

California State University, San Bernardino

CSUSB ScholarWorks

Theses Digitization Project

John M. Pfau Library

1995

Conditioned acquisition and augmenting effects in causal attributions for employee performance

Lia Jean Nieri

Follow this and additional works at: <https://scholarworks.lib.csusb.edu/etd-project>



Part of the [Industrial and Organizational Psychology Commons](#)

Recommended Citation

Nieri, Lia Jean, "Conditioned acquisition and augmenting effects in causal attributions for employee performance" (1995). *Theses Digitization Project*. 985.

<https://scholarworks.lib.csusb.edu/etd-project/985>

This Thesis is brought to you for free and open access by the John M. Pfau Library at CSUSB ScholarWorks. It has been accepted for inclusion in Theses Digitization Project by an authorized administrator of CSUSB ScholarWorks. For more information, please contact scholarworks@csusb.edu.

CONDITIONED ACQUISITION AND AUGMENTING
EFFECTS IN CAUSAL ATTRIBUTIONS
FOR EMPLOYEE PERFORMANCE

A Thesis
Presented to the
Faculty of
California State University,
San Bernardino

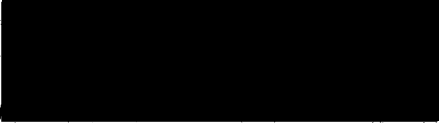
In Partial Fulfillment
of the Requirements for the Degree
Masters of Science
in
Psychology

by
Lia Jean Nieri
June 1995

CONDITIONED ACQUISITION AND AUGMENTING
EFFECTS IN CAUSAL ATTRIBUTIONS
FOR EMPLOYEE PERFORMANCE

A Thesis
Presented to the
Faculty of
California State University,
San Bernardino


by
Lia J. Nieri
June 1995
Approved by:



Robert E. Cramer, Chair, Psychology



Joanna Worthley



Sanders McDougall

May 31, 1995

Date

ABSTRACT

A social analog of a short-delay conditioning paradigm in Pavlovian learning was used to test the prediction that under certain conditions, human causal judgments would reflect acquired response properties that can be either increased (augmented) or decreased (discounted). The learning experiment was masked by describing it as a study testing a computerized employee evaluation system. Subjects were presented information about a hypothetical worker and a fictitious company's level of productivity.

Consistent with contemporary conditioning models of associative learning, the results indicated that when a particular social stimulus (Worker X) was repeatedly paired with a particular social effect (high productivity) in a stimulus compound with an inhibitor of the effect (Worker A), the strength of causal attributions to X was increased relative to a single Worker X paired with the productivity effect. Implications for future research and the role of context with regard to augmenting effects in educational settings are discussed.

ACKNOWLEDGMENTS

It was approximately four years ago when I set foot on the campus of CSUSB. I was fortunate to meet many good friends who shared in my journey toward completing a master's degree in psychology. During the first quarter of school, I was introduced to Dr. Robert Cramer. That meeting was the beginning of a four year student-mentor relationship that has evolved tremendously. Throughout my journey, many life experiences have contributed to unanticipated delays in completing my degree. At times I felt discouraged, lacking in confidence, and wondering if I would ever finish. However, Bob never lost faith in me, encouraging and guiding me throughout the entire experience. His high expectations drove me to excel to my potential. For this, I am very grateful. I also thank Dr. Joanna Worthley, for her nurturing ways and for giving me the sense that my intellectual curiosity has no bounds. Thanks also to Dr. Sanders McDougall, who served on my thesis committee, for his insightful comments and input regarding this manuscript. For their long hours in the lab, I sincerely thank my fellow SLRG members, especially Suzanne Reid whose statistical assistance was greatly appreciated. And finally, I extend a thank you to my parents for making this experience possible by their financial assistance and their unending encouragement and genuine interest in both my academic and personal goals.

TABLE OF CONTENTS

ABSTRACT.....iii

ACKNOWLEDGMENTS.....iv

LIST OF TABLES.....vii

LIST OF FIGURES.....viii

INTRODUCTION.....1

 Causality.....1

 Social Psychology.....3

 Learning Psychology.....13

 Social Learning Theory.....18

STATEMENT OF THE PROBLEM.....23

 Technique of Theory Development.....24

 Hypotheses.....26

 Acquisition Effects.....26

 Discounting Effects.....26

 Augmenting Effects.....27

GENERAL METHOD.....29

 Subjects.....29

 Experimental Design.....29

 Masking Task.....30

 Apparatus.....30

 Procedure.....31

RESULTS.....35

 Acquisition.....37

 Discounting.....37

 Augmenting.....40

 Confidence.....43

DISCUSSION.....45

 Acquisition Effects.....46

 Discounting Effects.....47

 Augmenting Effects.....49

 Confidence Ratings.....50

 Limitations on Reported Effects.....51

 Implications for Future Research.....52

 Educational Implications.....54

APPENDICES.....56

 A. Instructions for Group 1.....56

 B. Instructions for Group 2.....57

 C. Instructions for Groups 3 and 4.....58

 D. Consent Form.....59

 E. Debriefing Statement.....60

 F. CS/US Acquisition Trial.....61

 G. CS/US Discounting Trial.....62

 H. CS/No US Inhibition Trial.....63

REFERENCES.....64

LIST OF TABLES

1. Mean Scores for the Acquisition, Discounting,
Augmenting, and Control Groups.....36

LIST OF FIGURES

Figure 1. Acquisition Curve of Causal Judgments
for B+ Trials in Group 1.....38

Figure 2. Learning Curves of Causal Judgments for AX+
Trials in Group 2 vs. X+ Trials in Group 3.....39

Figure 3. Learning Curves of Causal Judgments for X+
Trials in Group 1 and X+ Trials in Group 4.....41

Figure 4. Acquisition Curve of Confidence Ratings
for B+ Trials in Group 1.....44

INTRODUCTION

The present research utilized contemporary learning theory and research to examine the stimulus selection problem in human causal attribution. In particular, this study was devised to test the effects of "acquisition", "discounting", and "augmenting" in human social causal judgments. This thesis takes the theoretical position that social effects or outcomes automatically elicit a search for causes and the generation of cause and effect statements. This search was referred to as "invariance seeking action". Social analogs of familiar conditioning variables were developed and manipulated in a manner consistent with contemporary conditioning principles in order to test three hypotheses. The importance of the research lies in extending learning theory, particularly associationist models, to the explanation and prediction of human social causal judgments.

