literacy skills, and multiliteracies as the impetus for this project.

Focus on form is another use of comics found in the literature. Williams (1995) used comic strips to teach grammar skills, vocabulary building, noticing, and prompts for discussion in his secondary ELL class. Jacobs (2007) used a hypothetical situation in explaining how he would teach the same skills using a graphic novel. The website for The National Association of Comics Arts Educators (NACAE, <http://www.teachingcomics.org>) has entire lesson plans built around focus on form activities using comics. One such activity that typifies the literature, but adds a modern twist is Bergland's (2011) lesson plan in NACAE. Bergland (2011) uses the student created comics model but has the students create their own narrative and dialogue using photographic images and the software *Comic Life*.

Educators are some of the leading proponents calling for the use of comics as tools (Versaci, 2001; Schwarz, 2006; Jacobs, 2007, Carter, 2008; Viadero, 2009). Research involving comics as an instrument for classroom tasks are typically used as tools in literacy, discussion activities, prompts, and keeping children on task (Versaci, 2001; Bitz, 2004; Norton, 2003; Ranker, 2007; Carter 2008). Other than the collaborative tasks using comics detailed in the next applied linguistics research subsection, the literature indicates that the use of the medium falls under individual activities and is directed towards an individual development.

Grammar instruction. Grammar studies focusing on preposition instruction typically use comic and other images in isolation (where no story involved with the images). As a part of the task in the present study, this subsection investigates why prepositions are

characteristically difficult for English language learners and how they are commonly used in grammar books.

The research of prepositions points to the aspect of English as one of the most difficult for English learners to master (Celce-Murcia & Larsen-Freeman, 1999; Lindstromberg, 1996; Slobin, 2004). The research suggests that the polysemous nature of prepositions is the primary factor in student confusion and difficulty in acquiring English prepositions (Celce-Murcia & Larsen-Freeman, 1999; Lindstromberg, 1996).

The prepositions *in*, *on*, and *at* are explicitly mentioned by Celce-Murcia and Larsen-Freeman (1999) as the three most difficult to master. These prepositions are specifically targeted in the present research. According to Celce-Murcia, these prepositions can assume spatial (place, path, goal) meanings, temporal (time) meanings, and can be used idiomatically (in strange ways). Lindstromberg offers a compelling reason for idiomatic uses of prepositions. He finds that all prepositions were historically used to express spatial relationships, but over time, took on other meanings in English (Lindstromberg, 1996). Some of the original meanings may no longer be used and for this reason are considered “idiomatic.” For instance, the prepositions *with* originally meant *against* in Old English. This is why modern English speakers will say, “fight *with*” instead of “fight *against*” (ibid.).

Prepositions can be used as locative or motion events in the English language. Locative prepositions in language describe the position of an object, while motion prepositions portray the path of movement (Baker, 1995). Slobin (2004) looked at prepositions used in motion events in his studies using *Frog, where are you?* (Mayer, 1969). In these studies, Slobin (2004) distinguishes different languages’ descriptions of motion events and how Satellite-languages (English, German) show profound variation to Verb-framed

languages (Spanish, Turkish) in describing motion events. ESL students coming from a verb-framed language background may need fuller description of prepositions to understand. In the present study, two students have Spanish as their L1- a verb framed language according to Slobin (2004). Comic images can be used in this task.

Prepositions are commonly depicted in textbooks using isolated images. Normally these images take geometric form, such as found in Figure 2-1.

Geometric images like the one depicted above are common throughout many ESL textbooks (Celce-Murcia & Larsen-Freeman, 1999). Variations to the geometric example exist in demonstrating the spatial relationships of prepositions. Figure 2-2 depicts one such variation taken from Cambridge's *Ventures* text.

This subsection addressed use of prepositions in the classroom tasks found in the literature. Prepositions represent one of the more difficult grammatical concepts for English language learners due to their having multiple meanings. For this reason, the present study focuses on the spatial meanings of *in*, *on*, and *at*. The reason for the spatial focus is that they are easily understood in images. Further differences between languages in describing location and motion also contribute to misunderstanding of English prepositions. The literature shows

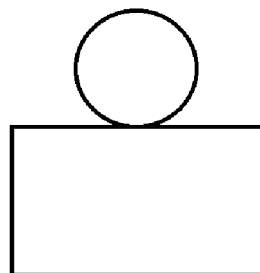


Figure 2-1: Icon representing the sentence: “The ball is on the box.”



Figure 2-2: Figure taken from *Venture 's*, Cambridge Press

that teaching prepositions commonly uses isolated images (similar to other studies). The use of the comic images also represents an individual approach in teaching prepositions and other forms of grammar to ESL students.

Psychological testing. The following portion reviews the literature focusing on the use of comics in psychological testing. These tests measure modes of representation, speed of recognition, and recall which adds to the rationale for using comic images in second language learning. The research also examines the mental model theory (a mental representations of language) which has been compared to dual coding theory (a theory of cognitive process similar to semiotics) by Glenberg and Langston (1990). The importance of psychological testing to the present study is in the conclusions that pen and ink comic images are just as effective as color photographs in speed of recognition, recall, and representation. Comic images are cheaper to reproduce in texts than color photographs and readily available to teachers, researchers, and students.

One of the earliest studies using comics in psychological testing was Ryan and Schwartz's (1955) study comparing modes of representation for the United States Air Force's training manual program. The research tested with method of representing objects was most

effective- photographs, shaded drawings, line drawings, and comics. The research found that comics took the least amount of time in perception⁹ because of their lack of shaded relief which distracts the human eye (Ryan & Schwartz, 1955, p. 69). The limitations to this study are: color photographs were not used (most likely to the cost of color photographs in 1955) and representation of objects was compared across modes of representation and not between different modes. In other words, various forms of visual depictions of objects (photographs, line drawings, shaded reliefs, comics) were compared while visual versus other modes (such as written text) were not compared.

In a similar study, Tversky and Baratz (1985) compared photographs and caricatures of the faces of famous people. Caricatures are comics depicting and exaggerating facial features of people. Contrary to the Ryan and Schwartz (1955) study, Tversky and Baratz (1985) found that photographs were overwhelmingly recognized more rapidly than caricatures. The implication is that greater detail (through photographs) enhances “recognition, recall, and retrieval” (Tversky & Baratz, 1985, p. 48). The authors stressed that the dominant limitation to this study is the quality of the caricatures and that they may not have adequately depicted the photographs.

Visual recognition was also tested in Biederman and Ju’s (1988) study. Images of everyday objects (telephone, blow dryer, fork, and pipe) in photographic form and in simple line drawing (pen and ink) were compared for speed of recognition. The authors concluded that the line drawings were just as effective as color photographs. The implications are

⁹ The use of comics for this research occurred during the same period, Wertham (1954) and his crusade against comics was prevalent throughout the United States. That the Air Force recommended comics as better for training manuals seem counters the thought of the time.

profound for publishing companies in that simple line drawings are more cost effective to mass produce than color photographs, but just as effective. The limitations to this study are that background noise (shades, shadow, extraneous features associated with the objects) could have distracted the speed of recognition in the photographs, whereas the line drawings depict only what is necessary to recognize the object. Once more, images were compared to images and not to texts or other forms of representation.

Line drawings are also used in the literature to test the mental model theory. Glenberg and Langston (1990) conducted two psychological tests to test the theory. The mental model theory is the idea that “mental representations of language are representations of situation (or the affordances of a situation) rather than a mental representation of the language itself” (Glenberg & Robertson, 2000, p. 384). One test was written in text only detailing a four-step procedure, while the other test did the same, but added a visual component (line drawings). According to the study, the procedures were better remembered when accompanied by pictures but the mental representation was the text. The authors argue that “when the texts were presented alone or with pictures illustrating the order in which the steps were described in the text, subjects tended to mentally represent the text” (Glenberg & Langston, 1990, p. 2). Two experiments were used to test the authors’ claim. In one test, subjects read texts describing a “four-step procedure” while in the other, subjects read texts “accompanied by appropriate pictures” (Glenberg & Langston, 1990, p. 4). The authors claim that the mental representation of text counters dual coding theory, motivation, and repetition hypotheses (ibid.). The authors then counter their argument including the caveat “...it seems quite likely that our subjects could reproduce from memory at least some of the pictures they saw”

(Glenberg & Langston, 1990, p. 24). This directly support aspects of dual coding theory as found in Sadoski et al. (1991).

In general, this section reviewed the literature focusing on the use of comics in psychological testing. Comics used for this endeavor measured modes of representation, speed of recognition, and recall. The conclusions of this research are that pen and ink images as found in many comics are easily recognizable, easily remembered, and quickly recalled. The present study uses comic images that are easily recognizable for answering the research questions. The research also examined the mental mode theory which has been compared to dual coding theory. The gaps in this research are that the images are not a part of a larger story, background detail can affect the outcome of the tests, and the images were used to test individual performance.

Applied linguistics research. The literature contains comics as a social artifact in the language classroom through collaborative tasks (Swain & Lapkin, 1998, 2000; Swain, 1999; Fernández Dobao, 2011). The comic images typically used in the applied linguistics literature come in the form of jigsaw tasks. Jigsaw tasks use various images placed out of order and student pairs or groups are given half of the story. The students then have to work out the order and write their collective version out (Swain & Lapkin, 1998, p. 324). The present research tested comic images impact in a similar manner by modifying a dictogloss task (which is discussed in depth in Chapter 3).

Comics use in socially-based language research tends to focus on collaborative tasks. Jigsaw tasks using comic images are common in the literature (Brooks et al. 1997; Swain & Lapkin, 1998, 2000; Swain, 1999; Brandl, 2008; Fernández Dobao, 2011). The studies using comics in collaborative tasks measure pair and group interaction using the images associated

with the task as a prompt. This interaction is typically analyzed using discourse analysis and analytical foci. The latter analysis is important to the present study and will be discussed in depth in the next chapter. The gap in this social interaction is the comic images are not considered a significant variable in the language used during the interaction. The present study considers comic images a fundamental variable and they act as mediational tools for each individual student and between students in their dialogue.

Liu (2004) provides the only study using comics to test recall and features of dual coding theory discussed more in depth in the next section. His study used an experimental approach analyzing statistical data to declare that comics benefitted “comprehension and output” in low-intermediate ESL learners in college (Liu, 2004, p. 236). Specifically, Liu (2004) addressed “theoretical and practical issues” related to how comics can be used as “visual support for ESL texts” (p. 225). The research in this study was conducted individually and the conclusions supported a cognitive explanation of comics as textual support. However, it does not measure how interaction could affect performance of recall.

Overall, the literature of comic images in applied linguistic research use comics as a social artifact in collaborative tasks, but these tasks only analyze the interaction and language taking place and do not measure the comic images acting as a tool in of itself for language development. The comic images are not considered a variable in the literature. Liu’s (2004) study takes the predominant cognitive stance in using comic images to test recall, but what is important to the present study in his research is supposition that comic images benefit beginning level students more than those at a more advanced level.

Gaps overview. This section presents the gaps that are found in the literature using comics. Gaps in justifying comics are highlighted in the literature using them in psychological

testing, as physical artifacts in the classroom, and as prompts in language research. Table 2-1 displays these gaps.

The rationale typically purported in using comics in the classroom stem from individual perspectives. Motivation is the ubiquitous justification for using comics and takes on various forms. Norton Peirce (1995) and Norton (2003) proposed that motivation through ownership and identity justifies the use of comics in the classroom and that these principles are not necessarily confined in the cognitive realm of second language acquisition. Comics are frequently cited as the cause of enthusiasm in classroom activities (Norton, 2003; Morrison et al., 2002; Versaci, 2001; Bitz, 2004; Ranker, 2007; Carter, 2008). Other rationales similarly promote comics as a pathway to literacy in that the medium acts as a stepping stone to “legitimate” literacy and as a way of revealing critical literacy (Versaci, 2001; Bitz, 2004; Frey & Fisher, 2004; Ranker, 2007; Smetana et al., 2009; and Carter, 2008). Through the interplay of the visual and the verbal, comics are proclaimed to aid in comprehension

Table 2-1: Gaps overview

Areas	Use of comics	Research details
Language classroom	Motivation, special education/reading, multiliteracies, critical literacies, artifacts, and grammar instruction	Cognitive/individual stance, images used in isolation with no story
Psychological testing	Speed of recognition, representation, and recall	Images used in isolation, background details in image is hindrance, cognitive/individual stance
Applied linguistics research	Collaborative tasks and cognitive tasks (motivation from language classroom category also fits in this category)	In collaborative tasks, comic images not considered as a variable. Most research using comics takes a cognitive/individual stance

(Krashen, 2004; Carter, 2007, 2008; Ranker, 2007). Every justification for using comics in the classroom takes a developmental, individual learner's stance in rationalizing its use.

As physical artifacts in classroom, comics again predominantly take on individual perspectives. Liu (2004) provided the only research using comics to test recall and aspects of dual coding theory, thus placing his work firmly in the cognitive paradigm. The bulk of the research using comics as classroom instruments inclines towards focus on form activities, creating comics to build vocabulary and reading fluency, and in collaborative tasks (Norton, 2003; Morrison et al., 2002; Versaci, 2001; Bitz, 2004; Ranker, 2007; Carter, 2008; Brooks et al., 1997; Swain & Lapkin, 1998, 2000; Brandl, 2008). Other than the research using collaborative tasks, all research in the literature have individual, internal development foci.

Various gaps exist in the previous studies as a part of psychological testing. Psychological testing reviewed in this section compared results between similar modes of representations. Only one study conducted psychological testing across modes (Glenberg & Langston, 1990). This study compared texts with and without line drawings. The conclusion, however, showed that the text was the most mentally represented which contradicts dual coding theory. Glenberg and Langston (1990) add the limitation that some of the pictures could possibly be remembered by the subjects (p. 24). Apparently, this question was not asked.

Few studies reviewed comics in social interactive tasks. Prominent studies by Swain and Lapkin (1998, 2000), Swain (1999), and Fernández Dobao (2011) explore the spoken language in student to student dialogue. These studies, however, focus on the role, development, and use of language during collaborative discussion and ultimately contributing to each individual student's cognitive development (Mitchell & Myles, 2004, p. 217). The

comic images these discussions are not considered a fundamental variable to the research.

This gap in particular is addressed in the second research question of the present study.

Theoretical Stance of the Present Research

The present study follows the paradigm of sociocultural theory of mind (SCT). This theory of learning suggests that all human learning and cognition is socially mediated (Lantolf, 2000; Wertsch, 1991; Johnson, 2006). The important distinction between this and other theories of linguistics and learning is that humans use an arsenal of tools to change the world around them including their minds. Language is considered an important tool in this endeavor (Vygotsky, 1978). Much of the research following sociocultural theory investigates the process of learning through mediation. Lantolf (2011) states that “SCT focuses on the formation of mediational ability through appropriating and internalizing symbolic artifacts, it is not very useful to study this ability once formed...it is difficult to observe mediation once it has been internalized” (p. 26). The present study suggests that language already internalized is important and continues to be used in learning new material. The first question in particular attempts to study language already internalized and how it helps with new concepts. For this reason, a review of the principles of internalization is necessary.

The first subsection investigates the principles of internalization according to sociocultural theory of mind. Vygotsky (1978) and subsequent research suggested that internalization of learning occurs through semiotic mediation (Lantolf, 2000; Wells, 2007). Semiotics is therefore investigated first and is followed by the contemporary explanation of this cognitive theory- dual coding theory (DCT). DCT suggests that two systems of information processing exist in the mind- the verbal and the visual. Both systems work collectively to both internalize new material and for appropriate responses.

The next subsection investigates the social aspect of sociocultural theory of mind. In this subsection the principles that pertain specifically to the present study are reviewed: language as a tool for learning; the zone of proximal development; and collaborative dialogue. Other principles of SCT that were initially not considered for the present study have become important for future research. The principles of the activity theory particularly would be another area for exploration if this study were conducted again. This is discussed in Chapter 5.

Internalization. The first question of the present research pertains to internalization and how students of a second language bring their L1 and newly acquired English into the process of learning English. Therefore, this section details cognitive aspects of sociocultural theory of mind. Internalization is the “reconstruction of the inner, psychological, plane of socially mediated external forms of goal-directed activity” (Lantolf, 2000, p. 13). The idea of internalization is important to the study for two reasons: 1). it is argued that the wordless comic images transmit meaning immediately to the language learners and 2). the language student uses what is already internalized in both their L1 and L2 to mediate meaning to themselves and mediate their dialogue with others. Social cultural theory research does not typically investigate what has already been internalized because “it is difficult to observe mediation once it has been internalized” (Lantolf, 2011, p. 26).

SCT does, however, assume certain principles of internalization. It is still a mediated process called *semiotic mediation* (Vygotsky, 1978; Wells, 2007). Vygotsky (1978) suggested that Saussure’s (1915/1959) notion of semiotics or the study of all things considered a sign was the worthy explanation of what occurs psychologically once learning has been internalized. The next section explores this theory further.

Semiotics. The theory of semiotics and the incorporation of signs explain internalization. This section details the theory of semiotics and attempt to relate it to the concept of internalization. The initial portion will describe the theory of semiotics. Next, a review of dual coding theory is presented.

The study of human learning and thought has numerous theories that fall within the realms of psychology, linguistics, logic, and philosophy. During the last century, the most popular approach to human thought and learning was Cartesian dualism (Chandler, 2003). This approach placed mind and body in separate realms. Saussure looked at the human mind in a different way, but also in duality (Figure 2.1). One facet of this study created by Saussure is called *semiologie* (in the European tradition) or semiotics (in the American tradition). Essentially, semiotics is the study of signs or “anything that could be considered a sign” (Chandler, 2003 p. 3). Saussure considered many fields under this study of signs: linguistics, psychology, and philosophy (Cobley & Jantz, 1997). In sociocultural theory, Vygotsky (1978) considered the sign as the instrument for intramental mediation and internalization (p. 52).

The sign is the basic element of Saussure’s (1915/1959) theory. It is comprised of a signified (or mental representation of something) and the signifier (another manifestation of the signified: word, speech act, writing, gesture, etc.). The sign is the basic unit of meaning (Figure 2-3). Saussure suggested that signs in themselves are arbitrary and that meaning is only made when the relationship between other signs is made (Chandler, 2003). These strings of signs or codes are then transmitted from person to person through language (or other means) to transfer thoughts and meaning from one person to another.

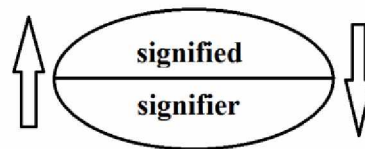


Figure 2-3: The sign (adapted from Saussure, 1915/1959)

The unit of analysis for the study of signs is the text (or chunks of language). This type of analysis contributed to the rise and study of structural linguistics early in the 20th century in Europe and simultaneously in the United States.

The study of signs may explain meaning-making (through sign relationships) and is frequently used in the field of comics. McCloud (1993) touched on this correlation by comparing comic arts to iconography and signs. The dominant relational theory between signs and comics comes from Groensteen (2007). Groensteen suggests that comics can be analyzed in a similar manner as the structural linguists analyze texts (signs) that is, not by looking at the sign itself (or in Groensteen's example, the panel) but by analyzing the relationships between panels and how images can be linked within and across panels (viii-ix). Cohn (2009) analyzed comics in a similar way to Groensteen (2007) by creating what he named "visual language." The major difference is that Cohn (2009) treats the panels and relationships within and outside the panels as a form of syntax. Both approaches, however, incorporate the idea of signs as the basis of meaning into their theories.

What is not considered in the studies above is that comic images act as in accordance with Vygotsky's (1978) principle of semiotic mediation. The images are transmitting meaning immediately to the individual (intramentally) and then act as tools for transmitting that meaning to other individuals (intermentally). What is also not apparent is how images are

converted to verbal language intramentally. The dual coding theory takes this psychological interaction into account and is reviewed in the next subsection.

Dual coding theory. A more modern approach to the idea of semiotics is dual-coding theory by Paivio (1986). Dual coding theory takes the tenets of semiotics and the study of signs as a model, but codifies the cognitivist process into two separate but interdependent components: the visual and the verbal (Sadoski et al., 1991). Further investigation into dual coding theory suggests that a form of semiotic mediation also occurs within Paivio's paradigm. It is necessary to explore dual coding theory in depth in order to understand this premise. As a cognitive process, dual coding theory incorporates both the visual and verbal in order to process meaning and promote internalization in the human mind. Intramentally, visual stimuli are converted to verbal response and vice versa in a semiotic fashion. This is important to the present study because at first, the wordless comics are transmitting purely visual stimuli to each individual student who then need to transform this stimuli into verbal response through dialogue with another student.

Dual-coding theory is also a theory of cognition similar to Saussurian semiotics in its duality. The system of cognitive development according to this theory and researchers in dual coding theory, resides in verbal and a nonverbal components (Paivio, 2006, Sadoski et al., 1991; Liu, 2004). The verbal component of the system acts directly on language processing while the nonverbal processes other aspects (visual, objects, images). According to Paivio (2006), the respective component is activated during the processing of either visual or nonvisual stimuli. The stimuli enter the respective component. The stimuli are processed and shared with the other component in a form of mental reference (Figure 2-4).