Causality

One way in which we use reason to make sense out of the world is through comparisons or by identifying an object's relation to another. Similarly, the process of understanding causation is concerned with the relationship or association between two or more objects or events. Scientists and philosophers have long been interested in

issues pertaining to causality. Many contemporary discussions on causal relations find their impetus in the British Associationist, David Hume. Hume (1739/1964) posited several rules using a highly deterministic associative process to explain causal judgments. These rules include: spacio-temporal contiguity; constant union; and temporal contiguity. The rule of spacio-temporal contiguity refers to the idea that the cause and effect must be contiguous in time and space. The rule of constant union refers to the idea that the cause and effect must occur together. The temporal contiguity rule states that causes and effects can in some places be present and at other times be absent. In other words, you can not have one without the other (see Kelley & Michela, 1980). Additionally, Hume stated that the cause must precede the effect. Finally, although not a position strongly supported today, Hume noted that causation requires a correlation between variables.

John Stewart Mill (1972) outlined two important factors necessary for inferring cause and effect. First, the method of agreement states that one can infer cause if, when X is present, Y is observed. If you observe the effect, the cause must be present. Second, the method of difference states that one can infer cause if, when Y is not observed, X is not present. By using the method of agreement in conjunction with the method of difference, the probability that X is the cause of Y is strengthened. Hence, if X,

then Y; if not X, then not Y, describes the relationship.

For example, suppose that when a particular employee is scheduled to work, the company for whom he works produces a high level of productivity. When the employee is not present, however, the company fails to perform at a high level. Thus, it would be likely that the worker's supervisor would attribute the cause of company performance to the employee.

According to the critical realist Harre (1972), looking for causes has an evolutionary or adaptive role. We use this information from our causal search as a means for survival. According to Harre, looking for causes and effects is an innate process. Additionally, critical realists view causal perceptions as subjective constructions of the mind, not unlike other learned associations. However, causal relations, such as the relationship between X and Y are said to be independent of our consciousness. Because observations alone are insufficient in making sense of the world, Harre argued that people focus on manipulative relations between cause and effect through the use of experimentation.

Social Psychology

Hume, Mill and others were highly influential in contributing to the development of "attribution theory", an area within social psychology that addresses cause and

effect relationships. Attribution theory seeks to explain the processes by which people attribute characteristics and traits to others in an attempt to make causal inferences about their behavior. Despite attribution theory being a relatively new area of research, it has received much attention in the past few decades, and has been applied to several research areas in social psychology: attraction (Regan, 1978), learned helplessness and depression (Abramson, Seligman, & Teasdale, 1978). Attribution theory also contributes to our understanding of other domains such as cognitive, developmental, and industrial psychology (see Crittenden, 1983). This broad range of theoretical application points to the vast interest in how people understand their world and the potential contributions attribution theory can provide.

Modern attribution theory's "rule governed" or "inferential approach" (Jones & Davis, 1965; Kelley, 1967, 1972, 1973) is derived from arguments developed by Fritz Heider (1958). Similar to the critical realists, Heider postulated that cause and effect assignments are used by persons attempting to bring order and meaning to the world. Heider suggested that perceivers seek the invariances in the environment by assigning cause and effect relationships to make people and the environment more predictable.

Before Heider's publication of The Psychology of Interpersonal Relations in 1958, inquiry into the area of

how people perceive and interpret other's actions was almost nonexistent. Heider was interested in how ordinary people understood and explained everyday life events. He postulated that people tend to use common sense explanations when making causal judgments. For example, a person may conclude that a person drinks because he is thirsty. Thus, he referred to his analyses as "common sense psychology" or "naive analysis of action."

According to Heider, attributional processes parallel perceptual processes. Many principles that are essential to "person perception" are also important in nonsocial perception. One's initial perception of social objects involves a distal stimulus or the person toward whom the perceiver's attention is focused. However, the distal cue is external and does not have a direct impact on the perceiver. Thus, information about the object must be relayed through some type of mediation. A proximal stimulus mediates information about others' personality through behavioral or verbal descriptions. Again, Heider argued that people act as "quasiscientists" in an attempt to make logical connections between possible causes and effects. It is important to note that this process is not always objective and rational. Many times attributions are based on little or inaccurate information.

Heider's aforementioned analog of nonsocial and social perceptions led to the idea that people search for causes

by relying on attributions to the environment (external) or to personality dispositions (internal). For example, some people may conclude that a homeless person is lazy and does not want to work, whereas another person may attribute the cause of the person's housing situation to a poor economy and lack of available jobs. The former cause represents an internal attribution and the latter an external attribution.

Influenced by the seminal work of Heider (1958), Jones and Davis (1965) developed the theory of correspondent inferences. This theory was the basis for many empirical studies in the area of attribution. Primarily, Jones and Davis were interested in understanding which factors influence an observer's attributions of intent and dispositions of another person. Correspondent inference refers to an observer's inferences about another person's intentions and dispositions that directly result or correspond to the observed behavior. In other words, correspondence refers to "the extent that the act and the underlying characteristics or attributes are similarly described by the inference" (p. 223). When an act occurs within a particular context, its meaning is better defined for the perceiver. Further, the meaning or the perceived intention of the act is determined, in part, by considering the other possible actions that were available in a particular situation. For example, if a supervisor observes

that when a particular employee is working and the company is productive, he may conclude that the employee is an excellent worker. This dispositional inference directly corresponds to the observed behavior (e.g. high productivity follows from good work). However, a supervisor may infer that the employee had a lot of help from coworkers in order to perform so well, or possibly the production standards were not that stringent. The latter causes do not represent correspondent inferences but rather refer to external or situational factors. In attributional research correspondent inferences are often operationally defined by how confident a person is in making inferences about someone else (see Harvey & Weary, 1981).

Correspondent inferences, which directly reflect the amount of information given by an action, are determined by three conditions. The conditions are: the desirability of the outcome, noncommon effects, and free will. Jones, Davis, and Gergen (1961) provided empirical evidence to show that behavior that is unexpected or socially undesirable is more informative to the perceiver and results in a correspondent inference. In other words, the more distinctive reasons a person has for an action, and the more these reasons are widely shared in the culture, the less informative that action is concerning the identifying attributes of the person. Thus, the attributor is less confident about his inferences regarding the intent of the

behavior as compared to situations in which the action is considered undesirable.

Noncommon effects refer to the idea that the fewer distinctive reasons for an action, the more informative that action is about identifying dispositions of the actor. The intention underlying a voluntary act is more clearly evident when it has a small number of effects that are unique to it. In other words, noncommon effects represent distinctive outcomes that follow from an act. For example, let us say that Susan has been getting together with her old high school friends on an annual basis for the last fifteen years. It could be said that the groups activities are "common effects". However, this year Susan has decided not to attend the reunion. Susan's decision not to go represents a "noncommon effect", relative to the group's decision, since all of the other friends have attended the reunion in the past and will attend this year. The observer in this situation is more likely to make a dispositional inference (an inference about Susan) regarding Susan's decision. One might infer that Susan is not as loyal to her friends as she once was (dispositional attribution), when in fact situational factors, such as an illness, may have prevented her from attending this year. Jones and Davis argued that the fewer the noncommon effects associated with an act, the more likely a correspondent inference will be made.

The final criteria for correspondent inference is free will. When an individual acts on one's own volition, the perceiver tends to make dispositional attributions because he holds the individual accountable for his or her behavior. If the behavior is not freely chosen (for instance, if the individual was coerced or manipulated), the perceiver tends to hold the individual less personally responsible for the act. Thus, other causes are given to explain the behavior rather than focusing on personality attributes.

Although Jones and Davis (1965) focused on attributions to others, Kelley's approach is applicable to explaining another person's action and the action stemming from one's self. The theory of correspondent inference explains the criteria for which internal attributions are the result. By default, external causes are given if the criteria are not met. Kelley's theory, however, uses specific rules that determine whether a behavior is attributed to external causes or internal causes.

Kelley described attributional processes as being analogous to analyzing data patterns by means of the statistical method, Analysis of Variance (ANOVA). This statistical analysis makes simultaneous comparisons between two or more means, and yields a series of values which can be tested to determine whether a significant relation exists between the experimental variables. In other words, ANOVA indicates when an independent variable has a significant

effect on a dependent variable. Similarly, according to Kelley, the perceiver is assumed to attribute effects to those causal factors, which over time, covary. Fundamental to Kelley's theory is the covariation principle which states that, "an effect is attributed to one of its possible causes with which, over time, it covaries" (Kelley, 1973, p. 109). If a given cause is always present with a particular effect in many situations, and if the effect does not occur in the absence of the cause, the effect will be attributed to the cause (see Hume above). Implicit in the covariation principle is the idea that the observer has information about the effect at two or more points in time.

Attribution theory deals with situations in which inferences about someone's behavior are made based on either single or multiple observations. As mentioned above, Kelley's covariation principle pertains to situations in which multiple observations are made by the observer. However, most people have only a single observation upon which to make a causal attribution. Kelley proposed that the attributor will use three types of information to determine if a cause is a valid explanation for an effect. These three types are: distinctiveness, consistency, and consensus. Distinctiveness refers to the extent to which the individual, whose action is being explained, reacts in the same manner to other, different stimuli or events. If the action has little distinctiveness, dispositional

attributions are more likely. For example, let us say that, when an employee named Joe is working, his company is highly productive, and when Joe worked for another company, productivity was also high. There is little or no distinction between his behavior at the two different places of employment. Therefore, the perceiver would most likely infer an internal attribution, concluding that Joe is a very good worker (internal attribution). However, if the high productivity information was limited to his current position, the perceiver would probably attribute the performance to situational factors such as the influence of other workers, the easiness of the job, etc. (external attributions).

Consistency refers to the extent to which the individual reacts to the same stimulus or event in the same manner on other occasions. Returning to the example given above, let us say that, when Joe was working, the company was productive over many months. When such behavior is consistent over time, the perceiver tends to make internal attributions. Thus, we would conclude that Joe is a good worker (internal attribution). However, if when Joe was working, the production was sometimes high and sometimes low, the attributor would most likely use external causes to explain the inconsistent outcomes.

The extent to which others react in the same manner to a stimulus or an event as does the individual in question

is referred to as consensus. It would be more difficult to make an attribution specific to Joe's dispositions if productivity is high when other employees are working. In other words, other employees, as well as Joe, experience the high productivity outcomes.

According to Kelley, causes can be either inhibitory (discounted) or facilitative (augmented). The discounting principle is applicable to situations involving an attributor who has information about a given effect(s) and a number of plausible causes. Kelley's discounting principle states that, "the role of a given cause is discounted if other plausible causes are also present" (p. 113).

Discounting can be demonstrated by a person's lack of confidence in the inference made that a particular cause is responsible for a particular effect (Kelley, 1972). Suppose that two employees, Sam and Joe, work together at a company. Each month that they work together, the company's productivity level is high. According to the discounting principle, each employee will be given less causal weight than if they worked alone. In other words, because Sam and Joe are both potential causes for the performance, each employee is discounted as being responsible for the effect.

For situations in which multiple plausible causes of a given effect exist, some of which are facilitative and some are inhibitory, a reverse of the discounting principle results. The augmenting principle states that, "if for a

given effect, both a plausible inhibitory cause and a plausible facilitative cause are present, the role of the facilitative cause in producing the effect will be judged greater than if it alone were present as a plausible cause for the effect" (p. 114). In other words, the facilitative cause has succeeded in producing the behavior in the face of important barriers.

Returning to the employee-production level example, let us suppose that, when employee Joe works, the company's productivity level is high. A supervisor would more confidently attribute the cause of the company meeting its standards to Joe. Let us assume that another employee named Sam also works for the company, and when he works he inhibits company performance. On some occasions, Sam and Joe work together and during this period productivity is high. When inferring the cause of the company's successful outcome when both Sam and Joe are present, Joe is expected to be given more causal weight than when he worked alone.

Learning Psychology

Much of the traditional research in learning psychology has been similarly interested in the phenomena of cause and effect relationships. However, rather than employing a "rule governed" or "naive scientist" approach to understanding causal attributions, learning theorists focused on an associationist strategy.

Historically, scholars assumed that two stimuli occurring together in time and space was sufficient to produce learning. Pavlov (1927) discovered that subjects can learn to associate a conditioned stimulus (CS) with an unconditioned stimulus (US) as a result of the pairing of these stimuli. In other words, some involuntary reaction can "be passed" from a stimulus which automatically elicits it (US) to a stimulus which does not initially elicit the response (CS). As a result of repeated pairings, the CS eventually elicits a response called a conditioned response (CR).

In his classic experiment with laboratory dogs, Pavlov demonstrated the process by which conditioned learning takes place. Pavlov noted that an unconditioned stimulus (food) would automatically elicit an unconditioned response (salivation). He then repeatedly paired a neutral stimulus (a bell) with the unconditioned stimulus (food). Again, the dog would salivate. After several of these pairings, the bell was presented alone without the food, and salivation occurred. This process is referred to as classical or Pavlovian conditioning.

However, contemporary learning theorists reject the sufficiency of simple contiguity in producing associations. The rejection of the sufficiency of contiguity is based on the arguments that it is not applicable to most real learning situations due to the fact that most situations

are characterized by multiple CS's (Rescorla, 1988).