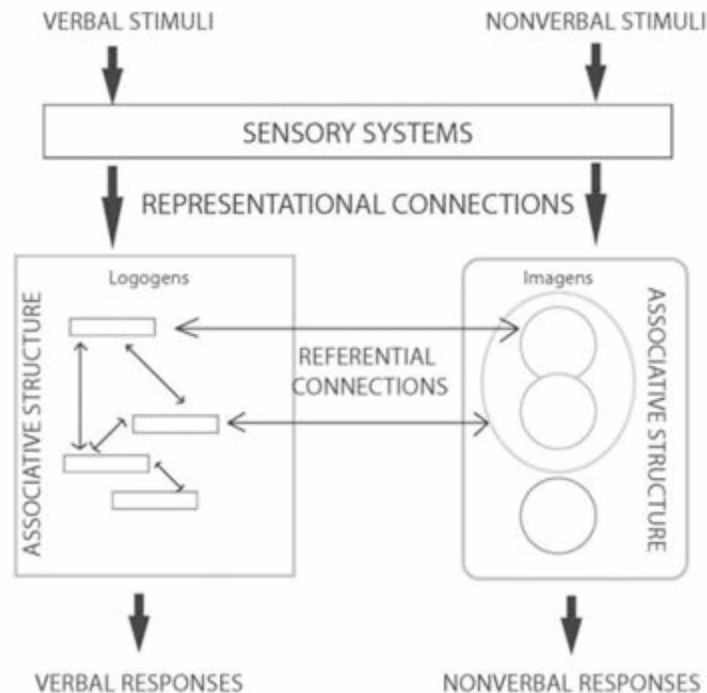


Figure 2-4: Dual coding theory adapted from Sadoski et al. (1991)

The main focus of dual coding theory is memory and recall. Paivio (2006) stresses that the nonverbal component is essential to recall and to memory because it provides a form of “mnemonic” strength to the verbal component (p. 4). Dual coding theory’s unit of analysis is the memory task (the device triggering the memory). Paivio (2006) concludes that the picture-verbal combination on memory/recall outperforms the solely verbal (or abstract) performance by a ratio of 2:1. This analysis appears to be in line with the comic images studies, where comic images were recalled and recognized more quickly than photographic images. Although memory and recall are not specifically investigated in the present study, it is suggested that the individual student uses the comic image (the visual stimulus) to help during peer interaction (verbal response).

A specific example of analyzing comic images through dual coding theory (among other cognitivist theories) is found in Liu's (2004) study using comic images to aid in reading comprehension. Liu (2004) used a 2 x 2 x 2 approach (English proficiency-high/low) X (test difficulty-easy/difficult) X (visual support- with/without comic images) (p. 231). Liu (2004) found that beginning English learners best benefitted from the visual/verbal approach to reading comprehension (and memory/recall), while more advanced learners did not improve their performance from the visual/verbal combination (p. 237-8). These conclusions were derived from the results in that the beginning students performed better using the comic images than did the more advanced students. Liu (2004) suggests that the comics hindered the more advanced students. The recommendation of future research with comics should be conducted within the realm of retention. The present study investigates retention of the targeted prepositions resulting from a classroom activity using comic images and peer dialogue.

Liu's (2004) analysis applies to the present study in two ways. First, that the comic images benefit lower-level students more than advanced students is important and testable in the present research. Second, the visual stimuli assist those lower-level students recall the verbal associations with those images during interaction. The images in effect are acting as semiotic mediational devices.

This section reviewed aspects of cognitivist approaches that related specifically to the current study. The theories of semiotics and dual coding theory were considered and correlate to the present study in their nature in explaining the process of internalization. Both of these approaches form the basis for the cognitivist aspect of this thesis and share commonalities with the sociocultural theory, which will be explained next.

The Sociocultural Theory of Mind

The sociocultural theory of mind is the theoretical framework on which the present research is based. It is necessary to now explore the social, interactive aspect of SCT to understand the principles being employed to answer the second research question and how language development occur using comic images and peer interaction.

Although the sociocultural theory is frequently placed within the paradigm of linguistics and second language acquisition, it originated as a theory of mind or a psychological theory that explained how human beings learn. Vygotsky (1978) developed this psychological theory in reaction to the dominant psychological ideas of the time: Cartesian dualism, Piaget's (1968) genetic epistemology, and structural linguistics (p. 24). These dominant theories of the time suggested that the human mind came equipped with the capabilities to develop knowledge by individual interaction with the world around that individual. The interaction with other people in a social setting was never the focus for cognitivists. For them, the domain of the learning process was within the mind and would move outside of the mind (intra to inter psychological) with acquired knowledge. The sociocultural theory of mind takes an entirely different approach. Interaction between social beings is paramount and learning moves from outside of the individual mind towards the inside (intermental to intramental). The following principles form the basis of SCT:

- Language is a *social/collective* phenomena; interaction is essentially social in nature and the means for both (or more) minds to learn.
- The human mind is *mediated* by all forms of tools (including language); humans historically use tools to shape the world around them; learning is a mediated process.

- *ZPD (zone of proximal development)* is the metaphor for where learning and co-construction of knowledge occurs.
- End result of SCT is *internalization* (also called *appropriation* with SCT theorists), however once concepts are internalized, mediation does not stop.
- Private, inner, and self-directed speech are important as a form of self-mediation once concepts have been internalized.
- Genetic domains are important for placing mediation, development, and internalization into historical context. The four domains are: *phylogenetic* (biological traits such as sight passed down over generations that is used in learning); *sociocultural* (tools such as the writing system that was developed and passed down over generations); *ontogenetic* (learning developed over the course of one life); *microgenetic* (local-contextualized moment in learning).

Vygotsky rejected this predetermined, internalized, cognitive theory and proposed an opposing point of view. He called his theory cultural historical psychology, which is currently known as the sociocultural theory of mind (Wells, 2007, p. 244). Fundamentally, his theory posited that innate systems, principles, and knowledge did not exist. Human children interact socially (that is, intermentally) early in life with others resulting in cognitive development. In other words, the move was from intermental to intramental, opposing the psychology of the time (and various modern-day cognitive theories of language and learning). Vygotsky wrote mainly about childhood cognitive development with the special focus of using language as the *sine qua non* for this development (Vygotsky, 1978; Lantolf, 2000; Wertsch, 1991). The purpose of Vygotsky's focus on child development was because "what changes is the interfunctional relations that connect memory with other functions (in children)" (Vygotsky,

1978, p. 49). In essence, Vygotsky suggests that memory changes with activity and mediation as the child grows. However, the sociocultural theory equally applies to adults learning another language and adult cognitive development in a similar fashion. This learning is a result of social interactions and does not begin innately in the mind (as per Piaget, 1968 and Chomsky, 1959). Through social interaction in activity, the learning becomes internalized. Learning is internalized (or appropriated) while using language as a tool for cooperative action. Lantolf (2011) elaborates this concept by stating that thinking and speaking are separate but interconnected (p. 7). Because of this distinction, the sociocultural theory is a mind-based theory with the caveat that language and connection to others (socially, environmentally) plays a vital role in learning (cognition, internalization).

Language as a tool for learning. Many of the original tenets of the sociocultural theory of the mind apply to the current research. The overriding aspect of Vygotsky's theory is that human beings are masters of tool use, both physical tools and symbolic. Because of this predisposition, it makes sense that language is simply another tool in the arsenal of human technology. Comics also fill the role as a tool for linguistic development both internally and interpersonal. Vygotsky was interested in how symbolic tools were manipulated between humans in order to create meaning and understanding. He called this act semiotic mediation (Vygotsky, 1978, p. 55). Semiotic mediation aligns with Saussurian semiotics, but uses this form of structural linguistics only as an aspect of human cognition through language use. Donato and McCormick (1994) aptly note that mediation "is the instrument of cognitive change" (p. 456). Vygotsky proclaimed that mediation was best between children and parents (or expert-novice) and much of the studies during his time and immediately after dealt with

childhood L1 acquisition (Vygotsky, 1978). Theoretically, Vygotsky proposed that the child¹⁰ learns and develops cognition through his interactions with adults using language as a semiotic mediation device (tool). This idea appears similar to Locke's (1690/1975) philosophy of *tabula rasa* where a child is born with a "blank slate" - a mind ready to be filled by the world around him (Book 2). Piaget and others took this as the child filling his mind through invention or trial and error and is enacted in pre-programmed stages in life (Cole and Wertsch, 1996). Vygotsky suggested that through use of language in a social context, the mind was filled and what was learned became internalized (Wertsch, 1991). This process of formation occurs over different aspects of time. Vygotsky proposed four genetic (time) distinctions (Lantolf, 2011):

- Phylogenetic domain: the change in human cognition as distinct from other life forms over the course of evolution
- Sociocultural domain: how symbolic tools were created by various human cultures throughout human history and how these cultural tools affected the favored form of mediation and types of thought valued by those cultures
- Ontogenetic domain: the change in human cognition over the course of one human life- from childhood to adulthood
- Microgenetic domain: the change through mediation over a short time span

The unit of analysis is an important point in the research. Vygotsky proposed that the "word" should form the basis of analysis in SCT (Vygotsky, 1978, p. 50; Lantolf, 2011;

¹⁰ Vygotsky was a psychologist that studied mentally troubled children. His focus was therefore on the child and first language, but subsequent researchers in the Neo-Vygotskian tradition have broadened the focus to include adults and second languages.

Wertsch, 1991). Vygotsky regarded the word as appropriate because it embodied meaning in linguistic form (Lantolf, 2011, p. 7). Other researchers rejected this unit of analysis (Wertsch, 1991; Leontiev, 1978; Lantolf, 2000). According to Lantolf (2000) a unit of analysis which is widely accepted by Neo-Vygotskians was created keeping the importance of the tool in mind. The *tool-mediated goal-directed action* was thought to be a more suitable unit of analysis than the word because it (the tool) “preserves the dynamic nature of intermental and intramental organization and functioning” (Wertsch, 1991, p. 208). This unit of analysis specifically applies to the present research. Indeed, the pantomime comics used in the research is the tool for intramental and intermental mediation during a task within a microgenetic domain (Lantolf, 2011).

The present study focuses on language internalization and language development that happens during a brief moment in time. The microgenetic domain best describes the genetic domain where the present study occurs. The majority of studies operating under SCT tend to demonstrate development in microgenesis (Swain & Lapkin, 1998, 2000; De Guerrero & Villamil, 2000; Siekmann, 2004; Gutiérrez, 2007; Fernández Dobao, 2011). Although internalization can occur in microgenesis, many early studies in SCT focus on internalization and development in the ontogenetic domain (Lantolf, 2000, p. 3-4).

The zone of proximal development. The zone of proximal development (ZPD) is another important facet of Vygotsky’s theory. Lantolf (2011) best describes this metaphor, “...the ZPD is not a physical place situated in time and space; rather it is a metaphor for observing and understanding how mediational means are appropriated and internalized” (p. 17). This mediation is somewhat distinct from semiotic mediation which can occur externally and perpetually through mediation with signs throughout the world or internally (Wells,

1994). Semiotic mediation might explain mediation between the visual and verbal as in dual coding theory. Mediation within the ZPD occurs interpersonally, sometimes between expert-novice, or between peers. The end result is internalization (as mentioned in semiotic mediation mentioned previously). Several researchers suggest that since adult language learners come to second language learning with highly developed and internalized understandings (from their mediation in the ZPD from childhood), and that the appropriate study of activity in the ZPD is found between the expert-novice relationship (Wertsch, 1991; Lantolf, 2011). Lantolf (2011) states,

Because SCT focuses on the formation of mediational ability through appropriating and internalizing symbolic artifacts, it is not very useful to study this ability once formed, as with competent users of language. That is, it is difficult to observe mediation once it has been internalized (p. 26).

This excerpt points to the importance of interaction, language as a mediational tool, expert-novice work in the ZPD, and learning as a process for SCT. The majority of the studies therefore, focus on interaction between expert-novices, but more are exploring the benefits of peer mediation/interaction. What has been internalized is not often explored. Studies within SCT have investigated student use of their L1 to mediate L2 learning (Aljaafreh & Lantolf, 1994; Brooks et al., 1997; Swain & Lapkin, 1998, 2000; Antón & DiCamilla, 1999; Siekmann, 2004; Gutiérrez, 2007; Fernández Dobao, 2011). This in essence, is looking at what has been internalized and being used in learning another language.

Collaborative dialogue and mediation between peers in microgenesis is the example the present research follows. Similar studies exploring collaborative dialogue in this genetic domain have been previously conducted (Donato, 1994; Brooks & Donato, 1994; Brooks et

al., 1997; Swain & Lapkin, 1998; De Guerrero & Villamil, 2000; Siekmann, 2004; Gutiérrez, 2007; Fernández Dobao, 2011). Collaborative dialogue in microgenesis is discussed in the next sub-section.

Collaborative dialogue. Collaborative dialogue is social speech between peers during a collaborative task in a language classroom. Essentially, it is speech arising from problem solving and typically, a written document is produced from mutual resolution of the problem (Swain, 1999, p. 45). What is important about collaborative dialogue is that SCT researchers suggest that the collective speech of the students working out a problem is internalized individually. Collective dialogue then is “both social and cognitive activity; it is linguistic problem-solving through social interaction” (Swain, 2000, p. 104). Donato (1994) also adds that collaboration between peers encourages raising consciousness and through consciousness, co-knowledge is created. “For Vygotsky, consciousness is co-knowledge; the individual dimension of consciousness is derivatory and secondary” (Donato, 1994, p. 38).

Numerous studies exist in the literature focusing on collaborative dialogue in the language classroom (Aljaafreh & Lantolf, 1994; Brooks et al., 1997; Swain & Lapkin, 1998, 2000; Antón & DiCamilla, 1999; Siekmann, 2004; Gutiérrez, 2007; Fernández Dobao, 2011). Collaborative tasks prompting dialogue commonly come in the form of jigsaw and dictogloss tasks which are fill-in the gap tasks between students. The research typically uses university-level foreign language classes with the exception of Aljaafreh and Lantolf (1994) who used a university ESL class and Swain & Lapkin (1998) who researched collaborative dialogue in an eighth-grade French immersion class.

Collaborative tasks/dialogue commonly analyzes the mediation occurring between expert-novices and peer interactions. Wood et al. (1976) categorized mediation by creating the

concept of scaffolding. Drawing from Wood et al.'s (1976) research, Donato (1994) explains scaffolding as a “discursive mechanism” that has six features (pp. 40-41).

- *Recruiting* interest in the task
- *Simplifying* the task
- *Maintaining* pursuit of the goal
- *Marking* critical features and discrepancies between what has been produced and the ideal solution
- *Controlling* frustration during problem solving
- *Demonstrating* an idealized version of the act to be performed

By using these markers of scaffolding, a researcher could analyze peer (or even expert-novice) interaction effectively.

The literature demonstrates other ways of analyzing collaborative dialogue. Swain and Lapkin (1998), Gutiérrez (2007), and Fernández Dobao (2011) used language related episodes (LREs) to analyze collaborative dialogue. LREs are when students talk about language which is identifiable in data. Typically, LREs are comprised of lexis-based, form-based, metalinguistic, and pragmatic features that can be highlighted in the data. The present study uses analytical foci to pinpoint student talk about the language. Although different than LRE conventions, analytical foci helped to zero-in on language being developed through collaborative dialogue using the comics.

Another mediational tool in the human arsenal can be found in physical gestures during social mediation (McCafferty, 2002, Negueruela et al., 2004; Johnston, 2011). Gestures can be considered “pantomime, in which the entire body may be involved (during speech acts) to express meaning” (Negueruela et al., 2004, p. 114). Gestures have been categorized as

gesticulation, deictic gestures, beats, and motor gestures (Kendon, 1997; McCafferty, 2002; Negueruela et al., 2004). The important gesture for the present study is deictic gesture which is used to “single out individuals, objects, locations, or even ‘unseen, abstract, or imaginary things’” (Negueruela et al., 2004, p. 114).

The other tool of analysis used in the literature that interests the present study is the use of conversation analysis (CA) conventions. Swain and Lapkin (2000) used “the turn” in their analysis (p. 257). The turn is an essential component of CA and the authors discuss how the turn and L1 speech was used to move the task along, to help focus attention, and for interpersonal interaction. The present study also analyzes the data using the basic transcription conventions of CA demonstrating rich description. This is detailed further in Chapter 3.

Private speech. Private speech is a significant aspect of SCT. According to Vygotsky (1978) and contemporary interpretations of SCT, once learning has been internalized mediation continues but is manifest frequently within the self. In children, self-directed, audible speech is often noted (Vygotsky, 1978; Leontiev, 1978; Lantolf, 2000; McCafferty, 1992). In adults, however, this speech tends to be inaudible or inner speech. At times, audible, self-directed speech is apparent during tasks that are difficult during the learning process (McCafferty, 1992; Appel & Lantolf, 1994; DiCamilla & Antón, 2004). In adult situations, private speech can be seen as the manifestation of inner speech which in essence shows cognitive or self-mediation at work (Lantolf, 2000). DiCamilla and Antón further suggest that private speech “has a central role in understanding how the mind functions” (p. 38).

Frawley and Lantolf (1985) provide the seminal investigation of private speech in SCT. Their research classifies private speech into three orientations: object- regulation, other- regulation, and self-regulation (McCafferty, 1992, p. 180). DiCamilla and Antón (2004) on the

other hand, classify private speech differently. They looked at utterances as self-addressed directives, self-addressed negations, and self-addressed questions (p. 41). Other characteristics of private speech in adult learners are noted in the literature. Private speech made as utterances is not typically syntactic (Lantolf, 2000). Evidence of private speech can be seen in transcripts as “no, wait, done, next” (Lantolf, 2000, p. 88). However, some literature points to fully syntactic utterances are possible in private speech (McCafferty, 1994; Wells, 1999; Lantolf & Yáñez, 2011). Paralinguistic features also indicate private speech during interaction. The literature indicates that in adults, private speech is commonly heard in lower tones or whispers during peer interaction (Wells, 1999; Lantolf & Yáñez, 2011). Wells (1999) notes the shortcoming of Antón and DiCamilla’s (1999) transcriptions and assumption that a subject’s utterance of “wait, no” was private speech when paralinguistic details (such as volume) of that utterance was not stated (p. 251). For this reason, the present study uses transcription conventions of CA to highlight such description during analysis.

Private speech has been compared between adult English speakers taking foreign language (FL) classes to adult ESL learners. Frawley and Lantolf (1985) note that the private speech of ESL students tend to be in English (their L2), while FL students tend to use their L1 as private speech (in Lantolf, 2000, p. 88). One explanation is that adult ESL students in the United States (both at the college level and in adult learning centers) do not come from a homogenous L1 as opposed to FL students whose L1 is typically English. This exemplifies *intersubjectivity* during tasks. Antón and Dicamilla (1999) explain intersubjectivity as a cooperative attempt to describe elements in a task (p. 233). Both adult FL and ESL maintain intersubjectivity through English. Private speech therefore does not only mediate the

individual learner, but can act as a way of creating intersubjectivity, other-regulation, and co-construction of meaning (Wells, 1999; Appel & Lantolf, 1994; McCafferty, 1994).

Of particular interest to the present study is that some of the studies place high value on the students' use of their L1 during the collaborative dialogue. Antón and DiCamilla (1999) suggest that L1 use through private speech indicates that the student is using intramental mediation or essentially, using what has already been internalized during interaction. Other studies also consider the use of L1 as key in demonstrating private speech as mediation from what has been internalized (Swain & Lapkin, 1998; Brooks et al., 1997). This applies directly to the present study in that it has been suggested that comic images, whose meaning is immediately understood by individual students because the visual language is universal, also acts as a psychological mediational device during social interaction. This is similar to L1 as a psychological/intramental mediational device in the literature.

Difficulty in determining when internalized features are being used as mediation during collaborative dialogue can be apparent. In order to determine if the students are self-mediating, the present study considers the previously mentioned evidence of paralinguistic features such as utterances made in low volume. The present study also considers lexis indicating private speech (wait, no, etc.) during the collaborative task as possible forms of private speech.

This section reviewed the sociocultural theory of mind and explored the major aspects that apply to adult second language learning. The section began with a discussion of how the SCT views learning as arising from interaction between humans in social context as opposed to any sense of an innate cognitive process. Language, according to the SCT is one tool among an arsenal of tools that humans have used over genetic time (phylogenetic, sociocultural,

ontogenetic, and microgenetic domains). The theory further suggested that internalization occurs through semiotic mediation. Semiotic mediation can occur perpetually outside the individual mind or can manifest within that mind using verbal or non-verbal assistance through signs, mnemonic instruments, images, etc. The SCT further proposes that learning occurs through mediation between novices and those considered more adept through notion of the zone of proximal development. The ZPD is where the novice operates beyond his ability with the assistance of the more expert person. This mediation has recently included peer to peer mediation.

Similar studies exist using the idea of comics and other images as a mediational tool between learning pairs. Jigsaw tasks¹¹ as a tool for social interaction are common in many research articles. Brooks et al. (1997) studied the discourse of university students taking a Spanish course using a jigsaw task as the basis for the problem to be solved (Figure 2-5 for jigsaw example). Their analysis showed improvement during the task that was attributed to meaningful collaboration. Swain and Lapkin (1998) also used a similar jigsaw task to analyze dialogue as a tool of communication and cognition. Besides the jigsaw task, the authors incorporated a modified jigsaw task using comic images.

The influences of cognitive, individual, prior knowledge allows the ESL student to know what the story behind the comics is about and to see the relations of the objects being described in a locative manner by the prepositions in question. With the easing of this cognitive load (that is the normal task of constructing the story in the first language before beginning the task), the student is able to negotiate socially with a partner in order to convert

¹¹ Jigsaw tasks are activities where pairs of students each have different puzzles that they solve together by asking each other questions to determine what is in each “box.”

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Figure 2-5: Typical jigsaw puzzle (adapted from Brooks et al., 1997)

this knowledge into the second language and helping the student remember (internalize) the relationships caused by the prepositions in question. This in particular is what question number two is investigating.

Summary

This chapter investigated the rationale and theoretical justification of using comics in the language classroom. The intent of this chapter to review the research using comics that is evident in the literature. The first section detailed the existing research using comics in the classroom and the prevalent rationale for this research. The next two sections investigated the theoretical foundations of the sociocultural theory which suggests that what is internalized and what is mediated during social interaction play a collective role in second language learning. The present study suggests that the application of comics using both cognitive and social approaches (both found through sociocultural theory principles) makes its employment more effective and fills a gap in comics research in the classroom.

Chapter 3

Methodology

The purpose of this chapter is to present the methods used to conduct the research in the present study. The chapter is divided into four sections. The first section considers the research design utilized by the present study. Next, details of the setting and a rich description of the research site and participants in the study are discussed. The subsequent section reviews the procedures used to collect the data, the types of data collected, and the instruments used to collect the data. Finally, a review of the criteria used to analyze the data and the types of analyses used for the data that was gathered are considered.

Research Design

This section examines the research design for the present study. The theoretical framework from chapter two will first be briefly reviewed as background for the research design. The subsection also defines qualitative research methods and expresses why the present study falls under the paradigm of applied research. The goals of the research will be detailed in the following subsection. Lastly, the subsection specifies various collaborative activities and why one was chosen over others as the task for the present research.

Theoretical framework. The present research investigated the use of pantomime comics as an intramental and intermental semiotic mediational tool within the microgenetic domain following sociocultural theory. The literature revealed gaps in classroom praxis and linguistic research using comics. In classroom praxis, comics were typically justified by motivating students, provides entertainment value, as alternative modes of literacy, and as a gateway to legitimate literacy. Linguistic research using comics also showed limitations. Comics were typically placed within cognitivist paradigms in learning and in praxis. Another

gap in the applied linguistic research shows the use of comics (in both cognitivist and social studies) as static images that either had no associated story or whose story was difficult to follow (especially in jigsaw tasks).

In order to address the reviewed gaps, the use of comics in the present research was developed to fulfill two goals: 1) Comic images transmit meaning to the learner without the use of English text. As the learner negotiates the translation of the images to text, specifically English text, the visual images would be used as an intramental mediational tool. Cognitively, instead of being a basis of reference for verbal response, comics mediate the visual language into verbal language. 2) Additionally, comic images perform as an interpersonal mediation tool. Used as an artifact during a task, comics hypothetically provide a mediational basis for interpersonal dialogue and subsequent written responses. This makes comics as a significant variable that other studies have not assumed.

The theoretical framework of the present study combined two different aspects of applied linguistic theory. The research questions for the study are:

1. *How does the use of pantomime comics contribute to the acquisition of the prepositions in, on, and at for adult English language learners?*
2. *How does the use of peer interaction mediated by pantomime comics affect language development?*

The first question specifically looks at cognitive aspects of language. The key word in this question is “acquisition.” Language acquisition can be viewed both through cognitive and social perspectives as the culmination of all learning is internalized. Acquisition of the targeted prepositions is the objective of question one. Measuring this objective can be done with data conducted on an individual basis and by looking at the collaborative learning in

progress. Therefore goal in the first question implies acquisition that is measured using the cognitive paradigm, although it can be answered socially as well. Internalization can be processed by the use of semiotics, dual coding theory, and the sociocultural theory of mind to explain how comics mediated the learning of the targeted prepositions during the study.

The second question addressed how comics are also used within a social, collaborative context. The comics act as a mediational tool for both the individual mind and as the impetus for collaborative discourse about the task. The sociocultural theory of mind particularly is particularly suited to show how comics mediated the dialogue and learning individually and between peers. The second question takes a social perspective in answering how language development is mediated through the comic images and through language in use during an activity. The overriding goal is to use both paradigms to internalize the targeted prepositions.

Research paradigm, tradition, and method. The present study falls under the definition of the applied research paradigm. According to McKay (2006), applied research differs from basic research in that it looks to provide “real-world solutions to problems” (p. 4). Applied research tends to limit its questions and conclusions. It also does demonstrate how research findings can apply to a particular time, place, and context (McKay, 2006).

The current study follows the tradition of qualitative research. Mackey and Gass (2005) suggest that qualitative research is “based on descriptive data that does not make (regular) use of statistical procedures” (Mackey & Gass, 2005, p. 162). The present study uses descriptive statistical analysis of written tests by analyzing raw scores and averages. Descriptive statistics provides an “overview of the data, thus allowing researchers to gain a better understanding of the data set” (Mackey & Gass, 2005, p. 251). The raw, written data from the participants will be used for this endeavor. However, the majority of the data is

analyzed following qualitative methods. The research for the present study follows at least five of the seven characteristics of qualitative research proposed by Mackey and Gass (2005). Table 3-1 details Mackey and Gass' (2005) characteristics of qualitative research (p. 162-164).

The study uses rich descriptions in describing the participants of the study and setting of the research. The classroom represents a natural setting in the research. Few participants comprise the student body for the research. And although the research begins with hypotheses of how comics would affect language learning, the study is considered open-ended in that concrete conclusions may not be found, but will contribute to the general theory of learning. The study takes an emic perspective in that the dialogue of language discourse by the students without prompting is analyzed. Finally, the research questions are open-ended. Several interpretations can be made from the findings and further hypotheses may be derived in further qualitative and quantitative studies.

The present study also uses the method of case study which falls under the tradition of qualitative research. Mackey and Gass (2005) detail certain characters of the case study method in applied linguistics. According to the authors, case studies provide general descriptions of language learning, detailed descriptions of learners and setting, and associated with "longitudinal approaches" (Mackey & Gass, 2005, p. 171). McKay (2006) provides further descriptions of the case study approach. Case studies can detail real-life situations; they can describe an intervention technique; and can assess a particular case (p. 72). The present study satisfies all the features of the case study approach except for it not being longitudinal in nature. Since the present study follows the sociocultural theory and specifically language learning in a microgenetic domain, the research is considered a microgenetic case

Table 3-1: Characteristics of qualitative research

Type	Description
Rich description	Careful and detailed descriptions used in contrast to data extracted through statistics.
Natural/holistic representation	Study individuals and events in natural settings (home, work, classroom) opposing laboratory research.
Few participants	Large numbers of participants are required for statistical purposes in quantitative research. Because description is detailed, few participants are preferable in qualitative research.
Emic perspective	The point of view of the subject/participant is valued more in qualitative research than the point of view of the researcher (etic perspective).
Cyclical and open-ended processes	Categories tend to develop through the process in qualitative research. Hypotheses are rarely predetermined and tested in contrast to quantitative research.
Possible ideological orientations	Qualitative research does not proclaim impartiality in ideology. Some qualitative research actually takes a social-political stand and advocates reform.
Research questions	Qualitative research questions are open-ended. Hypotheses may arise from the research.

study following established research using case studies and intervention approaches (Aljaafreh & Lantolf, 1994; Donato, 1994; Swain & Lapkin, 1995, 1998, 2000; Antón, 1999; De Guerrero & Villamil, 2000; Lantolf & Poehner, 2010). In contrast to other sociocultural theory domains, the microgenetic domain looks only at contextualized moments in learning. The other domains look at longer periods of time: ontogenetic is the domain pertaining to the life and learning of an individual human; the phylogenetic domain is the learning that is passed through generations; and the sociocultural domain pertains to symbolic tools created by

various human cultures throughout human history and how these cultural tools affected the favored form of mediation and types of thought valued by those cultures (Lantolf, 2011).

Goals of the research. The purpose of the current study is to use comics as a part of intervention research through a microgenetic case study in an adult, ESL classroom to teach the prepositions *in*, *on*, and *at* and analyze language development during this intervention. The literature on educational research typically uses comics as a way to make learning English enjoyable or provide motivation for students or as a mechanism to develop reading skills (Norton, 2003; Morrison et al., 2002; Versaci, 2001; Bitz, 2004; Ranker, 2007; Carter, 2008). However, the present study suggests the idea that comics are more than a tool for enjoyment. The research specifically highlights the use of comics to shed light on these processes and details implications of their use in the class to further the discussion of theory and praxis in the classroom.

The present research investigates the use of comic images effects on the retention of targeted prepositions for adult English language learners. The prepositions *in*, *on*, and *at* represent the most difficult to master for their polysemous nature (Celce-Murcia & Larsen-Freeman, 1999; Linstromberg, 1996). Another aspect of this goal is to investigate peer interaction and how it is mediated by pantomime comics in a classroom lesson. The current study proposes that comics aids in the retention of these key prepositions by serving as a mediational tool individually and between students. The study suggests that the mediational use of the comics during discussion and completion of the task positively influences language development and subsequently language internalization.

Setting

The intent of this section is to detail the setting for the present study. The subsections containing the research site and participants are described in order to give a broad picture of the research. Next, the setting details participants' demographic data as well as some of their goals for the. The final subsection examines the adherence to the university's ethical standards for human research and how this adherence affected a small, but important part of the study.

Research site. The research for the present study was conducted at an adult learning center (ALC) in a medium-sized city in Alaska (Figure 3-1). Alaska is the largest state in the union in land mass, but from the 2010 census, the state has a population of 710,231 people. (www.census.gov). The city is situated in the Interior of Alaska and has a population of approximately 97,000 people within the borough where the city serves as its administrative center. Alaska's largest industries are in fishing, tourism, mining, and forestry (www.commerce.state.ak.us). Alaska has a substantial military presence with two Air Force bases, three Army posts, and a Coast Guard base. The military and dominant industries draw many foreign and domestic immigrants to the state yearly. The immigrant population in Alaska has grown following the trends in the U.S. where immigrants comprise 10% of the total state population in Alaska. (www.census.gov). In contrast to the rest of the country, Alaska has a more equal balance of foreign born immigrants as Spanish speaking immigrants do not make up the overwhelming majority. According to the American Immigration Policy Center (2011), Spanish speaking immigrants comprised 6% of the total foreign born immigrants in Alaska while Asian immigrants comprised 4%.

The city was founded in 1903 during the waning of the Klondike gold rush. In comparison to the contiguous states, the city is small. It has approximately 40,000 persons



Figure 3-1: Map of Alaska and the U.S. (taken from www.asf.alaska.edu)

within the city limits. The major industries in the city follow Alaska's industries with the exception of fishing and forestry. The military, tourism, petroleum, and mining industries attract many people to the city annually. The city saw a substantial increase in population in the 1970's during construction of the Trans-Alaska Pipeline System (www.census.gov).

The adult learning center was established during the "pipeline boom" to address the growing population and dedicated itself to helping more adults become literate. The ALC also has various programs in its charge beyond adult literacy (ESL, computer training, daycare for adults receiving training, citizenship classes). This subsection will detail the adult learning center through discussion of its geographical context, the program type in which the research

took place, the student population, and the resources at the disposal of those who work in the center.

The building that houses the ALC is located downtown in the city. The center is one block north of the major thoroughfare that separates the city. This location makes the adult learning center ideally situated to receive students because of its convenient location to the heart of the city and for its proximity to the metropolitan bus depot which is located three blocks to the north.

The adult learning center was founded to help adult English speakers to learn how to read. However, over the years the center has moved from adult literacy for English speakers, to teaching adult immigrants the English language, to computer literacy, and other on-site activities targeting adult learners. The adult English classes delivered at the ALC are developed for immigrants with little background in the English language. The ALC uses the Alaska Department of Labor's approved curriculum design to administer these courses. The center currently uses Cambridge University Press' *Ventures* series textbooks/curriculum for this endeavor. The *Ventures* series teaches basic, work-related English skills and follows the numbers one through four. For example, *Ventures 1* and *Ventures 2* target Basic English skills, while *Ventures 3* targets intermediate English skills. Some students wishing more advanced instruction receive individualized tutoring at the center to prepare them for the General Equivalency Degree (GED), the Test of English as a Foreign Language (TOEFL), and U.S. citizenship preparation. The demand for English classes at the center is high. Typically the English classes at the center have up to ten students per class and serve up to one hundred immigrants in total each year. Any students wishing to receive advanced-intermediate or

advanced English courses are referred by the center to the local university or another adult learning center located in the city.

The student body using the services at the center is diverse. The center reflects the growing immigrant population through its ESL service which has grown annually since the center's inception. The first language most common in classes at the center teaching English skills is Spanish. However, there are a growing number of students with Chinese, Korean, Russian, Thai, Arabic, and Serbian language backgrounds taking English courses at the center. The center administers a basic ESL test when a student enrolls for services. This test determines the student's English level. The center only teaches beginning and intermediate English to its students, only those levels of proficiency are accepted for classes in the center. Frequently the classroom is mixed with beginning and intermediate level students to accommodate staff, volunteer, and student schedules. Students who score in the high intermediate or advanced range are typically referred to another adult learning center or the university. The main purposes for students studying English at the center is to improve their English for the workplace, to communicate with the teachers of their children, to prepare them for a GED, to prepare them for U.S. citizenship, and to help with everyday life in an English speaking country (such as going to the store, using the bank, asking for help).

The ALC has various resources available for the teachers and students use. As mentioned beforehand, the center uses the curriculum and texts from the *Ventures* series. The course texts are comprised of a textbook and a workbook for the students to complete activities in the class. The center also has about ten computer stations available for the teachers and students. One of the more popular programs available for students is the *Rosetta Stone* and a one-hour class is offered to students to show them how to use the program and

how to “log-on” with their own password (personal communication with the program specialist). The center has a television capable of displaying PowerPoint presentations and a copy machine for teachers to prepare for classes. It also houses a lending library with English language resources (dictionaries, encyclopedias, thesauruses, etc.) and a used bookstore selling books of all types at a reasonable price.

The center is run by salaried staff and volunteer support. Its student body grows each year. Although much of their needs are based on the amount of space available, more computer stations and programs, and more trained staff, the center makes due with what they have and subsequently rely heavily on the aforementioned volunteer support from the community.

During the summer, the ALC offers courses that deviate from the standard curriculum of the year. Some of these courses during the summer were: surrounding area tours, crafts courses, and a book club. This seemed to be an excellent opportunity to use the summer course as research for the present study. The researcher was granted a class for the summer of 2011. The class lasted six weeks and used only comics as course materials. Drawing instruction (comics) and teaching English through comics was proposed by the research and readily agreed to by the ALC. The goal of the class was to teach ESL to adult learners using only comics and provide the students an alternative to using the *Ventures* curriculum. Activities as part of the course ranged from reading exercises using various comic genres to drawing student created comics to classroom discussions using comics sources.

Participants in the study. The purpose of this subsection is to give a brief overview of the participants in the present study. This snapshot of the student body provides a context

for rich description in order to compare with other case studies involving microgenetic intervention.

The characteristics of the student body for the present study accorded with the current trend in adult ESL education in the U.S. Adult immigrants in the U.S. come from many backgrounds, languages, and economic situations (Auerbach, 1993; Dryden-Peterson, 2007). Statistically, immigrants to the U.S. speak Spanish, come from a Latin American country, work in one or more minimum wage jobs, and want to improve their English to better their lives within the U.S. The other dominant group of immigrants comes from Asian countries (American Immigration Policy Center, 2011). Many of the immigrant men in the city work two or more jobs. For this reason, immigrant men do not consistently take advantage of English classes while immigrant women with small children in tow comprise the majority of the ESL classroom (Crandall & Shepard, 2004). This was apparent in the center as well. Two male students were enrolled in the class for the current study. The majority of the students were housewives or visiting family members in the country for the summer. All students were highly educated (that is, having at least a high school diploma or equivalent in their home countries). Three students had a bachelor's degree in their home countries and one student had a professional degree (master's or equivalent). All students expressed comfort in reading English, but conveyed difficulty in listening and conversation skills. Most students were interested in improving their conversational skills and making friends in the U.S. Two resident students (married to Americans) were not interested in gaining citizenship according to the survey, which is more typical in the rest of the adult learning centers in the states.

Ten students enrolled in the summer course. Once the course began in July 2011, eight students were present. One of these eight students sporadically attended class and

another attended consistently for two weeks and then left the country because she was in the city only to visit family. The one who had non-consistent attendance actually arrived for the lesson during the research. Those who were present for the research activity have their names (pseudonyms) marked in bold text and shaded in grey in Table 3-2.

Profile description of the participants in the study. In order to preserve the identities of the participants in the present study, pseudonyms instead of their real names are used throughout this thesis. The pseudonyms reflect the national origin of the students' names, but are in no way similar to their actual names (including the first initial). Demographic information was derived from an initial questionnaire and interviews during the first week of the summer course. Other information was obtained by discussion activities in class, informal discussions between students and the researcher, and through drawing activities where the students discussed their families and other small details of their lives.

Gabriela came to Alaska with her American husband from Colombia. Her husband served in the armed forces of the U.S. and Gabriela met him while he was on assignment in

Table 3-2: Demographic information of student body. Rows shaded in gray indicate students present for the study.

Name	Sex	Country of origin	Age (approx.)	Native language	Profession
Gabriela	F	Colombia	35	Spanish	Lawyer
Oksana	F	Russia	60	Russian	Accountant
Miyu	F	Japan	25	Japanese	Housewife
Ayaka	F	Japan	25	Japanese	Housewife
Diego	M	Mexico	25	Spanish	Student
Jung	M	Korea	25	Korean	Guitar maker
Hien	F	Vietnam	25	Vietnamese	No answer given
Maria	F	Colombia	18	Spanish	Student (high school)

her country. She previously worked as a lawyer in Colombia. Her first language is Spanish and although her English is very good, she felt uncomfortable and embarrassed to use it. Gabriela expressed her goal to improve her English so that she might be able to practice law in this country someday.

Miyu and Ayaka came to Fairbanks with their husbands who work for a large mining operation near the town. Since their husbands work a schedule of roughly seven days on the job and four days off, both women wanted to pass the time learning and improving their English. Both women have bachelor's degrees in Japan. Miyu had less exposure to English than Ayaka, who has learned English for the past ten years. Both women were great enthusiasts of comics and come from a truly comics culture in Japan. Both women seemed very enthusiastic to draw and discuss comics with the researcher.

Diego met his American wife in his home country of Mexico. He came to Fairbanks in 2010 to live with her and has been a regular student at the ALC ever since. Diego liked to draw and was not hesitant to participate in class discussions.

Hien was in Fairbanks visiting her sister (who also married an American husband) when she enrolled in the ALC. She could read and write English well, but had real difficulty in understanding and speaking the language. She wanted to improve her English, but was dependent on her sister taking her to and from class (personal communication with the support specialist).

Table 3-3 details the English level, the manner each student best learns, and goals for learning English. The information was garnered from a pre-course questionnaire created by the researcher and personal communication with the support staff at the ALC.

Table 3-3: Student language level, learning style, and goals. Rows shaded in gray indicate students present for the study.

Name	English level	Learns best by...	Goals
Gabriela	Intermediate	Reading, writing	C, U, Job
Oksana	Intermediate	Reading, writing	C, U
Miyu	Beginner	Writing	U, MF
Ayaka	Intermediate	Speaking	C, U, MF
Diego	Intermediate	Speaking	Job
Jung	Beginner	Speaking, listening	MF
Hien	Beginner	Reading, writing, speaking, listening	N/A
Maria	Intermediate	Reading	C

C-conversation, U-understanding, Job-employment, MF-make friends, N/A-no answer given

It was also important to the researcher to assess the potential students' attitudes of language learning and their attitudes towards comics. As a part of the initial questionnaire, some questions assessing these issues were asked. Table 3-4 details these issues. The table shows that the students' attitudes towards language learning and comics were generally favorable. A number of answers were left blank and the researcher used the code "N/A" to depict this in the table.

The research for the present study comprises one class during the course of the summer. For the collaborative portion of the study, groups were predetermined before the start of the class. Since two of the regular participants were not present for the research, one group comprised a dyad while the other a triad. The researcher placed Gabriela and Diego together as a dyad for the express purpose of them being able to use their L1 if the need arose. According to Swain and Lapkin (1998) the use of the student's L1 is beneficial to language learning and internalization during collaborative tasks. Miyu, Ayaka, and Hien formed the

Table 3-4: Comics interest. Rows shaded in gray indicate students present for the study.

Name	OK to use L1?	Favorite Comics	Like to draw?	Can comics help improve English?
Gabriela	No	Pink Panther	Yes	Yes
Oksana	N/A	Russian animal comics	Yes	Yes
Miyu	Yes	Doraemon, Dragon ball	Yes	Yes
Ayaka	Yes	Master Keton	Yes	Yes
Diego	Yes	Friends	Yes	Yes
Jung	Yes	Monster	Yes	Yes
Hien	N/A	Tom and Jerry	Yes	Yes
Maria	N/A	Mafalda	N/A	Yes

N/A-no answer given

second group for the study. These groups were formed only for this lesson as members of groups frequently changed throughout the summer.