The current learning literature purports that conditioning is affected by contextual variations rather than the simple pairing of two stimuli (Algom & Bizman, 1983; Kamin, 1968). In other words, the association between two variables cannot be determined solely by the isolated CS-US relationship. Rather, it depends on other concurrent event relationships as well. The problem of specifying the rules whereby a relationship can be learned when presented in a specific context is referred to as the stimulus selection problem (Rudy & Wagner, 1975). Rudy and Wagner describe the stimulus selection problem as, "one of specifying the rules whereby a relationship will or will not appear to be learned about depending upon the context of environmental events in which it is embedded" (p. 270). The conditioning of a neutral stimulus (CS) is affected by environmental factors, and cannot be accounted for by mere CS-US contiguity.

Pavlov's experiments were the basis for later research on the overshadowing effect and conditioned inhibition. Overshadowing refers to situations where two or more stimuli are presented simultaneously, but one stimulus is easier to associate with the US and, as a result, decreases the likelihood that other stimuli will be conditioned. If two stimuli of different intensities conditioned equally, support for the concept of simple contiguity would be

stronger. However, using two stimuli of unequal saliency, intensity, or validity can produce the overshadowing effect (Kamin, 1969; Mackintosh, 1971; Wagner, Logan, Haberlandt & Price, 1968). The overshadowing effect clearly demonstrates the insufficiency of simple contiguity in producing conditioning.

Pavlov noted that stimuli can be conditioned to signal the presence and the absence of an unconditioned stimulus. Inhibitory conditioning refers to situations in which one learns that a stimulus signals the absence of the US. Conditioned inhibition results in an organism "holding back" a conditioned response. From a contemporary vantage point, an inhibited response is assumed to be as equally adaptive as the ability to make a conditioned response. In other words, signals that alert organisms about what will not occur are just as important for survival as information that reveals which events are likely.

Despite its discovery by Pavlov, inhibitory conditioning has received little empirical attention until recently (Boakes & Halliday, 1972; Rescorla, 1969). Unlike excitatory conditioning, inhibitory conditioning requires a special context to occur. Specifically, inhibitory conditioning takes place in the context of excitatory conditioning (Baker & Baker, 1985; Fowler, Kleiman, & Lysle, 1985; Lolordo & Fairless, 1985).

Rescorla and Wagner (1972) and Wagner and Rescorla

(1972) postulated a learning model by adopting and extending general Pavlovian classical conditioning principles to address the stimulus selection problem. Like Pavlov and others, Rescorla and Wagner predicted that developing an association between two stimuli is influenced by the number of times the two stimuli occur together. However, they demonstrated that "changes in associative strength of all the stimuli present on the trial, depend upon the total associative strength of all stimuli present on that trial" (p. 333). In other words, learning the relationship between two stimuli is not only influenced by how often the stimuli occur together, but also the context in which the pairings take place. For example, if a stimulus (CS) is paired with a reinforcer (US) in a context which includes no other competing stimuli, an association between the CS and the US will occur. However, as mentioned earlier, a pure association between the stimuli (CS_1 and an US) with no other competing stimuli is not likely to occur in a real situation. A more realistic situation would include at least two competing stimuli. When a CS_1 and an US are paired together in a context which includes another stimulus, CS_2 , which has no prior relationship with the US, the result may be less associability of the CS_1 and the US. However, if CS_2 was a conditioned inhibitor, conditioned responding to CS_1 may actually be augmented (Wagner & Rescorla, 1972).

Wagner and Rescorla (1972) and others argue that

conditioned inhibition does not result from merely not reinforcing a particular stimulus. Hence, repeatedly ringing a bell (CS) will not result in the bell becoming a conditioned inhibitor. Conditioned inhibition effects result from not reinforcing a particular stimulus in the context of another stimulus that has a history of reinforcement. In other words, inhibition results from not reinforcing a stimulus in the presence of a conditioned excitatory stimulus. In sum, learning psychologists view inhibitory stimuli differently than do social psychologists. According to learning psychologists, inhibitory stimuli do not "get in the way" of an effect, but rather predict the effect's absence. This is a critical distinction between learning and social psychologists and necessarily influences how we think about augmenting effects in causal judgments. Using the employee-company production example, an inhibitor (the worker Sam-see above) should predict the absence of high performance information, not the presence of low performance information. Hence, the worker Joe, when working with Sam, is expected to be given greater causal priority when high production is observed.

Social Learning Theory

The current study adopts a view advanced by several researchers that there are many parallels between animal and human associative learning (see Lovibond, 1988). Miller

(1959) proposed that learning processes found in the laboratory can be applied to more complex social phenomena. Alloy & Tabachnik (1984), for example, developed a theoretical framework for understanding and integrating animal learning phenomena and human covariation judgments (e.g. attributions). According to these theorists, both animals and humans perceive event contingencies. Further, they assert that covariation judgments are the result of an interactive process between prior expectations about event relationships and current available situational information. Thus, an organism makes judgments based on relevant expectations, objective situational information, and the extent to which these two sources of information interact.

Shanks and Dickinson (1987) stated that, "the impact of event contingencies developed within animal learning may well illuminate the processes underlying our judgments of causality" p. 256). In other words, they suggest that an associative view can be applied to human causality judgments. As with animal conditioning, people's judgments of the covariation of events are influenced by the other concurrent events in the environment. Arguably, causal judgments can then be viewed in terms of the stimulus selection problem; the rules people use to attribute (or not attribute) a cause to an event depends on the context within which the events are embedded.

In an effort to demonstrate that causal judgments are affected by factors necessary for associative learning, Dickinson, Shanks, and Evenden (1984) and Shanks and Dickinson (1987), used an operant conditioning paradigm. In the research reported by Shanks and Dickinson (1987), for example, subjects were asked to judge the extent to which their key pressing caused an effect to occur on a computer screen. During the first stage of the experiment, some of the subjects had observed trials in which an alternate stimulus, a stimulus other than key pressing, reliably predicted the effect. During the second stage, all of the subjects performed the key pressing task at the same time the other stimulus occurred. This combination of potential causes, the key press and stimulus was then followed by the effect. Subjects were asked to make judgments about the causal relationship between the key press and the effect. The results indicated that the subject's judgments were significantly reduced following exposure to the other stimulus compared to the control condition in which the other stimulus had not been paired with the effect in the first stage. Despite all the subjects receiving key press-effect pairings, causal judgments to the key press were blocked in the group also receiving the other stimulus effect pairings.

In the Shanks and Dickinson (1987) experiment, human subjects were asked to judge the relationship between an

action (the cause) and an outcome (the effect). As expected, subjects' judgments were influenced by the contingencies between the probability of the outcome given the action $P(O/A)$ and the probability of the outcome given no action $P(O/-A)$.