The layout of the class for the day of the research is shown in Figure 3-2. It should be noted that the student who requested not to have his face shown in video, has his back to the camera during the lesson (Figure 3-3). The DVD camera projects towards the wall to the right of the picture.

Ethical considerations. The researcher followed the university's ethical considerations for conducting research on human subjects. Written permissions and signatures were necessary to gather from the university, participants in the study, and the adult learning center prior to conducting the investigation. All documents were translated into respective languages and each participant understood and signed the required consent forms. All participants were aware that they could opt out of the study at any moment. As previously mentioned, one student (Diego) wanted to be a part of the study, but chose to not be included

ALC HALLWAY

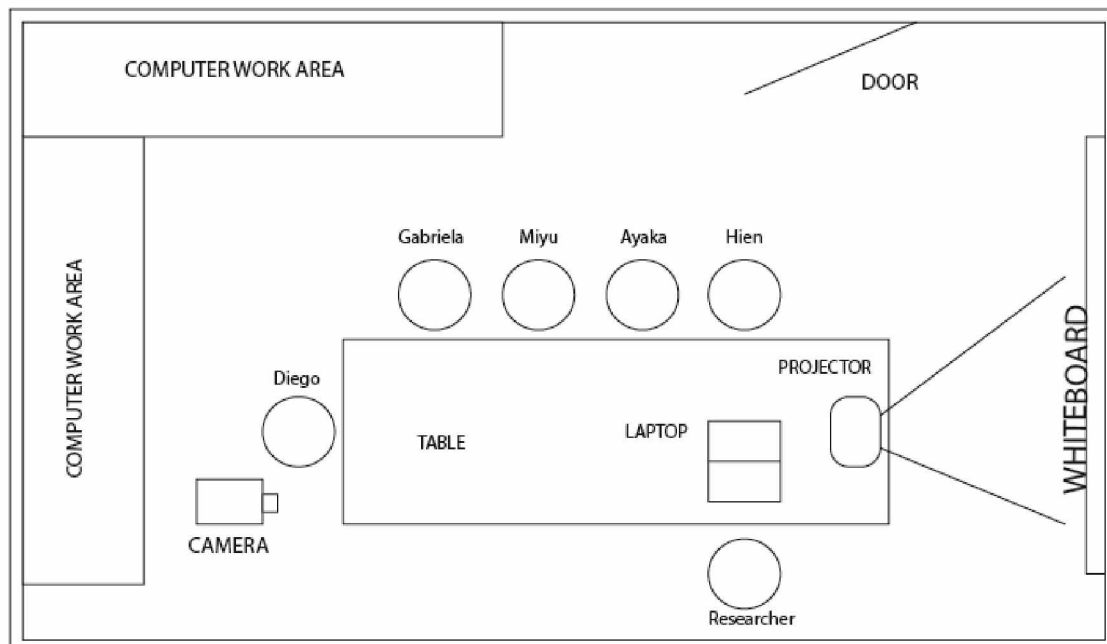


Figure 3-2: Classroom layout



Figure 3-3: Camera view

in any video or photographic data. He consented to using his voice, written, drawing, and other data gathered in the research.

The researcher also contacted E.C. Publications and requested permission to use the Spy vs. Spy images for academic research. E.C Publications subsequently approved the use of the comic images for the present study. The letter of approval can be found in Appendix G.

Data

Although much data were collected during the summer course, the present study considers only the data gathered during the modified dictogloss task activity as pertinent for analysis of the research questions. Data collection, procedures, and instruments for the present research study are detailed in this section.

Data collection. The data collected for this study forms a small portion of the entire course taught during the summer. Much of the data does not pertain directly to the research. However, the researcher wanted to gather as much data as possible for the analysis portion of the study should any aspects arise that warrants looking outside of the proposed research data.

This section has two subsections. The first will describe the electronic data gathered for the present study. The next subsection will detail all other data that will be useful for the study.

The course offered by the researcher at the ALC provided much information, artifacts, and items to study for both the research and for future teaching endeavors. As part of the Internship, all lesson plans were saved throughout the summer. Notes and reflections of how the lessons performed in the class were also saved. This project was also filed for possible analysis. Table 3-5 details all artifacts collected during the summer.

Table 3-5: Artifacts. Asterisk and bold text indicate use in analysis.

Artifact	Quantity
Class artifacts (work done in class)	17 pp.
Final project for class	10 pp.
Lesson template	1 p.
Prepared lesson	14 pp.
Attendance register	1 p.
Journals (copies of)	69 pp.
Informed consent	7 pp.
Demographic questionnaire	8 pp.
* Pretests	6 pp.
* Posttests	6 pp.
* Delayed-posttest	7 pp.
Teacher reflection log	18 pp.
Internship reflection	4 pp.
Intern hours log	1 p.
3 lesson evaluation	6 pp.
Video lesson evaluation	3 pp.
Protocols	2 pp.
Classroom exercise templates	5 pp.
Photos	7 each
* Video	148 min/16 s
* Audio	86 min/ 52 s
Pilot materials	5 pp.

Various forms of data were collected specifically for the research project. The specific data for analyses are indicated by the bold text and asterisks in Table 3-5. Most of the data collected were not used for the present research. The most pertinent data are as followed: attendance register, lesson plan for the pantomime comics study, all IRB forms, student questionnaires and surveys, oral interviews on MP3, reflection logs, pretest, posttest, delayed

posttest, lesson evaluation for the pantomime comics lesson, and video recording of the lesson itself.

Procedures of the study. The lesson specifically used for the present research was given on July 28th, 2011 as a portion of a unit using comics to explain spatial prepositions. Table 3-6 represents what occurred during the lesson on this day.

The researcher targeted the English prepositions *in*, *on*, and *at* for the study. As discussed in Chapter One, Celce-Murcia and Larsen-Freeman (1999) and Lindstromberg (1996) identified these prepositions as the most difficult for English language learners to master because of their polysemous nature. The researcher also decided that instead of using static images to teach the targeted prepositions, that comic images depicting a story would be used instead. It was essential for the images to be well-drawn so no mistake would be made determining what the objects were and what the story was about. Also, the images needed to have a distinguishable order to them as to not confuse students. Prohias' (2001) *Spy vs. Spy* was chosen for this endeavor because of the previous requirements. Prohias (2001) was a comic artist for *Mad Magazine* from the 1960's until his retirement in the early 1990's. His most famous characters were the black spy and the white spy in the apt titled "Spy vs. Spy." The artist was a refugee from Cuba and never mastered the English language. This was not, however, the reason he chose to work in pantomime. According to Aragoes (in Prohias, 2001), Prohias chose to work in pantomime because it was more difficult to convey narrative without words and he wanted to reach a wider audience. Prohias' (2001) pen lines are beautifully drawn. There is no mistake distinguishing objects in the comic images and the story is effortless to follow (Appendix A).

Table 3-6: Overview of the lesson

Order of events	Approximate time span
Introduction of the lesson (Spy v. Spy)	3 min
Pretest (Appendix C)	5 min
Review essential vocabulary before dictogloss task (on PPT)	5 min
Read dictogloss task panel by panel leaving out the punch line	3 min
Read the dictogloss task again sans punch line	3 min
Broke the student body into pairs for discussion and retelling/writing of the narrative	3 min
Student groups complete narrative and predict punch line	7 min
Student groups tell their narratives and punch lines out loud to the entire class	3 min
The instructor reveals the real punch line	1 min
The instructor reads the entire dictogloss task with punch line	4 min
Posttest (Appendix D)	5 min
Delayed posttest given on August 16 th , 2011 (Appendix E)	5 min

A modified dictogloss task was used for the study. As discussed previously, the dictogloss task is a variation to the dictation exercises of the past and was developed by Wajnryb (1990). The procedure to the dictogloss task takes place in four stages (Wajnryb, 1990, p. 7-9; Nabei, 1996). Stage one is the preparation stage where new vocabulary for the dictation is introduced to the students before the dictation. Stage two is the dictation stage. The lecturer recites a text at normal speed. The students are instructed to simply listen to the read text the first time. The lecturer then recites the text again at normal speed. This time the students are to take notes. This all occurs on an individual basis. The third stage is the reconstruction portion of the exercise. Instead of individually reconstructing the text, the students are pair or broken into groups and compare notes and reconstruct the text. The fourth and final stage is the analysis. The students correct any errors they have between notes and

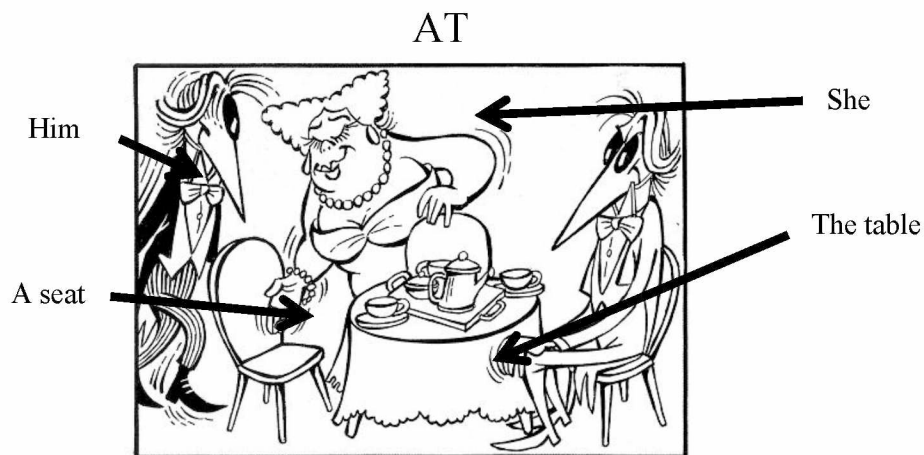
share their results with the class. Table 3-7 details the dictogloss task according to Wajnryb (1990).

The dictogloss task modification involved a visual component (through the comics). The *Spy vs. Spy* comic by Prohias (2001) was chosen to test the modified dictogloss task in a pilot study conducted at the adult learning center. The comic strip was broken apart panel by panel to tell the story in dictation (Appendix B). The procedure for the modified dictogloss task was the same as Wajnryb's (1990) with the addition of *Spy vs. Spy* images shown to the class through a PowerPoint slide-show. Following Wajnryb's (1990) preparation stage, new vocabulary and the intended preposition to be learned was introduced to the class (Figure 3-4).

The text for the dictation was created for each cartoon panel as text normally does not exist in pantomime comics (Figure 3-5). As the text was read aloud, each panel corresponding to that particular text was shown to the entire class through the projector.

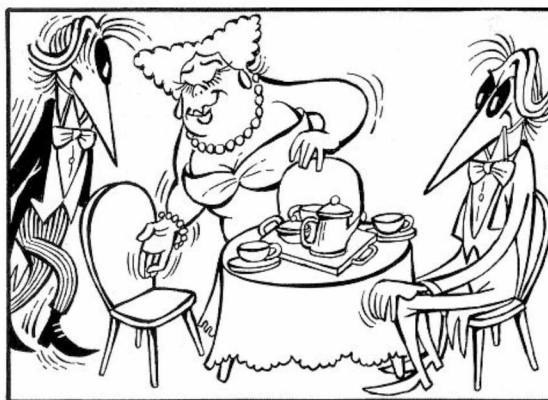
Table 3-7: Dictogloss task

Stage	Task
One (Preparation)	Warm-up exercise; introduce new vocabulary; learners will be taught what is to be expected in the exercise; groups will be assigned before the exercise
Two (Dictation)	Short text will be read once at normal speed; no notes to be taken; text read again at normal speed; students take notes on second reading
Three (Reconstruction)	Students broken into groups; groups cooperate to reconstruct text using their notes; students negotiate perceived errors in joint text reconstruction
Four (Analysis)	Students share their cooperative-reconstructed texts with the class (overhead, blackboard, or out loud); texts are compared and potential errors noted by students; upon completion of each groups' sharing text, the actual text is read again



™ E.C. Publications, Inc. used with Permission

Figure 3-4: Introduction of new vocabulary



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Figure 3-5: For this image, the text is read aloud: “She offers him a seat at the table.”

The concept of spatial prepositions was introduced in the lesson before the actual study. The researcher purposefully left out discussion of the spatial uses of in, on, and at in that lesson and for the particular lesson for the study, administering a pretest to find out what the students already knew. In this study, it is suggested that mediation occurs internally and externally using the pantomime comics as the tool for such mediation. The use of these images, therefore, was essential. The punch line was purposefully left out for the students to

predict what would happen next. The purpose of the posttest was to verify that the students could internalize what was learned in the lesson. The delayed posttest was to confirm that the students internalized the spatial meanings of the targeted prepositions thus showing acquisition. The entire modified dictogloss task including the dictation read by the researcher is included in Appendix B.

As per request by the ALC and mandated by local university's ethical policy, the course was discussed and the intent to use it as research for the university was declared to the students. The informed consent was read, reviewed, translated, and made completely understood prior to the start of class and a copy was given to each student for their personal records. The support specialist ensured that the Vietnamese, Russian, Japanese, and Korean students received adequate translation from a family member who spoke English well. The researcher reviewed the informed consent forms with the Spanish speaking students to ensure they understood the nature of the research and the class. All students readily gave their consent to be a part of the study and only one student chose to be part of the study but preferred to not be videotaped.

Instruments. This portion of the data section details the instruments used to collect data for research in the present study. Written data and audio/visual data are discussed.

Written data. Paper data were important to the present study. In order to determine prior-cognitive knowledge of the study's targeted prepositions, a pretest was administered to each student and taken individually. These data provide a source for quantitative analysis. In order to assess the effectiveness of the intervention, a posttest was administered immediately after the completion of the lesson. This test was to measure how the social activity affected each student's learning (again individually). A delayed posttest was subsequently administered

four weeks after the modified dictogloss task and was exactly the same as the posttest immediately following the intervention. The purpose for it being the same was to verify if internalization occurred and not to deceive the learners. This test measured each student's recall of the targeted prepositions in the present study (Appendices C-D).

The written tests used a variety of formats to elicit student responses. Each test contained three parts comprised of six questions. Part 1 used a cloze format where students supply the missing spatial preposition. Part 2 used a multiple choice format where the students circled the correct spatial preposition. Part 3 contained a modified cloze format that incorporated a picture accompanying the cloze questions. The students used the picture to help answer the question (Appendices C-D). The pretest had two questions for each part. The posttest and delayed posttest had three questions in the first part, two questions in the second part, and one question in the third part. The posttest and delayed posttest were exactly the same and administered four weeks between each other.

Audio/visual data. Electronic data was also gathered for analysis in the present study. An audio recorder was used for the dyad comprised of Gabriela and Diego while the digital camera was used for the triad comprised of Miyu, Ayaka, and Hien. The researcher used his personal Sony ICD-PX312 digital audio recorder for the entire lesson. During the instruction phase and dictogloss task, the recorder was placed on the center of the table. Since the Sony ICD-PX312 is a reliable tool with good sound quality, it was placed nearest the two Spanish speaking students present for the study to capture any use of the L1 for analysis. However, the audio recorder also catches extraneous sounds coming from outside the group which mixed with the sound from the lesson, making deciphering difficult at times. Also, some utterances were made quietly and could not be discerned.

In addition to the digital recorder, a Sony HandyCam Mini DVD visual recorder was used for the research lesson. The Sony HandyCam uses a smaller size compact disc that allows approximately one hour of digital video recording, which was sufficient for the present study's purposes. A tripod was also borrowed from the Rasmussen Library to mount the Sony HandyCam for better recording. Before the actual lesson took place, the researcher practiced recording various sessions throughout the summer using his personal Flip Ultra HD Video Camera. The purpose of recording the various sessions before the actual lesson was to get the students accustomed to being video recorded. The Sony HandyCam was used on the day of the research lesson.

Additionally, Adobe Illustrator was used to modify still shots taken from the video in the study. The stills were modified using Adobe Illustrator for two purposes: to distort the images in order make the participants unidentifiable and to make the images appear to be more like comics in spirit of the study itself.

Data Analysis

This section will detail the data collected in the present study. The section is divided into two subsections. The first will describe the criteria followed in order to analyze the data collected for the study. The next subsection will specify how the data collected was analyzed. The purpose of this section is to therefore provide a model that will be used for the data analysis in Ch. 4.

Criteria for analyzing data. The actual data analyzed in the present study were: the written tests and the audio/visual data. The importance to the present research dealt with data that would measure the knowledge already known by the students and what was learned during the intervention (the lesson). Additionally, the social interaction between students and

how this affected what was learned was significant for the research. With these factors, the researcher used written tests to measure learning for each individual student. The written data from the dictogloss task was also analyzed, but cannot be used for each, individual participant as one person wrote the narrative that was created through collaboration. The video, audio, and accompanying comic images to measure how social interaction (under the sociocultural theory) were also analyzed.

The study follows similar microgenetic case studies using intervention models (Aljaafreh & Lantolf, 1994; Donato, 1994; Swain & Lapkin, 1995, 1998, 2000; Antón, 1999; De Guerrero & Villamil, 2000; Lantolf & Poehner, 2010).

The audio and video provided the much of the data analysis allowing examination of social interaction between students. Similar studies used tools such as conversation analysis (CA) and discourse analysis (DA) to analyze student interaction during a collaborative task (Swain & Lapkin, 2000; He, 2004). Other studies have used CA to analyze interaction between teachers (Johnston, 2011). According to Wong and Zhang-Waring (2010), CA focuses on the emic perspective of the participants by investigating utterances during actual interaction (p. 8). CA analyzes certain practices within conversation. These practices are: turn-taking, sequencing, overall structuring, and repair (Wong and Zhang-Waring, 2010; Shergloff, 1987, 2000).

The present study does not base analysis on CA, but rather follows the detailed transcription conventions of the approach for more detailed transcription. The importance of such detail is explained in Wells' (1999) critique of Antón and DiCamilla (1999). In the latter study, the authors touted assumed private speech of one subject with her utterance, "wait, no" (Antón & DiCamilla, 1999, p. 243). However, the authors did not use descriptive transcription

as found with CA conventions and Wells (1999) points out that we as readers cannot tell if “wait, no” was said softly or with varying intonation which according to the research, definitively indicates self-directed speech (Lantolf, 2000, Wertsch, 1991). Wells (1999) calls such detail in transcriptions as highlighting *paralinguistic features* (p. 251). CA transcription conventions provide such features and are thus used in the present study.

All these aspects of CA apply to the present study; however, video data has recently become important to CA research (Shegloff, 2000). Video analysis helps describe why certain events take place in conversation. For instance, if a pause is apparent in audio analysis, a researcher might think the speaker is simply thinking about what to say next. Video analysis of the same event might confirm this thought, or it may reveal that the pause was caused by a distraction outside the conversation, or the speaker temporarily focusing (gaze) on another conversation nearby, etc. Video analysis for the present study is important to find instances of physical deixis and for analyzing the data using CA transcription conventions as a tool for descriptive transcription analysis.

Discourse analysis through the use of analytical foci, CA transcription conventions, and looking for instances of deixis (adverbs and gestures) were chosen as the tools for data analysis. This is discussed next.

Data analysis. Similar studies using collaborative tasks were consulted in order to provide a basis for the analysis in the present research (Swain & Lapkin, 1995, 1998, 2000; Nabei, 1996; Antón & DiCamilla, 1999; Fernández Dobao, 2011). The method many researchers take in analyzing audio data is language-related episodes (LRE). A LRE is considered any portion of dialogue where the language itself is talked about, questioned, or corrected (Jackson, 2001). Swain and Lapkin (1995) further refined LREs by categorizing

them as meaning-based, grammatical, or orthographic (p. 378). In a subsequent study, Swain and Lapkin (1998) categorized the LREs as either lexis or form based (p. 326). Jackson (2001) notes the LREs can also take other bases such as discourse, intuition, verb tenses, articles, prepositions, subject/verb agreement, and linking ideas (p. 299).). In a similar fashion of using LREs to highlight language events for analysis, the present study uses analytical foci to concentrating analysis in the student dialogue that demonstrates language development.

The first analytical focus analyzes the data for instances of the use of the targeted prepositions and development of other grammatical features by the students. This focus is assumed to have occurred in conjunction with the comic image in front of the students, but because of the lack of video data for the student pair, only the discussion in terms of grammatical development will be analyzed in the first analytical focus. The next analytical focus takes the lack of video into account and targets language that shows the students are looking at and pointing out features of comic panels during their reconstruction task. Analytical focus 2 therefore employs the highlighting of deixis and specifically deictic adverbs (here, right here, there, etc.) and deictic gestures (finger pointing, gestures) to show that the students are specifically using the comic images to mediate their language development and complete the task at hand.

Analytical foci will be used for the present study to pinpoint language development. Significant conversation was transcribed for further analysis using the software InqScribe. The researcher followed CA transcription conventions based on Jefferson (2004) and Shegloff (1987) which is commonly referred to as Jeffersonian notation (Jefferson, 1984). Student dialogue was transcribed phonetically as much as possible. The purpose was to accurately portray what was said as much as possible without implying what was said. Table 3-8 depicts

Table 3-8: Jeffersonian transcription notation

Symbol	Name	How used
[Left bracket	Starting point of overlapping utterance
]	Right bracket	Ending point of overlapping utterance
=	Equal sign	No break/gap between utterances
(.3)	Number within parenthesis	Elapsed time by 1/10 th of seconds
(.)	Period within parenthesis	Micropause; less than (.2) seconds
_____	Underscore	Stress, pitch
ALL CAPS	All words capitalized	amplified utterance
:	Colon	Prolonging previous sound
°word°	Degree symbols enclosing word	Quiet utterance
<i>Sí tienes razón.</i>	Italicized words	Utterance in foreign language
?	Question mark	Rising intonation typically eliciting help, feedback, or a question
¿	Upside-down question mark	Rising intonation not eliciting question
>Word<	Right/left brackets	Rapid utterance
<Word>	Left/right brackets	Slowed utterance
((descriptions))	Double-parenthesized words	Transcribers notes
(not understandable)	Parenthesized words	Transcriber uncertainty
hh	Double or more “h’s”	laughter
Tuhsheen	Phonetic spelling as heard on audio	<i>Touching</i> is the conventional spelling

the transcription notations that are used for the present study (Jefferson, 2004; Wong and Zhang-Waring, 2010). Furthermore, CA transcription conventions offer paralinguistic features valued by Wells (1999) for rich description and analysis.

As mentioned previously, three paper tests were collected during the course of the present study. The pretest measured what each student knew about the targeted prepositions. The posttest and delayed posttest measured whether or not the intervention using the comics and interaction with other students affected their individual learning of the targeted prepositions. The written tests are analyzed for each student and the class as a whole using raw scores, averages, and descriptive analysis.

Summary

This chapter presented the methods used to conduct the research in the present study. The first section detailed the research design utilized by the present study. The next section explained the setting and provided rich descriptions of the research site and participants that took part in the study. The third section reviewed the procedures used to collect the data, the types of data that were collected, and the instruments used to collect the data. The final section examined the criteria used to analyze the data as well as the type of analysis that was used for the data particular to the present study. Chapter four will analyze and provide a discussion of the data that was collected for the present study.

Chapter 4

Data Analysis and Results

This chapter concerns the analysis of the data collected during an activity as a part of a larger course during the summer of 2011. As mentioned in Chapter 3, a modified dictogloss task was used to teach spatial meanings of the prepositions *in*, *on*, and *at*. The modified dictogloss task was accompanied by a pretest, posttest, and delayed posttest. The data is analyzed according to each research question:

1. *How does the use of pantomime comics contribute to the acquisition of the prepositions in, on, and at for adult English language learners?*
2. *How does the use of peer interaction mediated by pantomime comics affect language development?*

The data collected for the first research question specifically investigates student acquisition of the targeted prepositions as a result of using pantomime comics. In order to measure acquisition, the present study considers the data gathered demonstrating individual knowledge of these prepositions as important. The only data thus that demonstrates this individual acquisition from the written tests taken before and after the activity.

The next research question investigates language development between individuals. The present study considers data demonstrating language development through the use peer interaction mediated by the comic images as integral. The data collected that demonstrate language development mediated by pantomime comics are audio/video data and transcriptions of that data. The transcription data are divided into two distinct analytical foci. These foci targeted any segment of dialogue where the language itself is developed. The first focus shows language development through peer interaction with the assumption that comic images are

being used, but not explicitly seen or discussed. This focus follows Swain and Lapkin (1998) in using grammar as the focal point. Specifically, the first focus examines the development of the targeted prepositions and the present progressive as examples of language development. The second focus shows language development with the comic images being physically pointed out and specifically discussed through the use of deictic adverbs and gestures¹².

The findings for the first research question are inconclusive. The research design, elicitation measures, and the addition of a control group are needed to clarify whether or not pantomime images affect language acquisition. The findings for the second question suggest that pantomime comics have a positive effect on the language development of beginning-level, adult ESL students during peer interaction.

The First Research Question

The importance of this research question lies in its focus on acquisition of specific spatial prepositions in the English language through the use of pantomime comic images. The question follows: *How does the use of pantomime comics contribute to the acquisition of the prepositions in, on, and at for adult English language learners?* First, the data that supports acquisition of the prepositions are presented and analyzed. Next, variables that affect the data are briefly discussed. Lastly, the overall analysis of the question is summarized.

Data to analyze the first question. The data collected during the activity that pertains to the first question come in the form of written tests which were taken individually demonstrating acquisition of the targeted prepositions. The pretest and posttest were taken on

¹² The act of pointing to a physical object takes different names in the literature. *Indexicals* and *indexicality* is common and comes from the philosophical tradition of Peirce (Chandler, 2003). The present study uses the more contemporary term *deictic gesture* from the literature to indicate the physical act of pointing out an object (Kendon, 1997).

the day of the activity and the delayed posttest was taken four weeks later. Table 4-1 represents the three written raw test scores for all the participants in the study.

The class average for the pretest, posttest, and delayed posttest were 70%, 93%, and 83%. This number was derived by taking the total number of questions answered correctly and dividing that number by the number of possible points. For example, the total number of points scored correctly in the pretest was 21. This number was divided by 30 (the total possible) and multiplied by 100 to get the percentage.

Individually, the participants' scores differed. Gabriela had perfect scores for the pretest and posttest, but her score dropped to a 4/6 in the delayed posttest. Miyu scored 5/6 in the pretest, a 6/6 in the posttest, but dropped to a 4/6 in the delayed posttest. Ayaka scored 5/6 in the pretest and 6/6 in both the posttest and delayed posttest. Diego's scores show the most improvement of the group. His pretest score was 2/6 and both posttest and delayed posttest were perfect scores. Hien scored 3/6 on the pretest and a 4/6 on the posttest, but was absent for the delayed posttest.

The pretest. The students took a pretest before the modified dictogloss task (the intervention). Table 4-2 displays the responses to the pretest questions.

Table 4-1: Written test data

Name	Pretest	Posttest	Delayed posttest
Gabriela	6/6	6/6	4/6
Miyu	5/6	6/6	4/6
Ayaka	5/6	6/6	6/6
Diego	2/6	6/6	6/6
Hien	3/6	4/6	

Table 4-2: Pretest scores

Student	Pretest questions					
	Cloze		Multiple Choice		Cloze with image	
	On	In	At	On	On	On
Gabriela						
Miyu				X		
Ayaka						X
Diego		X		X	X	X
Hien			X	X		X

There were six questions on the pretest. The first two elicited the prepositions *on* and *in* in cloze format. The next two questions elicited *at* and *on* in multiple choice format. And the last two questions elicited *on* in cloze format accompanied by a Spy vs. Spy panel from the modified dictogloss task. In the pretest, the students have yet to see the entire Spy vs. Spy comics. The “Xs” to the right of the students’ names signify an incorrect answer corresponding to the type of question. The blank spaces next to the students’ names corresponding to the preposition elicited were answered correctly. The actual pretest is presented in Appendix C. The fifth and sixth questions used the image below in conjunction with the questions written in cloze format (Figure 4-1).

Gabriela missed none of the questions. Miyu missed the question eliciting *on* in the multiple choice question. Ayaka missed the question eliciting *on* in the cloze with image question. Diego missed *in* in the cloze question, *on* in the multiple choice, and *on* in the cloze with image question. This demonstrates him having the most trouble with the prepositions *in* and *on*. Hien missed *at* and *on* in the multiple choice questions and *on* in the cloze with image question.

The white spy's hand is _____
 his knee.

The lady wears a bracelet _____ her
 wrist.



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Figure 4-1: Modified cloze questions

The posttest and delayed posttest. Upon completion of the pretest, the students received intervention through the modified dictogloss activity as detailed in Chapter 3. Table 4-3 displays the students' scores for each question of the posttest and delayed posttest. The question types, "Xs," and blank spaces follow the same format of the pretest.

Gabriela scored perfectly on the posttest, but missed *at* and *on* in the cloze and cloze with image questions of the delayed posttest. Miyu also scored perfectly in the posttest, but dropped her score in the delayed posttest by missing *on* and *in* on the delayed posttest. Both Ayaka and Diego scored perfectly in the posttest and delayed posttest. Hien missed *in* and *on* in the posttest, but was absent during the delayed posttest.

Discussion. The present research concludes that the data shows limited support for the first research question in that comic images contribute to the acquisition of the targeted prepositions. This partial support is derived from comics only being one of the numerous variables to test performance. Other factors such as: lack of control group; difficulty in

Table 4-3: Posttest and delayed posttest

Student	Posttest questions						Delayed posttest questions					
	Cloze			Mult. Choice		Cloze	Cloze			Mult. Choice		Cloze
	ON	AT	ON	IN	ON	ON	ON	AT	ON	IN	ON	ON
Gabriela								X			X	
Miyu							X			X		
Ayaka												
Diego												
Hien				X		X	Not present for delayed posttest					

isolating the comic images as a variable; the number of questions involved; acquisition being measured in a brief moment in time; test validity issues- it may have been too easy; and the lack of student homogeneity in language level could all contribute to testing results.

Studies that test language acquisition through innovative methods typically use a control group design (Mackey & Gass, 2005). The control group in this case would have taken the same written tests as the experimental group, but would not have received intervention using the comic images. In the present study, the size of the student body prohibited the option of using a control group. By having a control group, the study could have better pinpointed whether or not the comic images affected language acquisition during the activity.

Another factor in the data only showing partial support of the research question comes from the testing measures. Although comic images were used in the three tests, they were used in conjunction with cloze question format. The comic images were not isolated as their own question, which would more clearly demonstrate their effect on acquiring the targeted prepositions. One way to have accomplished this would be to present the comic image and ask the student to answer a question in their own words. The question would be made in such a

way as to elicit one of the targeted prepositions. Furthermore, the test might have been too easy for the participants.

The modified dictogloss task was an activity conducted within the microgenetic domain. According to the research, activities done in microgenesis are “crucial in understanding how psychological processes are formed” (De Guerrero & Villamil, 2000, p. 54; Vygotsky, 1978; Wertsch, 1991). Formation of psychological processes cannot be equated to internalization. Therefore, analysis in the ontogenetic domain that is learning over the period of an individual’s life as opposed to a moment in time would be necessary to determine if the task and the use of the comic images during the activity contributed to the students internalizing the targeted prepositions. One way of approaching this deficiency would be to administer another delayed posttest a year or so later. This, however, is impractical as students at the ALC typically move on and take more advanced courses outside the center, as mentioned in Chapter 3. Other factors such as test validity and student disproportion could also have affected the outcome.

According to the research presented in Chapter 2, comic images benefit beginning and low intermediate level students more than more advanced students (Liu, 2004). The three students that were either beginning or low-intermediate level were Miyu, Diego, and Hien. The other two, Gabriela and Ayaka, were considered at a solid or high-intermediate level by the ALC. In line with the literature, the three beginning/low-intermediate students should have benefitted the most from the comic images. While the more advanced students would be hindered by the images. The results reflect the literature through Diego’s scores (improvement) and Gabriela’s score in the delayed posttest (hindrance), but not through the others’ scores.

The Second Research Question

The second research question is analyzed using the data during the reconstruction phase of the modified dictogloss task. First, the question is discussed and the data used to analyze the question are examined. The variables affecting the analyses are then briefly detailed. Finally, the question and its supporting data and factors are summarized. The second research question investigates the effect of peer interaction mediated by the comic images on language development. The question analyzes language development in a microgenetic domain by questioning *how the use of peer interaction mediated by pantomime comics affects language development*. Although the first question measured language acquisition using the targeted prepositions, the second question considers the development of these prepositions as well as other examples of language development in microgenesis as important.

Data to analyze the second question. This question is analyzed using analytical foci as discussed in Chapter 3. These foci were selected from the transcripts of the student to student interaction during the reconstruction phase of the modified dictogloss task. Two foci were selected to be analyzed: 1). Focus 1 to analyze the development of grammar (prepositions and progressive) using the comic images circumstantially; 2). Focus 2 where language and gesturing are employed to focus attention on the comic image.

The analysis of peer interaction focuses on the data collected by the interaction of the dyad comprised of Diego and Gabriela. The reason for focusing on this pair is because the pair was predetermined (discussed in Chapter 3). The pair also has the clearest audio data than the other group. The data here is used to analyze whether or not pantomime comic images mediated the peer dialogue contributed to both students' language development. Transcripts of the audio data were used for this analysis. The transcripts during this time period comprise of

eighty-eight lines (Lines 249-337). The entire transcript of the activity can be found in Appendix E. As discussed in Chapter 3, the transcripts are written to match the students' utterances phonetically. The purpose of phonetic transcription in the present study is to analyze what is said exactly and not portray an exogenous point of view interpreting what may have been said by the researcher (Kasper & Wagner, 2011, p. 122). The comics panel accompanies each excerpt to provide background to the dialogue. Also, the analysis takes into account what was dictated by the researcher during the two dictation portions of the modified dictogloss task and the reconstruction notes the pair wrote during their interaction.

In order to examine the student dialogue, two different episodes were selected. The first analytical focus is used to target grammar in a similar manner as Swain and Lapkin (1998). Initially, the first analytical focus was selected to examine the students' language development through the use of the targeted prepositions. However, during analysis it was obvious that another aspect of language development (noticeable change in use of the present progressive tense) was occurring and for this reason, focus 1 targets the participants' change in use of grammar in general terms. The first analytical focus is discussed using instances of use of the targeted prepositions and present progressive as points of focus. Since video was not used to capture actual student discussion clearly depicting the pair's focus on the comic images, the first analysis using the grammar as a focus only examines dialogue between the students where language development is apparent in the transcripts and audio. While the student groups were reconstructing the story of the modified dictogloss task, they had the comic images in front of them. The present study therefore includes the specific comic image detailing the point of their discussion next to each excerpt.

The second analytical focus takes the lack of video into account. This focus is utilized to examine student dialogue where proof through language and gesture of their focus on the comic image is employed, thus exploring a significant gap in the literature. This language targeted by this focus is examined highlighting the students' use of deixis, both linguistic and gestural. Deixis is the term for a group of words that index time, space, and emotion (Vandelanotte, 2009) Deixis includes adverbs, pronouns, and others. The second focus looks specifically at two types of deixis employed by Diego- the spatial adverbial deictic *here*, and the spatiotemporal adverbial deictic, *right here* (Vandelanotte, 2009, p. 105). This study considers both forms as *deictic adverb*. Deictic gesture encompasses a person pointing out features of objects using a finger, gaze, and orientation (Kendon, 1997; Iverson & Goldin-Meadow, 2005; Hanks, 2005; Robinson, 1998).

Table 4-4 depicts the two foci that are utilized in the present study. Table 4-5 depicts a brief coding scheme for the transcriptions. The full coding scheme is displayed in Chapter 3.

Focus 1. This subsection investigates the grammar focusing on the development of grammatical features by Diego and Gabriela during the reconstruction phase of the modified dictogloss task. The data for analysis is taken from the transcripts of the audio data of the students' interaction, Gabriela's notes of their reconstruction, and the sentences used for dictation by the researcher. The discussion starts by detailing the panel that the students are talking about. Presentation of the excerpts is displayed next. Analysis of the excerpt is subsequently examined. And finally, the language that was developed is summarized.

Excerpt 1. The first instance depicts the student reconstruction of the first panel of the modified dictogloss activity. The panel depicts the hostess inviting the black spy to sit at the table (Figure 4-2). In this excerpt, Gabriela initiates the discussion by saying "a white" (Line

Table 4-4: Analytical foci

Analytical focus	Description
Focus 1 (grammar)	Examine excerpts involving the developmental use of <i>in</i> , <i>on</i> , <i>at</i> and the present progressive tense with the assumption of comics being the mediational instrument for this development
Focus 2 (deixis and deictic gesture)	Examine excerpts involving the participant use of deixis and deictic gestures to clearly demonstrate mediation by comic images to show language development

Table 4-5: Brief coding scheme for transcriptions

Symbol	Description
R:	Researcher utterance
D:	Diego's utterance
G:	Gabriela's utterance
→	Arrow depicting important point for analysis/discussion
034	Line number; not restarted but follows entire transcript
(uncertain)	Uncertain utterance due to noise, low volume of utterance, etc.
((notes))	Transcriber's notes
[ove]rlap [talk]	Overlapped talk during dialogue. Brackets are placed precisely where overlap occurs

261). This could refer to the white spy, the hostess in white, the white table cloth, etc. As Gabriela discusses “a white,” Diego overlaps this utterance and suggests that the lady offers a seat to the black spy at the table (Lines 262). He then elicits affirmation of his statement in Line 264, “thas right? hh.” In Line 265, Gabriela says “she offers seat” which was said by Diego in line 262 and offers a different prepositional phrase “to the black spies”. Diego confirms this addition with “uh huh (.)” but reiterates the prepositional phrase quietly in the

Excerpt 1

260 (5.0)
 261 → G: uh:[a white]
 262 → D: [shes off]ers suh seat at da table?
 263 (background talk from other group)
 264 D: thas right? hh
 265 G: She offers seat (.) to black spies?
 266 R: uh huh ((to other group))
 267 → D: uh huh (.) °at the table°
 268 (7.0)
 269 D: mmm here at shes [pour tea>in the cup<
 270 G: [shes pouring



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Figure 4-2: First panel

sentence “at the table” in Line 267. He does not repeat Gabriela’s prepositional phrase “to the black spies.” This demonstrates Diego accepting Gabriela’s addition, but marking a critical feature by repeating “at the table.” Gabriela uses the preposition “at” later in the discussion during Excerpt 3. The first excerpt ends as the pair moves to discussing the next panel (Lines 268-270).

In analyzing this excerpt, two issues of development could be occurring. First, Diego may be employing private speech (even though this is occurring in a social setting) and thereby helping himself negotiate his language. According to Lantolf and Yáñez (2011), private speech can occur during social speech between adult L2 learners, but normally the private speech is said at a lower volume than normal (p.104). This clearly occurs in Diego's utterance in Line 267.

Another possibility could be that he, as the lower level student, is helping the more advanced student (Gabriela) to develop her language and use the prepositional phrase "at the table." Referring back to the first research question, Diego may have already internalized this preposition and is helping Gabriela or Gabriela is simply focusing on "to" instead (Line 265). Diego immediately uses the phrase in Line 262 and ends the phrase in a rising intonation that could be an indication of questioning or that the phrase needs to be added to the sentence. He then elicits assistance or perhaps affirmation in Line 264, "that's right?" Gabriela takes Diego's present-tense verb suggestion (offers) and adds her own prepositional phrase in Line 265 (to black spies). Even with the lack of indefinite and definite articles, this sentence in of itself is grammatically correct (She offers seat to black spies). Diego who now appears more confident of his preposition choice affirms Gabriela's addition and restates "uh huh (.) at the table," emphasizing *at* in Line 267. The instance ends as the pair move to the next panel (Lines 269-270).

During this excerpt, there are other data that may be affecting their language use and development. Before the reconstruction phase, the researcher dictated the story of each panel as discussed in Chapter 3. For this particular panel, the researcher said "The lady offers the black spy a seat at the table" three times (twice during the first dictation and once during the

second dictation). This phrase is not apparent in Diego's notes during the dictation (Figure 4-3). Gabriela, who took written notes during the reconstruction and read the reconstructed story out loud to the class, wrote "She offers sit to black spy at the table" (Figure 4-4, Line 4). In summary, the data and analysis of Excerpt 1 presents Diego and Gabriela's negotiation of the first panel in the modified dictogloss activity. Evidence suggests that Diego is employing private speech in using "at the table." While Gabriela uses an entirely different prepositional phrase, "to black spies." It may be possible that Diego is attempting to help Gabriela change her "to black spies" response to his "at the table" phrase, but she does not repeat what he says.

In this excerpt, the present study considers Diego's employment of private speech in developing his own language as the stronger possibility because of his lower volume in Line 267 which follows Lantolf and Yáñez (2011) analysis of private speech employed during social interaction.

Excerpt 2. The discussion in this episode centers on the second and third panels of the Spy vs. Spy comics. In the second panel, the hostess is pouring tea for the spies (Figure 4-5).

The English proposition

1. The lady pours tea in the cup
2. A foot touches him on the leg
3. The black spy arriveS in her hauses
4. lady
5. she pour tea in the cup
6. she touch
7. the black spy touches the lady on the leg
8. kek him ahut
9. she smaks him on the face

Figure 4-3: Diego's handwritten notes (transcribed verbatim)

1. The black spy looks at the lady
2. The black spy touches the lady ON the leg.
3. The black spy arrives at Lady's house.
4. She offers sit to black spy at the table.
5. She's pouring tea in the cup.
6. She's touching black's spy on him ~~the~~ leg.
7. The black spy is looking at lady and touching on her leg.
8. She's is embarrassing.
9. She is happy when the black spy touch her leg but the problem is that his feet smell bad!
10. She slap him on his face.
11. And kicks him out her house.
12. She smacks him ON the face.

Figure 4-4: Gabriela's handwritten notes from reconstruction activity (transcribed verbatim)

The black spy has the question mark above his head because it appears the lady's shoe has been cast off near him. In the third panel, it appears that the lady is touching the black spy's leg with her foot (Figure 4-6). During the two dictations, the researcher said, "she pours tea in their cups." Diego wrote "she pour tea in the cup" in his notes (Figure 4-3, Line 5). Excerpt 2 depicts the interaction during this part of the reconstruction.