In a recent study by Wasserman (1990) subjects were asked to judge the efficacy of common and distinctive elements of a compound stimulus in determining the source of a hypothetical allergic reaction in a patient. The potential sources of the allergy were three types of food including peanuts, shrimp, and strawberries. Different food combinations along with the presence or absence of the allergic reaction were varied across trials. In situations where subjects could predict that a particular food caused the allergic reaction (e.g. the shrimp), and that another food doesn't cause the reaction (e.g. the peanuts), greater causal weight is given to the shrimp. However, if a subject is unable to determine the source of the allergic reaction, both stimuli are given causal priority because they are viewed as having the same associative strength. Thus, Wasserman argued that when multiple causes are present, subjects use information about the differential predictiveness of each stimuli in explaining the effect. He refers to this practice as the competition principle. Again, this experiment points to the parallels between the causal judgments of humans

(particularly discounting) and the conditioned responses of animals in associative learning.

As noted above, familiar conditioning principles have been applied to understanding human causal judgments such as acquisition effects, blocking effects, competition effects, and CS-US contingency effects. It has been argued that several other attribution phenomena can be understood in learning terms as well.

STATEMENT OF THE PROBLEM

As previously outlined, several theories have attempted to explain human causal judgments from a social psychological vantage point (e.g. Heider, 1958; Jones & Davis, 1969; Kelley, 1967), and conditioning viewpoint (Shanks & Dickinson, 1987; Allan, 1993). Another way to distinguish the different approaches to attribution involves recognizing the "rule-governed" explanations popular with social psychologists, and the associationist models favored by learning psychologists. The covariation principle and the concept of simple contiguity are consistent with these two different approaches. However, despite the widespread use of these principles by attribution theorists, certain attribution effects are more difficult to explain using the "rule-governed" approach. The present study is part of a series of investigations exploring attribution hypotheses using well-established conditioning principles. By employing general learning theory, the stimulus selection problem in learning research was addressed. Although general learning theory has been used primarily to predict individual behavior in controlled laboratory situations, it has been applied to many social processes with favorable results (Dollard & Miller, 1950; Lott & Lott, 1968, 1972; Steigleder, Weiss, Cramer & Feinberg, 1978). Specifically, we examined the proposition that under certain conditions, human causal

judgments reflect acquired response priorities that can be either increased (augmented) or decreased (discounted).

Technique of Theory Development

By using the method of analogy, a general model of conditioning can be applied to assist the investigation of a less-well understood area (e.g. of social causal judgments in context). Variables assumed to be important in the development of social causal judgments are viewed as being analogous to independent and dependent variables in learning. A dictionary of analogies is referred to as the Rules of Correspondence. According to this technique of theory development, the relations holding among the variables in the conditioning model should theoretically hold among the corresponding social variables (Campbell, 1920; Hesse, 1966, 1974, 1980; Masterman, 1980; Oppenheimer, 1956).

The Rules of Correspondence outline parallels between variables in conditioning and the variables in attribution, and are numbered here to be used for later reference. It should be noted that the Rules of Correspondence listed below are illustrative rather than exhaustive and are subject to further development. A conditioned stimulus (CS) or antecedent stimulus corresponds to a discriminable social stimulus such as an employee in a company (Rule 1). A company's productivity level, which is a social stimulus,

corresponds with an unconditioned stimulus (US) or a consequent stimulus (Rule 2). The subsequent attribution response termed, "invariance seeking action", is analogous to an unconditioned response [UR] (Rule 3). The conditioned form of the UR analog (strength, speed or the probability of invariance seeking action) corresponds to a conditioned response [CR] (Rule 4). The number of CS-US pairings (reinforced trials) corresponds to the number of CS analog-US analog pairings. This rule is exemplified by the number of times the worker is paired with the company's productivity information (Rule 5). These pairings constitute "invariance seeking action" acquisition trials. An extinction trial is represented by a trial on which the worker is not followed by information regarding the company's productivity level (Rule 6). Presenting US-analogs in the absence of CS-analogs constitutes a US alone trial, such as company productivity information given when a specific worker is not present (Rule 7). An attribution trial, where two or more social stimuli such as two workers paired with company productivity information, corresponds to a reinforced compound CS trial (Rule 8). Corresponding to CS saliency is the saliency or vividness of the CS analog (Rule 9). The intensity or strength of the US corresponds to the power of a social stimulus, such as the level of company productivity to elicit invariance seeking action (Rule 10). Corresponding to conditioned inhibition in learning

psychology is a CS analog that inhibits causal attributions or "invariance seeking actions" (Rule 11).

HYPOTHESES

Acquisition. When a neutral stimulus (CS) is repeatedly reinforced (i.e. paired with an unconditioned stimulus [US]), it will contribute to the cue's acquisition of associative strength. The result is a negatively accelerated increase in the learning curve for the conditioned response (CR). By manipulating analogous independent and dependent social variables, similar empirical relationships can be developed. We predicted that repeatedly pairing a single worker with information about a company's level of productivity will result in the acquisition of causal attribution strength to the specific worker. The strength of the subject's causal attributions to the worker should evidence a familiar negatively accelerated learning curve for "invariance seeking action" across evaluation trials. (Refer to #1-5 in the Rules of Correspondence). The prediction of causal attribution acquisition effects is particularly important because such effects are easily explainable by contemporary associationist models, but are more difficult to explain by "rule-governed" models.

Discounting. The second hypothesis states that when a neutral compound social stimulus, Worker X (Joe) and Worker

A (Sam), is paired together with an effect (company productivity), the strength of causal attributions to each worker should be weaker relative to attributions to a single worker paired with the same productivity effect. In other words, two workers are expected to "share" the associative strength, resulting in less causal priority attributed to each individual worker. (Refer to #1-5 and 8 in the Rules of Correspondence). The second hypothesis is consistent with the "discounting effect" frequently reported by social psychologists.

Augmenting. The third hypothesis pertained to situations in which causal attributions can predictably be augmented, not discounted, despite the presence of two workers. More specifically, we predicted that when a particular social stimulus (Worker Joe) is paired with a particular social effect (high productivity) in a stimulus compound with an inhibitor for making causal attributions (Worker Sam), the strength of the causal attributions to Joe will be increased compared to the attributions made by a different subject sample to a single worker (Joe) paired with the productivity effect. Hence, attributions can only be understood in terms of the context within which information is available. Changes in social context are expected to lead to changes in prediction of attribution strength. The third hypothesis is consistent with the "augmenting effect" frequently

reported by social psychologists, and the "supernormal" conditioning effect reported by learning psychologists. (Refer to #1-6, 8, and 11 in the Rules of Correspondence).