In this excerpt, Diego begins the discussion by relaying that the lady is pouring tea. He uses the correct prepositional phrase by stating quickly "in the cup" (Line 269). Gabriela overlaps Diego's utterance by adding the progressive tense of pour (Line 270). Diego does not repeat Gabriela's addition. The researcher's voice is heard saying "uh huh she offers him a seat" (Line 271). A nine-second pause breaks the discussion before the pair discusses Panel 3. Again, Diego begins by using the third-person singular tense of touch (Line 273). Gabriela again overlaps his utterance by adding the progressive tense. This time however, Diego takes the cue and uses the progressive tense himself in Line 275. In this utterance, he elicits help by asking where she is touching, "the leg, no?" Gabriela does not answer but takes her turn with

Excerpt 2

- 268 (7.0)
 269 → D: mmm here at shes [pour tea] >in the cup<
 270 → G: [shes pou]ring
 271 R: uh huh she offers him a seat ((to other group))
 272 (9.0)
 273 → D: she [tuhsh]
 274 → G: [shes t]uhshin
 275 → D: shes tuhsin (.2) uh (.2) >the leg< no?
 276 R: whats that? ((to other group))
 277 G: uhh:
 278 → D: the leg >no< shes tushin >him< (.) leg
 279 G: she tuhsin mm:



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Figure 4-5: Second panel



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Figure 4-6: Third panel

only the utterance “uh” as if in thought. Diego takes her utterance as a cue to continue and restates “the leg,” but quickly adds the third person pronoun “him” to “the leg.”

This episode shows that Gabriela’s corrective feedback is changing Diego’s responses. He begins his utterances by using the present progressive verb tense (Lines 269 and 273). Each time, Gabriela corrects his tense by stating the progressive form (Lines 270 and 274). Diego subsequently uses the progressive tense without prompt (Lines 275 and 278). This excerpt also shows what appears to be Diego attempting to fill a gap between the verb (touching) and the noun phrase (the leg) in Line 275. The pauses on either side of his utterance “uh” in Line 275 could indicate the need of a preposition between the verb and the noun phrase (*on* in this instance). In line 278, Diego fills this gap with a pronoun instead of a preposition (him). This specific pronoun was written in conjunction with the same verb and noun phrase in his notes for the same panel, “a foot touches him on the leg” (Figure 4-3, Line 2). Furthermore, the researcher is heard to say “uh huh she offers him a seat” in Line 271. Diego’s notes and the researcher’s utterance may have reinforced him to use the pronoun “him” instead of the preposition “on” in this excerpt.

Overall, the data and analysis of Excerpt 2 shows Diego’s progression during negotiation of Panels 2 and 3 of the modified dictogloss task. The data shows that Diego begins the excerpt by using the present third person singular tense of the verbs “pour” and “touch.” Gabriela overlaps his utterances twice to suggest the present progressive forms (Lines 270 and 274). The data also shows Diego attempting to fill a gap between the verb and the noun phrase. Instead of correctly filling this gap with a preposition, he uses a pronoun instead. The pronoun use may have been influenced by the researcher’s utterance in Line 271 and

Diego's notes in Figure 4-3. Diego also demonstrates an utterance of affirmation to Gabriela's statement in Line 271.

Excerpt 3. This excerpt takes place mid-way through the pair's discussion of Panel 4 of the Spy vs. Spy comics (Figure 4-7). In this panel, the hostess appears to touch the black spy with her foot, while he coyly removes his shoe and looks at the hostess. During the two dictations, the researcher stated "a foot touches the black spy on the leg." On Line 6 of Diego's notes, he wrote "she touch" (Figure 4-3). Excerpt 3 is presented below.

The excerpt continues from the previous with Diego stating "the leg >no< shes tushin >him< (.) leg" (Line 278). Gabriela acknowledges the statement by using the progressive "tousheen" and Diego confirms his previous addition of "him" in Line 280. Gabriela says "the black spies?" using rising intonation to elicit confirmation, which Diego offers immediately after (Line 282). Then in Line 283, Diego says with emphasis "on." This emphasis though increase of volume indicates a change in Diego's language use. The dialogue shows him moving away from using the pronoun to using a preposition. Gabriela adds the correct prepositional phrase using on in the next line and Diego quietly confirms the phrase in Line 285. This quiet confirmation could be self-reinforcement through private speech of Diego's new language use. The pair then begins discussion of the next comic panel.

In summary, this instance demonstrates the clearest use of peer interaction through co-construction and peer scaffolding to affect language development. In Diego's case, he moved from using a pronoun incorrectly to using the correct prepositional phrase. Gabriela unconsciously helped Diego develop this progression through her utterances and questions. She also added the prepositional phrase, which Diego confirmed and said quietly indicating private speech during social interaction at the end of the excerpt.

Excerpt 3

- 278 → D: the leg >no< shes tushin >him< (.) leg
 279 G: she tuhseen mm:
 280 D: him
 281 G: black spys?
 282 D: mm hmm ((affirmation))
 283 → D: ON
 284 → G: on the leg
 285 → D: °on the leg°
 286 R: very good ((to other group))
 287 D: and here she (.3)
 288 G: the black spy



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Figure 4-7: Fourth panel

Excerpt 4. The final excerpt in analytical focus 1 indicates the use of both “on” and “at” within the same discussion between the dyad. The excerpt begins at Line 295 and ends on 311. The excerpt begins with a continuation from Line 285 where the dyad negotiated “on” (Excerpt 3). Between Lines 286 and 294, Diego points out a part of the comic image which is discussed more in depth in analytical focus 2, Excerpt 6. The excerpt here shows the student dialogue while looking at the fifth panel where black spy appears to have his foot under the

table to touch the lady (Figure 4-8). She has an expression of surprise or shock and the black spy has a look of contentment.

Excerpt 4

- 295 G: is lookin?
 296 D: °is lookin the lady.°
 297 → G: AT the lady?
 298 D: wat happen? hh
 299 G: uh tusheen?
 300 G: her leg >ON her leg.<
 301 G: she?s: (.2) embarrasin?
 302 D: no.
 303 → D: the black spy tuhshes lady on (.) >on the leg.<
 304 R: what will happen next=
 305 R: =THERES TWO MORE TWO MORE of these panels ((to other group))
 306 → G: °Si pero (ya lo digo/ya lo dijimos) aquí.°
 Yes but we already said it here
 307 → D: [oh ok I thihn shes]
 308 → G: [the black spys lookin] at the >lady<=
 309 → G: =>OK< [jus (.oh-)]
 310 D: shes [embarrassin] somethin hh
 311 R: and then you write down what will happen next



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Figure 4-8: Fifth panel

During the dictations beforehand, the researcher stated “the black spy touches the lady on the leg.” Diego has the same sentence written in his notes (Figure 4-3, Line 7). In Gabriela’s notes taken during the reconstruction and this excerpt, she has “The black spy is looking at lady and touching on her leg” (Figure 4-4, Line 7). Although the excerpt was initially investigated because of the analytical focus, it proved to be a good example of language development and follows some of the transcription conventions of conversation analysis. Gabriela comes to the conclusion that “at” was the correct preposition in this excerpt.

The excerpt begins with Gabriela drawing attention to the black spy in the panel above, “is lookin?” Diego answers with the present progressive tense of look, but then adds “the lady” (Line 296). In Line 297, Gabriela emphasizes “at” with increased volume, but finishes the statement with rising intonation. This signifies uncertainty with her added prepositional phrase “at the lady.” Diego does not offer confirmation or denial of Gabriela’s addition, but asks instead, “wat happen?” The pair then discusses where the black spy is touching the lady from Lines 299-303. While the researcher’s voice increases in volume in helping the other group, Gabriela speaks in Spanish to tell Diego that they had already included that phrase “on the leg”(Line 306). Figure 4-9 depicts a still image of what occurs on Line 305.

Diego understands Gabriela’s utterance immediately and begins to offer another suggestion. At this moment, Gabriela restates the entire phrase “the black spys lookin at the lady” (Line 308). This time, “at” was not said with rising intonation, but as a statement. Before she ends the statement, Gabriela begins to quicken her speech and then quickly says OK with increased volume and a rise in pitch. It cannot be discerned if she is reaching an



Figure 4-9: Image corresponding to Line 305

“ah-ha” moment with the prepositional phrase or other aspect of the language because Diego overlaps Line 309 and Gabriela stops speaking.

In Line 308, Gabriela states “the black spys lookin at the lady” with a noticeable increase in speed during “lady.” In Line 309, she couches this statement with “OK” with an increase in volume and emphasis and begins to add something else when Diego overlaps her in Line 310. Diego adds to Gabriela’s sentence using “looking at” by stating the present progressive “embarrassing” showing the result of the black spy’s action and using the present progressive unprompted. The instance ends when the researcher joins the conversation. This excerpt indicates co-construction of knowledge, use of L1 for mediation, and possibly private speech.

Overall, this excerpt depicts various acts of language development between the pair. Diego gives a negative response to Gabriela’s sentence “shes embarrasin” in Line 302 with “no.” He then explains where the lady is touching the spy as was previously discussed between the pair in Excerpt 3 when the background noise increases in volume. Gabriela uses this opportunity to say explicitly in Spanish that they had already said that. Diego immediately understands Gabriela’s repair move with “oh ok I thihn shes” (Line 307). At this point, Gabriela changes the manner in which she utters the prepositional phrase “at the lady.” In Line

297, she emphasized the preposition “at” but ended the utterance with a rising intonation signaling a questionable utterance and end in turn. This time in Line 308, Gabriela overlaps Diego’s utterance “oh ok...” and then quickly adding at the lady without emphasis or intonation. The quicker speech can indicate that even though a complete utterance is forthcoming, she has more to say and wants to get it out before Diego takes his turn. The next line, as part of the same utterance as the previous, Gabriela emphasizes “OK” and continues when Diego steps in with a new direction (shes embarrassing).

The language development seen in this excerpt demonstrates Gabriela using social dialogue to self-mediate her language. Diego offers no real feedback or mediation to Gabriela’s conclusion and tends to take the conversation in a direction that the pair had already visited. Gabriela stops this direction change with a repair move in Spanish to get Diego back on track. She then, through talk, comes up with the correct prepositional phrase and states it more as a fact than a question as in her first use of the phrase (compare Lines 297 and 308). Although her quick speech and use of the OK with rising intonation in a non-questioning manner can indicate an “ah ha¹³” moment, we cannot discern this with certainty. Diego takes the conversation into a different direction by pointing out the reaction of the lady (Line 310) and the researcher intervening, thus ending the episode.

Discussion. The excerpts discussed above highlights two grammatical features and the language development that occurred while negotiating the reconstruction task. The uses of prepositional phrases, development of the present progressive tense, and the replacement of an

¹³ Ah-ha moments are described by Vygotsky (1978) as “sudden insight or lightning-quick guess” (p. 45).

initial response using a pronoun with a preposition demonstrate language development for the two students.

In analyzing the excerpts during the pair's dialogue it is possible to see language development in process. The research question specifically targets peer interaction mediated by comic. The transcriptions show language development through peer mediation by highlighting elicitation of assistance, use of the L1, peer scaffolding, co-construction of knowledge, , affirmation and negation, and the use of private speech during peer interaction. The students mutually cooperated to not only complete the activity, but to learn and eventually internalize the targeted prepositions as well as other aspects of language. For Diego, peer interaction contributed to his unassisted use of the present progressive tense.

Overall, the excerpts of the interaction between Diego and Gabriela indicate support for the present study's second question. What is missing is the mediation using the comic images. As stated previously, before the reconstruction task began each group had the images on the table in front of them. Even though the student pair did not explicitly talk about the images in these excerpts, it may be possible that they were looking at the images during their dialogue. Nevertheless, both Diego and Gabriela appear to benefit from the dialogue by developing their language to reflect the use of the correct prepositional phrases and grammatical features. Even though prior knowledge could play a role in the discussion, the analyses of the development of these grammatical features suggest language development for both students. The next analytical focus continues the analysis of peer interaction by examining precisely how the comic panels were explicitly incorporated into the student discussion and by deictic gestures.

Focus 2. This subsection highlights the excerpts that specifically demonstrate discussion of comic images during the student negotiation in the reconstruction phase of the modified dictogloss task. The present study considers the use of deixis and deictic gestures in the audio/visual and transcripts as the indicators that comic images are being especially talked about. The subsection uses transcripts, the comic panels, and still shots taken during the reconstruction phase to highlight analytical focus 2. Diego was the only student of the pair that used both deixis and gestures to highlight features of the comic images during discussion with his partner, Gabriela.

First instance. The first instance highlighting analytical focus 2 occurs during dialogue of the second panel in Excerpt 2. Diego uses the deictic adverb “here” with the preposition “at” Line 269. The referent is the comic image of the lady pouring tea into the white spy’s cup. Excerpt 5 shows the dialogue of Diego using the deictic adverb “here.” This utterance verbally indicates that Diego is pointing out Panel 2 of the comic images where the lady is pouring tea into the spies’ cups and then appears to touch the black spy’s leg (Figure 4-10). While Diego says “here at” his finger is physically pointing to the comic panel on the table with his index finger. Figure 4-11 shows a still image of the video where Diego says the utterance and uses his finger to point to the panel with the comic image demonstrating this gesture. The arrow shows where his right index finger is pointing.

Diego’s use of deictic adverbs and deictic gestures in this instance shows strong evidence that he is using the comic image as a mediational tool in his dialogue with Gabriela. Although language development is not evident in this particular excerpt, it clearly demonstrates that he is using the comic image with both verbal and physical deixis. He is drawing attention to the prepositional phrase that is included with his utterance by pointing out

Excerpt 5. First instance

268 (7.0)

269 → D: mm here at shes [pour tea] >in the cup<

270 G: [shes pou]ring]

271 R: uh huh she offers him a seat ((to other group))

272 (9.0)

273 D: she tuhsh

274 G: shes tusheen



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Figure 4-10: Second panel



Figure 4-11: Gesturing with index finger

parts of the image at the same time. Gabriela does not take the cue and focuses instead on the present progressive tense and the dialogue ensues as described before in Excerpt 2.

Second instance. The next instance of deixis and deictic gesture use by Diego is evident twice between Lines 286 and 291 in Excerpt 7. During this instance, the dyad is looking at the cartoon panel depicting the black spy removing his shoe while the lady has a look of confusion (Figure 4-12).

Diego employs two distinct deictic adverbs in Lines 287 and 290. Although it is not possible to see exactly which aspect of the comic image Diego is referring for the lack of visible finger pointing, the two deixis uses indicate his focus on the image. He is trying to tell Gabriela, using the image as a guide, what the black spy is doing. The video does not show Diego pointing to the comic as in the previous instance. However, during the utterance of “see right here?” in Line 290, Diego cocks his head to the right (Figure 4-13). This indicates a physical focus of attention on the comic image lying on the table in front of him. He may be pointing as well, but this is not seen.

Gabriela responds to Diego’s use of the deictic adverb “see right here?” by responding “is lookeen?” This indicates that Diego did not know which verb to use for the spy’s actions. He started with the verb “touch” in Line 289, quickly changed his mind and then used the comic image to point out what he was trying to say. Gabriela filled the gap for him and supplied an adequate answer to which Diego added “is lookin the lady” in Line 296. Gabriela then adds “at the lady” immediately after Diego’s response.

Discussion. This subsection highlighted Diego’s use of deictic adverbs and gestures to point out aspects of the comic images during peer interaction. Two distinct instances found

Excerpt 6. Second instance

- 286 R: very good ((to other group))
 287 → D: and here she (.3)
 288 G: the [black spy]
 289 D: the [black spy]s tuch >no<
 290 → D: see [right here?]
 291 G: [mm hmm] ((affirmation))
 292 G: is lookin?
 293 D: nah she the hes lookin the lady
 294 G: uh huh



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Figure 4-12: Fourth panel



Figure 4-13: Gesturing with head

within the video, audio, and transcripts demonstrated the real-time employment of deixis and deictic gestures to target aspects of the comic images. Diego did this to highlight features of what he was trying to talk about with Gabriela. This indicates that Diego particularly was employing the comic images as a mediational artifact to help the pair complete the activity. These acts by the student strengthen the support that comic images act as a mediational tool during their interaction.

The question at hand is how does this act by Diego show language development? Excerpt 5 does not depict the incorporation of deixis and gestures modifying Diego or Gabriela's language. It only shows Diego highlighting the comic image to point out the image's main point. Excerpt 6, however, shows stronger language development along with the employment of the image, deixis, and indexing. In Excerpt 6, Diego tries to express a point in the comic image. Line 287 shows him saying "and here she" with a significant pause. Gabriela adds context by saying "the black spy." Diego at first accepts this by repeating her suggestion, but quickly adds "no." And follows with "see right here?" This indicates that Diego cannot at the moment express what he is seeing and points to the image for Gabriela to see what he is trying to talk about. Gabriela affirms what Diego is looking at and fills in an appropriate verb "looking." Quietly, almost as if in private speech, Diego adds "is lookin the lady." This utterance prompts Gabriela to add "at the lady" in Line 297 fulfilling the correct prepositional phrase to Diego's utterance. This excerpt demonstrates the explicit use of comics, deixis, and deictic gestures as mediational tools in peer interaction.

Summary

Data in the previous two sections were analyzed to answer the two research questions. This section summarizes the results of the data for each respective question and whether or not

the data supports each research question. Chapter 5 provides discussion, implications, and conclusions for the present research.

The present study's first research question attempts to answer whether or not comic images contributes to the acquisition of the targeted prepositions as part of a classroom activity. The results of the data analysis marginally support the first research question due to certain factors in the study. The research question was: *How does the use of pantomime comics contribute to the acquisition of the prepositions in, on, and at for adult English language learners?*

The present study utilized data that demonstrated language acquisition. Acquisition is measured individually in the present study. The only data supporting language acquisition on an individual basis in the present study comes from the written tests. Written notes during the second dictation phase of the modified dictogloss task contribute to the data, but are not conclusive. Table 4-6 reviews the written test data for the activity.

The present study highlighted the students' test scores, which showed some improvement and followed the caveat stressed by Liu (2004) that images create saliency especially to beginning level students and inhibits more advanced students. The data narrowing on Diego's scores suggest acquisition of the targeted prepositions during the activity. However Gabriela's (Diego's interaction partner) score worsens on the delayed posttest, which does not show complete acquisition of the targeted prepositions, but falls in line with Liu (2004) in that intermediate and advanced students are sometimes inhibited by images. Miyu improved her pretest scores immediately following peer interaction, but not on the delayed posttest. Hien also shows modest improvement, but was not present to take the delayed posttest.

Table 4-6: Written test data

Name	Pretest	Posttest	Delayed posttest
Gabriela	6/6	6/6	4/6
Miyu	5/6	6/6	4/6
Ayaka	5/6	6/6	6/6
Diego	2/6	6/6	6/6
Hien	3/6	4/6	

More data is necessary to conclusively answer the first research question. The use of a comic image from the modified dictogloss task was used in the last two questions of the written tests, but this does not conclusively point to comics being the sole factor in aiding acquisition. Other factors such as the previous peer interaction, researcher-participant interaction, language level, and other courses being taken during the same time period could also have played a role. Diego was enrolled in other courses at the ALC during this time period. Other variables could have affected test scores: handwritten notes taken during the dictation; researcher-participant interaction; peer interaction from the reconstruction; and language levels all could be factored in score improvement. Because of the need for more data demonstrating acquisition of the targeted prepositions, the evidence partially supports the research question.

Two analytical foci concentrating on grammar and deixis along with deictic gestures showing student attention on comic images were used to pinpoint language development. This research question specifically targeted peer interaction mediated by comic images affecting language development of the students. The research question follows: *How does the use of peer interaction mediated by pantomime comics affect language development?*

The two variables of interest to this research question are peer interaction and mediation by pantomime comic images. Data analyzing peer interaction are derived from

grammar foci targeting the prepositions *in*, *on*, and *at* and other grammatical features. Although the comic images are not specifically mentioned in these excerpts, language development is occurring between the students with the comics on the table in front of them during interaction.

The next aspect measuring mediational effects to language development comes through the excerpts showing deixis and deictic gestures showing the students using the comic images as a mediational tool. These instances occur two times during the peer interaction. Both instances are used by Diego and are highlighted in both transcripts and still images taken from the video at the exact moment the utterance occurs. In one instance, Diego highlighted aspects of the comic images to Gabriela by both pointing and using deictic adverbs to show where his attention was focused. Consequently, Gabriela was able to understand what Diego was directing his attention to and provide an appropriate response. Thus, Diego used the comic image to express what he could not express on his own and at the same time, elicit help from his partner. The discussion of Excerpt 7 suggests a more positive effect on language development.

However, other variables must be taken into account. It is not known completely that Diego's uses of deictic adverbs were employed to focus attention on the comic images or to his notes or other artifact on the table in front of the pair. Although the data strongly suggests that the deixis along with gesturing with his finger to point out aspects of the comic images, without video depicting what was in front of the pair, this cannot be certain.

This chapter detailed the results that were concluded from the data gathered for the analysis of the research questions driving the present study. The data analyzed to answer the first question marginally supports the idea that comic images contribute to the acquisition on

in, on, and at. More data and a variety of analytical tools are need to better support the analysis of this research question. Analyses of the data highlighting peer interaction and mediational use of comic images better support the notion that comic images affect language development. Discussion, implications, and conclusions of these analyses and of the present study are presented next in Chapter 5.