GENERAL METHOD

Subjects

A total of 60 undergraduate male (N = 27) and female (N = 33) volunteers were recruited from California State University, San Bernardino. All subjects were randomly assigned to one of three conditions. Selection of subjects did not depend on any preliminary tests measuring either attitudes or beliefs, and all subjects were naive in regard to the study's objectives. Additionally, all subjects were treated in accordance with the ethical principles of the American Psychological Association.

Experimental Design

In classical conditioning, a discriminable antecedent stimulus, CS, is paired with a discriminable consequent stimulus, US. Similarly, in the present study CS analogs were fictional part-time workers, named Ted, Sam, and Joe, and the US analog was the productivity information of a fictional company where they worked (see Appendices F, G, and H). The primary independent variable was the context in which the CS-US analog pairings took place. We used two experimental groups and one control group to test acquisition, discounting and augmenting effects. A repeated variable, five worker evaluation trials, constituted the second independent variable. Hence, the experimental design can be described as a 3 X 5 (Groups by Trials) design.

The subjects' strength of causal judgments (i.e. invariance seeking action), which was measured on a 0-100 point scale, defined the primary dependent variable. The second dependent variable, also measured on a 0-100 point scale, was the subjects' ratings of confidence in their causal judgments.

Masking Task

The learning experiment was masked by describing it as a study testing a computerized Employee Evaluation System. This procedure allowed for repeatedly pairing a worker with information about the company's productivity level. The instructions indicated that, "In this experiment we are interested in testing the usefulness of this automated program. In order to carefully test the effectiveness of the system, it will be necessary for you to assume the role of a production supervisor in a small company." Further instructions, for example, indicated that, "Joe is a college student who is available for part-time employment. It is important to evaluate him carefully because he will be considered for full-time employment upon graduation."

Apparatus

All stimulus material was presented using a computer (IBM 360 PC) and the Micro Experimental Language (MEL) software version 120. Using MEL, a picture of a hypothetical worker, together with information in graphic

form about a fictional company's level of productivity, was presented to the subjects. Following the presentation of the worker and the graph, MEL presented a series of questions that the subjects responded to on a scale ranging from 0-100 using a standard computer keyboard. For example, the first question read, "Given all of the information you have received, on the scale below indicate the extent to which the worker (Joe) is effective in causing the company's level of productivity". Subject responses could range from 0 = Totally Ineffective to 100 = Totally Effective. Another question allowed for measurement of the subjects' confidence in rating the worker's performance and read, "How confident are you about your rating of the worker (Joe) being effective in causing the company's level of productivity?" Subject responses could range from 0 = No Confidence to 100 = Complete Confidence. A third question read, "On the scale below, indicate the worker's (Joe) chances of becoming a permanent employee". Subject responses could range from 0 = No Chance to 100 = Very Good Chance. This final question served to maintain the masking task.

Procedure

Subjects were asked to report to room 323 in the Biology Building where they were given preliminary instructions regarding their participation in a study designed to test

a "new automated employee evaluation system." Following this brief description of the study, subjects were asked to read and sign a consent form (See Appendix D). For clarity of exposition, the theoretical labels A, B, and X (representing three discriminable social stimuli, Sam, Ted and Joe) will be used to describe the procedure, as is standard in learning research.

Subjects who agreed to participate were randomly assigned to one of three experimental groups. The purpose of Group 1 (Augmenting Group; See Appendix A) was to associate a target worker, X, with high productivity information while in the presence of another worker, A, who reliably predicted no such information using a short-delay conditioning analog. Based on contemporary learning psychology, worker A should serve as an inhibitor of causal attributions for the productivity effect, and should, as a result, augment subjects' causal judgments to worker X (Rescorla & Wagner, 1972). The 20 subjects (Male = 8; Female = 12) in Group 1 were given a series of 20 worker-productivity trials that resulted in one worker, A, becoming a conditioned inhibitor for company performance information. On trials 1-5, a single CS, B, was presented for 5 seconds and then paired with information indicating a high level of company productivity for an additional 10 seconds (B+ trials). These temporal parameters were held constant for all CS-US analog procedures described below.

After each trial, subjects were asked to evaluate B's effectiveness using the three questions noted above. The question presentation and subject answer time were held constant at 17 seconds for each of the questions. Hence, no response contingency existed that would permit the subject to move the experiment along more quickly. On trials 6-10, two workers (B and new worker A), were paired together with information indicating that a report was not requested for that particular evaluation period (AB-trials; No Report = No US analog). Subjects evaluated only A on each of these trials. Note that this procedure should result in a single stimulus, A, signaling no information about company productivity in the context of a stimulus, B, who, based on trials 1-5, reliably predicted high company productivity. Consistent with learning theory, we anticipated that this procedure would result in A becoming an inhibitor of causal attributions for the productivity effect. Recall that conditioned inhibition results from not reinforcing a particular stimulus in the context of an excitatory or previously reinforced stimulus (Rescorla & LoLordo, 1986). Subjects on trials 11-15 were exposed to two workers (A and a new worker X) and paired with high company productivity information (AX+ trials). Following each trial, X was the target of the subjects' evaluations. If A was an effective inhibitor, compound conditioning trials with worker X should result in augmented causal attributions for the productivity

effect to X. The augmenting effect was tested on trials 16-20. The last five worker-productivity trials served as reinforced test trials on which X alone was paired with information indicating that the company was productive (X+ test trials). Following each test trial, X was evaluated by each subject in the Augmenting Group.

The purpose of Group 2 (Discounting Group; See Appendix B) was to test the discounting effect by pairing two workers (A and X) with productivity information. Subjects in Group 2 (Male = 10; Female = 10) were exposed to 10 worker-productivity information trials. Trials 1-5 were exactly as described for the compound trials 11-15 for the Augmenting Group (AX+). Hence, subjects received five (A and X) trials, but had no prior training with either worker. Trials 6-10 were as described for trials 16-20 for the Augmenting Group (X+ test trials).

The purpose of Group 3 (see Appendix C) was to serve as a control for the hypothesized augmenting and discounting effects. The 20 subjects in Group 3, the Control Group, (Male = 9; Female = 11) received five worker-productivity information trials. These trials were as described for trials 16-20 for the Augmenting Group (X+ test trials).

Before leaving the lab, subjects were completely debriefed regarding the purpose and goals of the research study, and all of their questions were answered (see Appendix E).

RESULTS

The analysis focused on the subjects' ratings of causal strength to particular workers and the subjects' confidence in their causal judgments. Ratings of causal strength were measured on the five B+ trials in Group 1 to test the acquisition hypothesis (#1). The five X+ trials in Group 3 were compared to the subjects' ratings of Worker X on the compound AX+ trials in Group 2 to test the discounting hypothesis (#2). In order to test the augmenting hypothesis (#3), subject responses to Worker X on the 5 X+ test trials in Groups 1 and 3 were compared. The means and standard deviations for the subjects' estimates of cause are presented in Table 1. A simple repeated measures model was used to test predictions regarding acquisition and a Groups by Trials design was the primary model applied to test predictions pertaining to the discounting and augmenting hypotheses.

The present study included both male and female subjects in the three experimental groups. In social-learning research, gender effects are rarely, if ever, hypothesized (see Weiss et. al, 1981), and no gender effects were hypothesized in the present study. A 2 (gender) X 3 (experimental groups) X 5 (worker X test trials) was conducted on the subjects' causal strength ratings in order to test for gender effects. No significant gender or interactions involving subject gender were observed.

Table 1

Mean Scores for the Acquisition, Discounting, Augmenting
and Control Groups.

| Groups | Trials | | | | |
|------------------------------|--------|------|------|------|------|
| | (1) | (2) | (3) | (4) | (5) |
| Acquisition B+ Trials | | | | | |
| <u>M</u> | 73.3 | 73.3 | 74.9 | 78.1 | 78.7 |
| <u>SD</u> | 10.2 | 9.50 | 7.96 | 10.8 | 9.89 |
| Discounting AX+ Trials | | | | | |
| <u>M</u> | 57.8 | 63.3 | 67.5 | 68.1 | 70.4 |
| <u>SD</u> | 16.7 | 19.2 | 12.9 | 14.0 | 12.8 |
| Augmenting X+ Test Trials | | | | | |
| <u>M</u> | 81.3 | 81.4 | 81.9 | 80.4 | 82.3 |
| <u>SD</u> | 9.46 | 10.7 | 13.5 | 15.8 | 16.8 |
| Control X+ Test Trials | | | | | |
| M | 73.3 | 70.8 | 72.9 | 73.9 | 74.4 |
| SD | 15.7 | 21.3 | 16.4 | 15.6 | 18.2 |

Note: N = 20

Therefore, in order to test the hypotheses, subject gender was collapsed in each of the three experimental groups.

Acquisition

Upon review of the causal strength means presented in Figure 1 for Worker B, results show a strengthening of causal estimates over repeated trials. Worker B trials were used to test the acquisition effect hypothesis because the subjects had no prior training or experience with Worker B or any other worker. Similar to learning research, the B trials evidenced a gradual increasing learning curve for causal strength. A simple repeated measures (ANOVA) performed on the subjects' causal judgments revealed a significant acquisition effect, $F(4,76) = 3.81, p = .007$.

Discounting

The strength of causal attributions to the target worker in the discounting group (#2) was expected to be weaker relative to attributions to the single worker paired with the same productivity effect in Group 3. The pattern of group means presented in Figure 2 is consistent with the predicted discounting effect. However, a 2 X 5 (Groups by Trials) repeated measures ANOVA did not reveal significant differences for causal attributions to Worker X in Groups 2 and 3, $F(1,38) = 1.96, p = .17$.

Figure 1

Acquisition Curve of Causal Judgments for B+ Trials
in Group 1

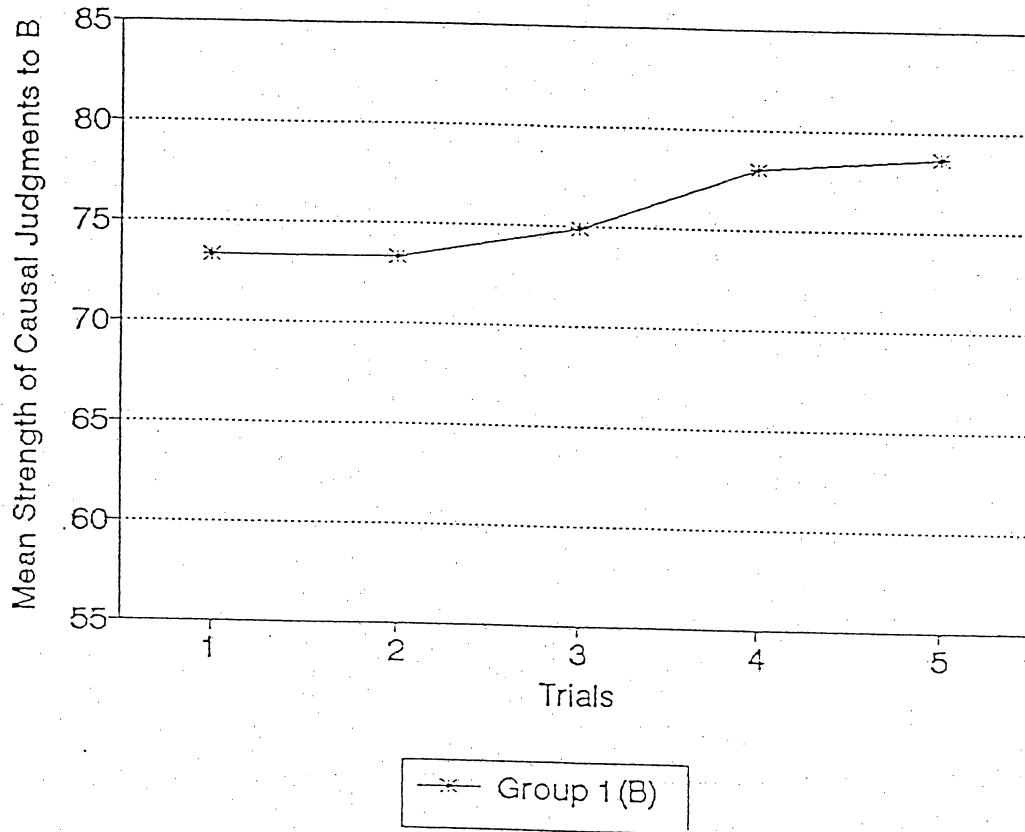
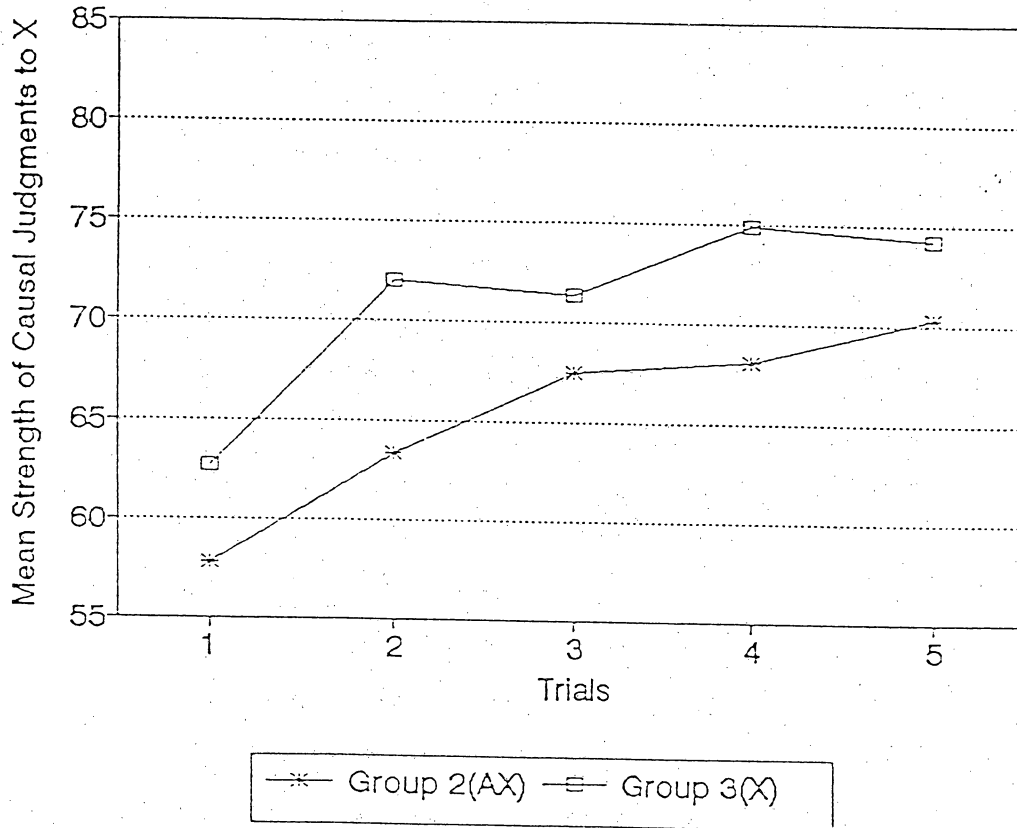