Chapter 5

Discussion, Implications, and Conclusion

This culminating chapter shows the results of the present study's two research questions. Each question is reviewed and the data along with their results of analyses are reconsidered. Each research question further elaborates the variables that could have affected the analyses. Discussion of the research questions concludes with suggestions on how the research question could have been improved. Upon completion of the discussion of the two research questions, implications of the research are envisioned. The chapter then concludes with how the research agreed with and contradicted prior research, general insights that resulted from the present research, and future directions.

Discussion

This section details the two research questions driving the present study. Each research question is overviewed and summarized. Next, the factors influencing the research question is detailed. The present study's research questions are:

1. *How does the use of pantomime comics contribute to the acquisition of the prepositions in, on, and at for adult English language learners?*
2. *How does the use of peer interaction mediated by pantomime comics affect language development?*

Research question 1. The first research question investigates comic images contribution to language acquisition. Acquisition is measured using specific grammatical concepts in English- the spatial meanings of the prepositions *in*, *on*, and *at*. Written testing scores are used to analyze this acquisition by focusing on quantitative data through raw scores and class average of these written tests.

Overview of data. The data for analyzing the first research question consist of the pretest, posttest, and delayed posttests. These were the only data in the current research that could show acquisition of the targeted prepositions.

Summary of results. The data for the present study is analyzed by how the class performed on these tests individually and on the whole. The students' English levels are varied: three deemed intermediate and two considered beginning by the adult learning center. One intermediate student scored perfectly on her pretest and posttest, but dropped her score on the delayed posttest. Another intermediate student improved her score from a 5/6 on the pretest to 6/6 on subsequent tests. The third intermediate student scored 2/6 on the pretest and had perfect scores for subsequent tests. The two beginning student scores improve from the pretest to the delayed posttest. However, one of these students' scores drop on the delayed posttest. The other beginning-level student improved her score between pretest and posttest, but was not present to take the delayed posttest. The class average for the pretest, posttest, and delayed posttest were 70%, 93%, and 83% respectively.

The research conducted by Liu (2004) is the only example in the literature moderately comparable to the present study's first question. In light of this research, the results of the written test data fall in line with Liu's (2004) conclusions. These conclusions state:

“that the effects of comic strips on L2 learners' reading comprehension are constrained by a number of factors, such as the students' comprehension level of the written text, their individual strategies for processing the text, and the way their reading comprehension is measured (e.g. multiple choice vs. recall protocols)” (Liu, 2004, p. 238).

Liu (2004) further elaborates that his study “suggests the reading comprehension of the low-level students was greatly facilitated when the comic strip repeated the information presented in the text” (p. 238).

These findings compare to how the students performed on the written tests in the present study. The three intermediate students started by performing well on the pretest, with one exception (Diego). Two of the three then scored perfectly on the posttest. And two of the three scored perfectly on the delayed posttest. The low-level students did not perform as well on the pretest, but brought their scores up on the posttest. One of these students, then dropped her score on the delayed posttest while the other was absent for the delayed posttest.

Limitations. Although comparable to a previous study, the analysis of the data for the first research question suggests marginal support for the first research question in that comic images contribute to the acquisition of the targeted prepositions. This partial support is derived from comics only being one of the several elements used to test performance. Other factors such as: lack of control group; difficulty in isolating the comic images as a variable; the study being conducted through the microgenetic domain and not longitudinally; the number of questions involved; students being enrolled in other ESL courses concurrently; test validity in the types of questions employed and student awareness of what was being tested (prepositions), and the lack of student homogeneity in language level. These factors could influence student test performance considerably and are detailed in depth in the previous chapter.

Suggestions. The overlying purpose of the first research question was to test comic images’ effects on language acquisition. It is suggested that the learner negotiates the meaning of the pantomime comic images individually in their minds. Theoretically, the comic images

would be used as a tool within dual coding theory (DCT) to make referential connections between visual and verbal processes. DCT is the cognitive theory composed of a verbal and a visual system. Both systems are separate but interrelated through “referential connections” (Sadoski et al., 1991, p. 473). DCT invokes Saussure’s (1915/1959) diachronic system of signs (Sadoski et al., 1991, p. 474). SCT also invokes Saussure (1915/1959) as an explanation of how internalized learning is stored in mind. Instead of Sadoski et al.’s (1991) notion of “referential connections” being made between the visual and verbal structures, the present study suggests that the visual images (comics) act as mediational references. Cognitively, instead of being a basis of reference to the verbal components, comics mediate the visual language into verbal language.

This could have been explored further by improving the testing measures. One suggestion for this would be to increase the number of questions using comic images or having students choose from other comic images eliciting the targeted prepositions. For example, instead of a conventional multiple choice question using text and circle the letter of the correct answer, a modified multiple choice format could be created. The question could remain in text format, but the answers would be a series of comic images. The students choose the image that best answers the question.

Within sociocultural theory, the comic images would also be used by the students in a similar manner that the L1 is used in other studies (Aljaafreh & Lantolf, 1994; Brooks et al., 1997; Swain & Lapkin, 1998, 2000; Antón & DiCamilla, 1999; Siekmann, 2004; Gutiérrez, 2007; Fernández Dobao, 2011). In these studies, the students used their L1 in private speech signifying the use of cognitive processes as well as creating intersubjectivity with interlocutors, metatalk, and scaffolded assistance for the individual learner and the other

learner within collaborative dialogue. In this way, comic images and private speech both act as mediational tools (one symbolic/verbal, one physical/visual) for the individual mind. An example is manifest in the present study through one student's use of deictic adverbs where he is trying to point out in the comic image exactly what he knows inside to the other student. This is similar to private speech being used in social speech and shows some cognitive processes occurring in real-time. However, more research and an improvement of the research design are needed to solidify this position.

The main drawback to the design of the present study is that mediational connections were not specifically elicited in the written tests to support or refute the dual coding theory. One way to have remedied this limitation is to have added questions eliciting the image itself to the students. For example, a question such as "draw the picture from the Spy vs. Spy that showed *in the cup*" would have demonstrated whether or not the student remembered the image depicting this particular prepositional phrase from the modified dictogloss task. The student drawn picture need not be in such detail as the comics itself, but sufficient enough to show that the image was used as a referential-mediational connector between the visual and verbal according to DCT and SCT.

Another problem with the study design is the lack of control group. Although the ALC does not typically have the population for large numbers of groups, a control group (not using comic images for the dictogloss task) would have been necessary to verify if the experimental design (using comics in a modified dictogloss task) was beneficial or not. A comparison of student scores on the written tests could have been undertaken to confirm or deny this hypothesis. For this reason, the bulk of the research tends to use university students as the

participants in the study. Another benefit of using university students is that attendance is typically better in the university level than in adult learning centers (Auerbach, 1993).

Research question 2. The second research question specifically investigates the effects of peer interaction mediated by comic images on language development. The question is analyzed following analytical foci which concentrate on student use of the targeted prepositions and the present progressive. The second focus targets student use of deixis and physical indexing to point out features of the comic images. Briefly, conversation analysis was used in one excerpt to analyze language development.

Overview of data. The data for research question 2 encompass data taken during the reconstruction phase of the modified dictogloss task. Audio/video, still image from the audio/video, the comic images, and transcripts of the audio data for the pair consisting of Diego and Gabriela were used for analysis. The data was divided into two distinct analytical foci. The first focus investigated the dyad's language use of the targeted prepositions and the present progressive during negotiation of the reconstruction task of during the modified dictogloss exercise. The second focus targeted direct and observable use of comic images mediating student dialogue (deictic adverbs and deictic gestures).

Summary of results. The analysis of both foci in Chapter 4 indicates stronger support for the research question. The goal for using the first analytical focus was to analyze various instances of the student language development through the use of the targeted prepositions mediated by comic images. These instances occurred, but other, unanticipated forms of grammatical development were evident as well. For instance, one student was frequently corrected by the other when he began an utterance using the third-person present tense. By the

end of the dialogue, the student was using the present progressive on his how without prompt by the other student.

The goal of the second focus was to examine how using deictic adverbs in conjunction with physical indexing were employed to point out features of the comic images. This would show direct use of the comic as a mediational tool. Both of these features suggest that the students are using the comic images as a verbal and physical mediational tool under the sociocultural theory of mind. The use of deictic adverbs and deictic gestures in one particular instance demonstrated student co-construction of knowledge, student elicitation of support, and confirmation.

Limitations of Focus 1. Factors other than the comic images and peer interaction existed in the excerpts described in this subsection. One obvious element derived from the audio and the transcripts occurs with researcher interaction with the groups. This issue could have an effect on student interaction and the direction the students take their discussion. Another factor in the discussions is the use of handwritten notes. The students were allowed to use their notes taken during the second dictation of the modified dictogloss tasks. Diego in particular, may have used his notes to prompt his utterances with Gabriela during various instances of their interaction. Another possibility is the use of private speech being interpreted as interactive speech. The data cannot definitively conclude during some instances that Diego or Gabriela's speech acts were meant as private speech or interactive speech. Finally, the discussion of the other group can influence what Diego and Gabriela said to each other. Talk by the other group in conjunction with pauses by Diego and Gabriela's group might indicate this influence.

Limitations of Focus 2. Since this focus draws attention specifically to the use of deixis and indexing in the audio/video and transcription data, other variables are not readily apparent. However, the instances of deixis use in transcription, indexing, and the still images may take a different interpretation. It is possible that Diego's use of deictic adverbs do not actually point to the comic panels in question, but point to his written notes instead. Also, the head and finger pointing gestures may not index Diego's attention to the comic panels, but again to his handwritten notes or other artifact on the table in front of the pair.

Suggestions. The results and analyses of the second research question show more promising implications, but some improvements could be made to the study. One improvement that could eliminate any doubt to whether or not the students were discussing comic images would be to use video depicting frontal views of the students during their interaction. Another beneficial modification to the study would use more conversational analysis (CA) as a tool to gather better detail in the student dialogue. For example, better video data showing the front of the students with comics on the table in front of them would conclusively demonstrate deictic gesturing towards the artifact. Pauses could also be better recorded and explained with video data. CA as an instrument for documenting dialogue takes a sociological approach (through ethnomethodology) in analyzing interaction in social situations- including the classroom environment (Kasper and Wagner, 2011). Analyses within CA would incorporate language, cognition, and identity within one theoretical principle and seems to go hand in hand with sociocultural theory as a tool for analyzing collaborative dialogue. CA as a method uses similar data to analyze audio/video as well as gestures and other forms of physical highlighting of discourse. The approach would provide "systematic, robust descriptions of social practices" (Kasper and Wagner, 2011, p. 123). A comparative

study could be conducted using CA to analyze interaction between a dyad using comic images in a modified dictogloss task as opposed to a dyad not using comic images. This comparison would better detail how comic images are used as mediational devices in negotiating a classroom task.

Implications

The present research identified gaps in the literature regarding the use of comics in language theory and classroom praxis. The nature of theoretical gaps exists in comics use as static images in psychological testing, as impetus for motivation, and as aids in comprehension of text. These gaps all point to comics remaining in the cognitive paradigm. However, comics can also be considered a powerful tool in the sociocultural theory of language learning. Comic images take semiotic and physical, symbolic, and social mediation roles in language learning. Furthermore, they enable students to co-construct knowledge during dialogue using both social and private speech. Comics also act as a mnemonic device triggering memory or as a point of reference to highlight aspects (through deixis) that assist in language development. This section highlights the implications of the present research in theory and praxis. It also offers future directions for comics research in applied linguistics.

Theoretical implications. The literature points to the use of comic images to fulfill and explain individual/cognitive components of SLA. Typically, comic images are used in psychological testing, motivation studies, and as aids in comprehension. Research exists in the literature using comics in socially-oriented activities, however, these studies do not consider comics as a significant factor in the collaborative dialogue that ensues from the activity using the comics. Instead, the bulk of the literature analyzes the language resulting in that activity. The present study offers theoretical implications pertaining to cognitive studies, sociocultural

theory of mind, and the analysis of collaborative dialogue resulting from a collaborative task using comic images.

As a tool for mediating what is learned or internalized during social interaction, the use of comics accomplishes two purposes. First, because of its pantomime nature, the comic images used in the present study immediately transmit meaning to the learner without the use of English text. As the learner internally negotiates the translation of the images for himself and then to English with an interlocutor, the visual images are being used as an internal mediational tool as well as a physical, mnemonic device during social interaction in a similar manner that the L1 is used in other studies. This can actually be seen in the transcripts by the use of private speech. Since private speech is considered the manifestation of cognitive processes, the present study offers different way of investigating these processes by using comics as a mediational tool.

Various gaps exist in the previous studies as a part of psychological testing. Psychological testing reviewed in this section compared results between similar modes of representations. Only one study conducted psychological testing across modes (Glenberg and Langston, 1990). This study compared texts with and without line drawings. The conclusion, however, showed that the text was the most mentally represented which contradicts dual coding theory. Glenberg and Langston (1990) add the limitation that some of the pictures could possibly be remembered by the subjects (p. 24). Apparently, this question was not asked. Although the present study separated the Spy vs. Spy story into distinct panels, the students reconstructed the entire story piece by piece. A predictive element was also included in the story that the students needed to create. This drastically differs from how comic images are commonly used in the literature. By predicting what will happen next, each student

individually and collectively visualize images of what will be drawn and then convert those mental images into written and spoken language that is eventually shared with the class.

The use of comic images in the collaborative dialogue of the present study also shows both cognitive processes and social mediation under SCT. The present study suggests that comic images are used in a similar manner that private speech and use of L1 are used in other studies under sociocultural theory of mind. One manifestation of private speech by Diego was noted in the present research. This instance followed the characteristics of private speech by being short and non-syntactic. Diego said “nah she the hes lookin the lady” in Line 293 of Excerpt 6. The “nah” corresponds to typical words used in private speech according to the research (Frawley & Lantolf, 1985; Wells, 1999; Antón & DiCamilla, 1999). Furthermore, this instance of private speech was uttered in Diego’s L2 which confirms Frawley and Lantolf’s (1985) position that ESL students tend to use their L2 in private speech. Other instances of private speech were noted using paralinguistic features such as lower volume.

Another area the present study could benefit sociocultural theory is from the analysis of deixis. Student use of deictic adverbs and gestures became an important facet of the research. By highlighting aspects of the comic images using deixis, each student is, in a sense, co-internalizing language with another student. In the zone of proximal development (ZPD), peers as well as expert-novices, develop language together which is difficult or impossible to do alone (Lantolf, 2011, p. 29; Donato & McCormick, 1994; De Guerrero & Villamil, 2000). For example, in the excerpt where Diego used deixis twice, he pointed out what the spy was doing, but he could not come up with the verb himself. By saying, “here” and “See? Right here” Diego elicited assistance from Gabriela to come up with the correct verb (look). Before this deictic utterance and gesture, Diego used a different verb (touch). In terms of scaffolding,

Diego was both marking a critical feature he could not come up with himself and controlling frustration by eliciting assistance. This exemplifies mediation within the ZPD, cognitive processes, and symbolic and artifact mediation.

Classroom implications. The rationale typically purported in using comics in the classroom stem from individual perspectives. Motivation is the ubiquitous justification for using comics and takes on various forms. Norton (2003) proposed that motivation through ownership and identity justifies the use of comics in the classroom, albeit in a social context. Comics are frequently cited as the cause of enthusiasm in classroom activities (Norton, 2003; Morrison et al., 2002; Versaci, 2001; Bitz, 2004; Ranker, 2007; Carter, 2008). Other rationales similarly promote comics as a pathway to literacy in that the medium acts as a stepping stone to “legitimate” literacy by getting learners to read acceptable works (Versaci, 2001; Bitz, 2004; Frey & Fisher, 2004; Ranker, 2007; Smetana et al., 2009; Carter, 2008). The present study takes an entirely different point of view and subscribes to the ideas of the New London Group (1996) in that comics as well as other genres such as video games, movies, and the Internet are legitimate forms of literacy that promotes various ways of making meaning. The medium uniquely blends images and text to both enhance meaning and through the images alone, can create meaning without text or create additional meaning to the text that may be associated with the images. Through the interplay of the visual and the verbal, comics are proclaimed to aid in comprehension (Krashen, 2004; Carter, 2007, 2008; Ranker, 2007) and create referential connections between visual and verbal stimuli (Sadoski et al., 1991; Liu, 2004). Justifications for using comics in the classroom, with very few exceptions, take a developmental, individual learning stance in rationalizing its use.

As physical artifacts in classroom, comics again predominantly take on individual learning perspectives. Liu (2004) provided the only research using comics to test recall and dual coding theory- a cognitive paradigm. The bulk of the research using comics as classroom instruments inclines towards focus on form activities, creating comics to build vocabulary and reading fluency, and in collaborative tasks (Norton, 2003; Morrison et al., 2002; Versaci, 2001; Bitz, 2004; Ranker, 2007; Carter, 2008; Brooks et al., 1997; Swain and Lapkin, 1998, 2000; Brandl, 2008). Other than the research using collaborative tasks, all research in the literature have an individual development focus. The present study embraces the individual component of comics, but adds the social in using comics in the classroom during a collaborative task. This act promotes co-construction of knowledge and in the spirit of Appel and Lantolf (1994), “engages students in talking about texts, not to ascertain if they have understood the text, but as a means of helping them to construct meaning from the text” (p. 450). By adding a predictive component to the task, the students not only helped each other cognitively and socially, but jointly created their own meaning and outcome of the story.

Language teachers can benefit their students by using comic images in classroom tasks. Instead of the typical use of the medium in individual learning tasks, comics should be incorporated into collaborative exercises that promote discussion among students. This enables the students to co-construct knowledge, tap what has been previously internalized, and create meaning mutually. Language teachers should also consider comics as a significant factor in language learning activities. Instead of justifying the use of the medium in the classroom by cognitive principles such as motivation, teachers could tout the medium as a powerful tool for mediation and language learning. Comic images assist with meaning-

making, mutually constructed meaning, self-mediation, and a means of assisting in student co-construction of knowledge and internalization.

As a collaborative task, language teachers could also use the modified dictogloss task as used in the present study for their own classrooms. For example, instead of being used in an adult ESL context as in the present study, the modified dictogloss task could also be used for juvenile ESL classes, adult and juvenile foreign language classes, indigenous language classes, developmental English classes, and special education classes.

Finally, using comic images in tutoring sessions as mentioned in the author's personal experience is beneficial. Sketching comic images provide explanations of difficult words and concepts for ESL students which create instant meaning. Comics also enhance the atmosphere of the learning environment and may encourage student participation and dialogue because of its (seemingly) informal nature to the student.

Further research. The present study shows some promising implications for using comic images in theory and in the language classroom. This subsection details future research using comics within sociocultural theory of mind and the language classroom.

The present study investigated comic images effects on internalization of specific grammatical features, how previously internalized and language development features are used in collaborative dialogue, how the comic images as a physical artifact mediate collaborative dialogue and subsequently language development, and how peer interaction itself mediates language development. The project took a two-step approach: 1) the first question prompted investigation of how comics could help grammar features be internalized for individual learners and 2) how comic images and peer interaction affect language

development and the co-construction of knowledge. These questions and the research design would be perfectly suited for investigation within activity theory of SCT.

The task or activity is not only important to sociocultural research and only to children, but an important addition to the sociocultural theory and likewise important to adult learning. Officially, this is called the “activity theory” which was developed by Leontiev (1978). According to the theory, the act of doing something has to be motivated by biological or cultural needs (Lantolf, 2011, p. 8). Lantolf (2011) furthers this aspect of SCT by proposing three levels of activity: motivation, action, and conditions (p. 8). Various activities (work, education, hobbies) in adult and child lives are culturally motivated (Lantolf, 2011, p. 13). However, the most important activity according to Vygotsky is through play (Vygotsky, 1978; Lantolf, 2011). Lantolf (2011) states, “...it is in play that children create, usually in collaboration with other children, a zone of proximal development in which they perform beyond their current abilities” (p. 13). Play (as an activity) can be an important aspect of adult internal and external mediation in the ZPD. Comic images can serve a similar purpose to adult learners by making meaning and sharing what they know with others follows the same tenets as play in children. Future research using comic images should explore activity theory more and incorporate it into theoretical justification and praxis.

Future research using comic images should take other steps to solidify the theoretical base of the study. First, the project should take place in a university setting for the express purpose of having more participants in the study and better attendance. University students would also be on a more even level linguistically than an adult learning center whose population language level tends to be disparate. Furthermore, in a university setting, the study

does not have to be confined to an ESL class, but can be conducted in a foreign language class.

By having more participants in the study, more instances of private speech, social speech, and all forms of mediation using comics could be further analyzed. One possibility would be to use a standard dictogloss task on a group and compare the results with a group using a modified dictogloss task. The same procedures could be used for each group, but the comic images would be an isolated factor for comparison, analysis, and discussion. Essentially one group would have a different communicative activity and dialogue than the other group. In this way, the comic images as a mediational tool for language development, internalization, and collaborative dialogue is isolated and can be compared to that of the control group.

The adult ESL classroom is not the only environment the modified dictogloss task, methods, and theoretical justification could take place. The same study could be applied to juvenile ESL classes, special education classes, developmental English classes, and juvenile foreign language (FL) classes. The present research could potentially be used in standard English courses strengthening L1 internalization of young students by promoting comics as legitimate literacy; as topics for collaborative tasks/dialogue; to introduce narrative, unfamiliar vocabulary to promote retention; and to encourage social and self-mediation to optimize learning development.

Finally, another possibility for future research could be to compare the collaborative dialogue of the modified dictogloss task between disparate groups of learners. For example, a modified dictogloss task could be used in the university setting for two separate classes: an ESL course and a FL course. The data from the collaborative dialogue from both classes could be used to compare and support or negate SCT principles such as type of private speech,

differing uses of mediation, instances of L1 as mediation, co-construction of knowledge, and internalization.

Conclusion

The present study investigated the effectiveness of instruction using pantomime comics on both language acquisition and language development in an adult ESL classroom containing few participants. The theoretical basis for this endeavor was within sociocultural theory of mind and particularly the principles of artifact mediation, peer mediation, working within the zone of proximal development, and collaborative problem solving that elicits dialogue for analysis.

Comic images are commonly rationalized in the literature by cognitive processes. Motivation, identity, multimodality, multiliteracies, and critical literacy are the typical rationale for using comics in the language classroom. Comics are also lauded as prompts for classroom activities and in these activities; they are typically displayed as stand-alone images to test recall, recognition, representation, and to depict grammatical features such as spatial prepositions in language texts. In applied linguistics research, comic images are frequently used to elicit dialogue that is thus analyzed. The images themselves are not considered a significant variable in these studies.

In order to address these gaps in the literature, the present study's research questions prompted exploration of how comic images affect the acquisition of specific prepositions and how they mediate peer interaction contributing to language development. The project's design followed the applied research paradigm by using a modified fill-in the gap activity on a small population of adult ESL students. Data was selected from this activity and analyzed. The first question was marginally supported by the data. Specifically the research design to answer this

question was flawed and too many variables were evident to fully show comics affecting acquisition of the targeted prepositions. The second question was better supported by analysis of the data. Comic images act in a similar manner to private speech and use of L1 in other studies demonstrating a cognitive mediation through the image and contributing to language development.

The implications are twofold. First, comic images should be taken as a significant variable in future applied linguistics research using the medium to elicit collaborative dialogue. Second, comic images act as a mediational tool both intramentally and intermentally contributing to language development. The typical, cognitive rationale for the employment of comics in the classroom can now be bolstered by a social, interactive rationale. Future research should improve the project design and better isolate the comic images as a variable to address how they affect language acquisition during a classroom activity.

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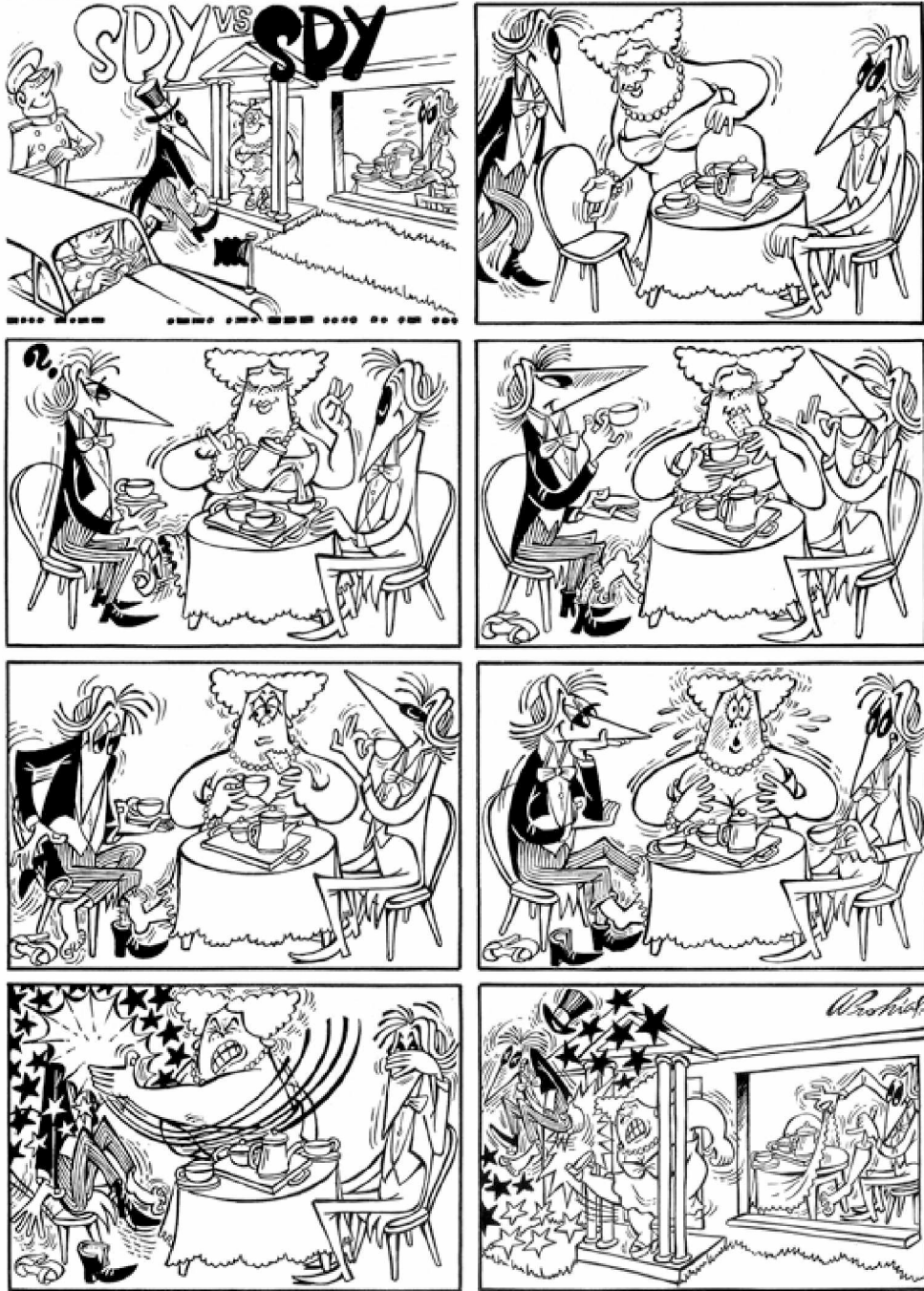
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Appendix A

JOKE AND DAGGER DEPT.



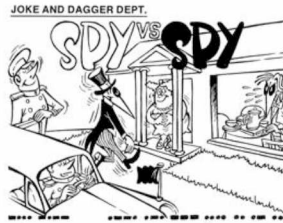
MAD #158, April 1973

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Figure A-1: Spy vs. Spy complete story in pantomime

Appendix B

1. The black spy arrives. The hostess invites him IN to her house.



2. The lady offers the black spy a seat AT the table.



3. She pours tea IN their cups.



4. A foot touches the black spy ON the leg.



5. The black spy looks AT the lady. He removes his shoe.



6. The black spy touches the lady ON the leg



What will happen next?

Punch line revealed upon completion of the exercise

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Figure B-1: Dictation of panels with script

Appendix C

PRETEST

1. Fill in the blank

The man sits _____ the chair.

She pours coffee _____ the cup.

2. Multiple Choice

The woman offers him a seat _____ the table.

- a. in
- b. at
- c. on

She slaps him _____ the face.

- a. at
- b. in
- c. on

3. Use the picture to fill in the blank



The white spy's hand is _____ his knee.

The lady wears a bracelet _____ her wrist.

Appendix D

Posttest and Delayed Posttest

1. Fill in the blank

The foot touches him _____ his leg.

She offers a seat _____ the table.

She smacks him _____ the face.

2. Multiple Choice

The hostess invites him _____ her house.

a. in

b. at

c. on

The cup is _____ the table.

a. at

b. in

c. on

3. Use the picture to fill in the blank



The shoe is _____ the floor.

Appendix E

Transcription of Task

[00:08:35.09]

001 R: Ok now weer gonna share with the class

002 R: So lets start with this group

003 R: tell me what happens first (.2) whats going on

004 M: a man cam to da table:

005 R: ok wh-what is this panel?

006 R: whats happening there? (.5)

007 M: see probaby asrive

008 R: OK he arrives to a house

009 M: [mh hm]

010 R: and then what?

011 M: uh cant

012 H: see invite eem to seat

013 R: yes she invites him to sit down

014 R: very good

015 R: and this one?

016 M: uhmm

017 A: [sees]

018 M: shes suv tea for him?

019 H: [come to table]

020 R: very good

- 021 R: she sirves tea
- 022 D: [unintelligible]
- 023 R: And how about this one?
- 024 (.4)
- 025 H: ummm see bring tea
- 026 R: OK theyre drinking tea
- 027 R: and then this one?
- 028 M: uh: a man (.6)
- 029 R: OK?
- 030 R: theres a foot touching him
- 031 R: and then this one?
- 032 (.8)
- 033 H: see talk
- 034 R: shes surprised
- 035 M: [hh]
- 036 R: good or embarrassed
- 037 R: all right now your turn (to Gabriela and Diego)
- 038 R: whats happening in the first panel?
- 039 G: hes comin to de restarant?
- 040 R: OK
- 041 D: [hes arriver]
- 042 R: OK and then what happens here?
- 043 D: ee go in: and de woman say take a seat

044 R: [very good]

045 R: and then what happens next

046 D: ee servuhs some coffee

047 R: OK

048 D: [for (.3) us]

049 G: [and she and she put off her]

050 D: [in cookie puttie]

051 D: but shes uh[put up hers]

052 G: [her sandals]

053 R: very good she kicked off her shoe

054 D: [in numb]er four is uh when shes pour

055 G: [touching]

056 D: of uh him boot uh think

057 R: OK?

058 G: hes touching hh shes touchin he?

059 R: uhn huh (affirmation)

060 G: [under the table]

061 R: very good

062 R: on where?

063 R: on his what?

064 D: yeah

065 D: in here I thin:(k) >no<

066 R: OK whats he doing?

067 D: hes pour her um (.2) surs but i thin(k) it was no

068 G: put off

069 D: no

070 G: she put

071 D: [oh no shes de]

072 G: no

073 R: [no hh laughter hh

074 D: [hh]

075 G: he put off hes choos?

076 R: very good

077 G: hes boots?

078 R: very good

079 G: um: in last one

080 D: [in here] hes put him leg on her leg I thin(k) hh:

081 R: [ah ha]

082 R: and what is that what does that mean?

083 G: maybe

084 D: [shes uh]

085 G: hes feet esmell bad?

086 D: [suprise cold feet cold feet]

087 R: hh its possible

088 R: but this this she looks embarrassed right?

089 R: or su surprised

- 090 D: [not as yeah]
- 091 R: thats like thats like going like this
- 092 G: hh
- 093 D: [hh]
- 094 R: OK
- 095 D: she say oh my gosh
- 096 R: Good job
- 097 R: very good you described it right
- 098 G: do you have nother copy another preposition copies here?
- 099 R: oh do you need another preposition copy?
- 100 G: maybe I lost my
- 101 R: >uh oh no< its not a test
- 102 R: Im not gonna grade you
- 103 R: but Ill give you one if i have one I think I do
- 104 G: OK
- 105 R: I [may] not
- 106 G: [no?]
- 107 R: but you can share with Diego
- 108 G: I have to put
- 109 D: [I dont have]
- 110 R: you dont have one ei[her?]
- 111 D: [no]
- 112 R: maybe you could share with Miyu

- 113 M: here (Miyu had an extra copy)
[00:12:22.16]
- 114 R: so theres a black spy on the left
- 115 R: and then a white spy on the right
- 116 R: theyre spies
- 117 G: (unintelligible)
- 118 R: what is a spy Diego?
- 119 D: spy: is *como* uh
- 120 R: tell her in Spanish thats fine
- 121 R: remember?
- 122 G: I dont know >her< hh or dat hh
- 123 R: do you know what a spy is?
- 124 R: no?
- 125 R: thats ok is there a word for spy in japanese?
- 126 R: in spanish its *espia*
- 127 G: ohhhj:
- 128 D: [yeah spy is *espia*]
- 129 G: OK
- 130 R: yeah whats a spy in japanese?
- 131 M:[spy]
- 132 A: [spy]
- 133 R: >oh< is it really?
- 134 M: yeah hh

135 A: [hh]

136 R: OK heres the preposition at

[00:16:08.01]

137 R: She offers him a seat? (.2) where

138 G: [On the

139 D: [on da shair

140 G: at the table? at [th]e table.

141 D: [at]

142 R: at the table

143 D: [oh at the table]

144 R: [because if she] offered him a seat on the table

145 R: where would he have to sit? (hand palming on table sound)

146 R: if youre at the table you are sorta next to it (.2) ok?

147 R: thats ok dont worry

148 D: hh

149 R: its >not a test< its fun (.) no its not fun

150 D: hhh

151 D: its not fun (joking tone)

152 R: its not fun,

153 R: uh a lady pours and there theres a cup

154 R: so she the lady pours tea (.2) where

155 D: [in the]

156 G: [in the cup]

157 R: Good

158 R: Do you agree Hien?

159 H: degree ya degree

160 R: OK in the cup (.) very good

161 R: Now on (.4)

162 R: So theres a foot

[00:16:50.25]

163 R: theres some legs

164 R: a foot touches him where?

165 D [on]him leg

166 G [on:]

167 R: >on< the leg

168 D: on the leg

169 R: very good

170 R: all right

171 R: so (.2) theres a story behind this

172 R: youre gonna listen to the story one time

173 R: just listen(.) dont write OK?

174 R: and then Im gonna tell the story again

175 R: and then I'm going to tell the story again

176 R: and this time you can take notes

177 R: if you (.) if you want [laughter] what?

178 R: or you could use your book I don't care

179 (laughter from class)

180 R: If you really need to go ahead

181 G: Uhn...

182 D: [Oh Im sorry]

183 R: [and if you need] to go back to your your group talk to your partner about the story

184 D: (unintelligible)

185 G: [remember (.) de]

186 D: [I know: is because:]

187 R: it's not cheating don't worry.

188 D: [No?]

189 R: and then you share your story with the class

190 D: *aqui no entendi nada de ti*

Here I don't understand you at all.

191 G: hh.

192 R: OK(2) lets see.Im supposed to do this in a different way (.) Im sorry

193 R: uhh.(.) Im supposed to do a slideshow with notes >how do I do that?<

194 (7.0)

195 R: oh it doesnt matter (talking to self)

196 R: i'll just do it this way ok?

197 R: can you all see that? is that good enough?

198 D: ya (.) i see that

199 R: ok (.) so the black spy arrives

200 R: the hostess invites him in to her house

201 R: the lady offers the black spy a seat at the table

202 R: she pours tea in their cups

203 D hm mmm

204 R: a foot touches the black spy on the leg

205 R: the black spy looks at the lady

206 R: he removes his shoe

207 R: so hes looking at the lady

208 D: mmm hmm

209 R: the black spy touches the lady on the leg

210 D: hh.

211 R: ok?

212 D: shes swet oww!

213 G: [mmm hmmm]

214 R: [now think about]

215 R: lets (.) lets do this again

216 R: ok now you can take notes

[00:18:56.14]

217 R: if you want to take notes

218 R: you can write down any any word you want

219 R: ok?

220 R: are you ready?

221 R: if i read too fast let me know

222 R: ok?

223 R: the black spy arrives

224 R: the hostess invites him in to her house

225 R: in to her house

226 (6.0)

[00:19:30.13]

227 R: the lady offers the black spy a seat (2.) at the table

228 R: a seat at the table

229 (7.0)

230 R: she pours tea in their cups

231 (5.0)

232 R: a foot touches the black spy on the leg

233 (2.0)

234 M: why? (unintelligible)

[00:20:10.02]

235 R: the black spy looks at the lady

236 R: he removes his shoe

237 (5.0)

238 R: the black spy touches the >lady on the leg<

239 7.0)

240 R: the black spy touches the lady on the leg

241 R: Ok

242 R: what will happen next

243 R: >so< keep your, your stuff in order right? and then you guys can talk about it

244 R: and rewrite the story, one sentence here >one sentence here< on sentence here?

245 R: ok?

246 R: >go ahead<

247 R: give you about five minutes

248 R: that will be plenty of time

[00:21:10.03] BEGIN RECONSTRUCTION/GROUP WORK

249 R: do you have it in order still?

250 R: good (2.) right here

251 G: [mmm hmmm]

252 R: [mmm hmmm]

253 R: good ok so whats happe[ning here?

254 D: [the black the black spy arrive]

255 R: Good (.) so you write that down

256 D: uhh:

257 R: Just one one person can write

258 D: their house in their house

259 R: Thats fine

260 (5.0)

261 G: uh: a[white

262 D: [shes offers suh seat at da table?

263 (background talk from other group)

- 264 D: thas right? hh
- 265 G: She offers seat (.) to black spies?
- 266 R: uh huh ((to other group...background))
- 267 D: uh huh (.) °at the table°
- 268 (7.0)
- 269 D: mmm here at shes [pour tea >in the cup<
- 270 G: [shes pouring
- 271 R: uh huh she offers him a seat ((to other group))
- 272 (9.0)
- 273 D: she [tuhsh]
- 274 G: [shes t]uhshin
- 275 D: shes tuhsin (.2) uh (.2) >the leg no?<
- 276 R: whats that? ((to other group))
- 277 G: uhh:
- 278 D: the leg >no< shes tushin >him< (.) leg
- 279 G: she tuhsin mm:
- 280 D: him
- 281 G: black spys?
- 282 D: mm hmm ((affirmation))
- 283 D: ON
- 284 G: on the leg
- 285 D: °on the leg°
- 286 R: very good ((to other group))

- 287 D: and here she (.3)
- 288 G: the[black spy]
- 289 D: [the black spy]s tuch >no<]
- 290 D: see [right here?]
- 291 G: [mm hmm] ((affirmation))
- 292 G: is lookin?
- 293 D: nah she the hes lookin the lady
- 294 G: uh huh
- 295 G: is lookin?
- 296 D: °is lookin the lady°
- 297 G: AT the lady?
- 298 D: wat happen? hh
- 299 G: uh tushin?
- 300 G: her leg >ON her leg<
- 301 G: she?s: (.2) embarrasin?
- 302 D: no
- 303 D: the black spy tuches lady (.)on >on the leg<
- 304 R: what will happen next=
- 305 R: = THERES TWO MORE TWO MORE of these panels)
- 306 G: °*Si pero (ya lo digo/ya lo dijimos) aqui*°
- Yes, but (I/we) already said it here
- 307 D: [oh OK I thihn shes]
- 308 G: [the black spys look]in at the> lady=

309 G:= OK_z< [jus (.) oh-]

310 D: shes [embarrassin] somethin hh

311 R: and then you write down what will happen next=

312 R: =what will she do or what will they do? ((to Diego and Gabriela))

313 D: shes ((smack sound)) hh

314 G: hh

315 D: bribe him face I think

316 R: I hope so hh

317 D: right?

318 R: what will happen next? ((to other group))

319 G: she:

320 G: she will clap?

321 D: no I think shes hahppy

322 R: hh

323 R: write down shes happy

324 D: or sh:

325 G: she

326 D: hh hh

327 D: is that true? hh

328 G: she happy

329 G: when [de black spy]

330 D: [when black]spy toush her leg hh

331 G: But (.2) the problem (.3) is in his feet

332 G: is mean (.2) but

333 R: hh

334 D: hh

335 R: I never thought of that!

336 G: hh

337 R: all right lets read your stories

END OF RECONSTRUCTION WORK

Appendix F

E.C. Publications Approval

Daniel:

Thank you for to use one (1) ‘Spy vs. Spy’ cartoon from MAD Magazine (the “Material”) in connection with your English as a Second Language course and thesis. Please be advised that we have no objection to your use of the Material for this use only on the following conditions:

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Sincerely,

DC Entertainment

Appendix G

IRB Approval



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Institutional Review Board

909 N Koyukuk Dr. Suite 212, P.O. Box 757270, Fairbanks, Alaska 99775-7270

June 3, 2011

To: Daniel Darrow, BA
 Principal Investigator

From: University of Alaska Fairbanks IRB

Re: [242252-1] Spies in from the cold: The use of pantomime cartoons to aid the retention of the English prepositions in, on, and at for beginning adult ESL students in Fairbanks, Alaska.

Thank you for submitting the New Project referenced below. The submission was handled by Exempt Review. The Office of Research Integrity has determined that the proposed research qualifies for exemption from the requirements of 45 CFR 46. This exemption does not waive the researchers' responsibility to adhere to basic ethical principles for the responsible conduct of research and discipline specific professional standards.

Title:	Spies in from the cold: The use of pantomime cartoons to aid the retention of the English prepositions in, on, and at for beginning adult ESL students in Fairbanks, Alaska.
Received:	May 10, 2011
Exemption Category:	1
Effective Date:	June 3, 2011

Modifications Required:

1. Please make it clear on the Consent form that researchers want permission to show the tapes to anyone at UAF or outside conferences.
2. PI name needs to be changed to faculty member; please call Bridget (474-7800) to fix.

This action is included on the May 26, 2011 IRB Agenda.

Prior to making substantive changes to the scope of research, research tools, or personnel involved on the project, please contact the Office of Research Integrity to determine whether or not additional review is required. Additional review is not required for small editorial changes to improve the clarity or readability of the research tools or other documents.