Figure 2

Learning Curves of Causal Judgments for AX+ Trials in Group 2 vs. X+ Trials in Group 3



Augmenting

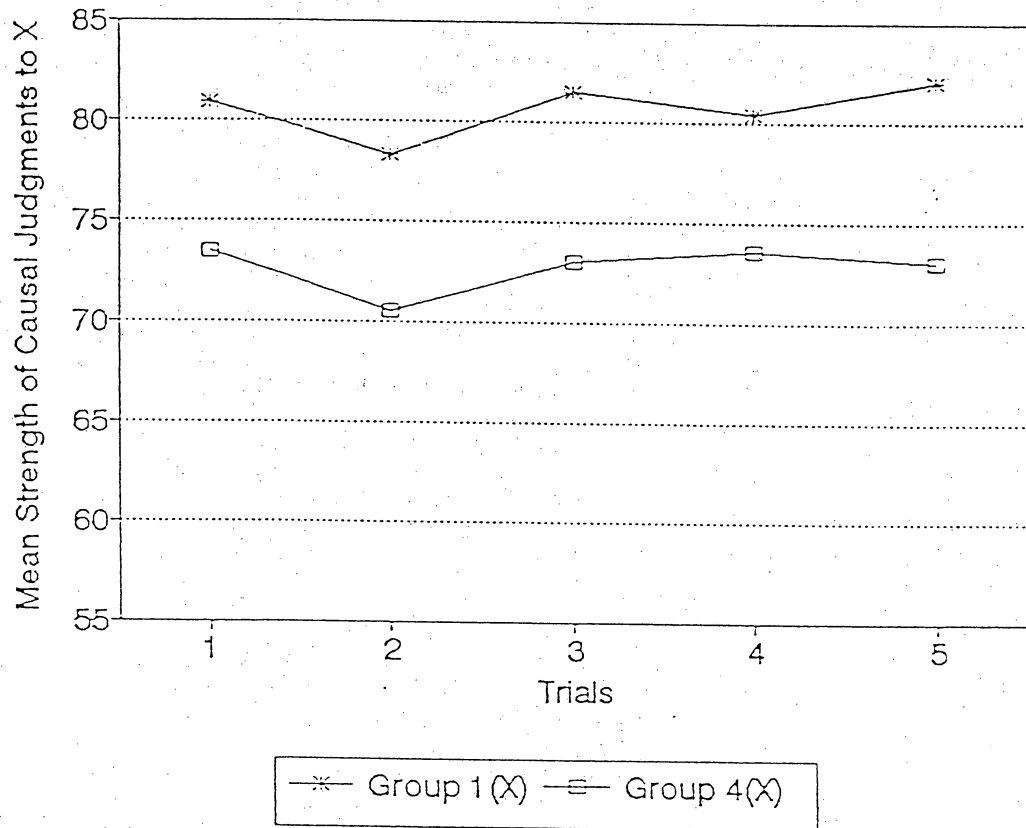
The augmenting of causal attributions was expected to occur when the target Worker X was reinforced by pairing him with company productivity information in the presence of an inhibitor for making causal judgments. In Group 1, inhibitory conditioning for worker A took place on Trials 6-10 in which he was not reinforced while in the presence of Worker B, who had a prior history of being paired with a high level of company productivity, and therefore was an excitatory stimulus (see acquisition effect noted above).

A conditioned inhibitor for making causal judgments would be expected to have a mean causal rating of approximately 50. Recall that the 0-100 scale used in the present study was anchored with the phrases totally ineffective and totally effective and the value of 50 represents the midpoint between these two extremes. Causal strength ratings for Worker A on the AB trials (6-10) provides evidence for Worker A's inhibitory properties. The average causal ratings across the five trials for Worker A (the inhibitory stimulus) was 47.03.

The original design of the project included the comparison of the five Worker X test trials in Groups 1 and 3 in order to test the augmenting hypothesis. After completing the project, we realized such a comparison would, whether significant or not, lead to equivocal interpretations. The reason, although not apparent earlier

Figure 3

Learning Curves of Causal Judgments for X+ Trials
in Group 1 and X+ Trials in Group 4



in the project, became apparent when the analysis commenced. For subjects in Group 1, the five X test trials represented only the first five presentations. Hence, any augmenting effect could be interpreted as simply a result of Group 1 receiving more X trials. Therefore, a fourth group (Group 4), where subjects received 10 Worker X trials, was established. For the purposes of testing the augmenting effect, subjects' causal ratings on the last five trials (6-10) in Group 4 were compared to the five Worker X trials in Group 1 (16-20). Now any differences between the groups could not be explained by differences in the number of exposures to Worker X.

Looking at Figure 3, one can see that causal attributions to Worker X in Group 1 (Augmenting Group) were greater (augmented) relative to attributions made to a single Worker X in Group 3. Drawing from contemporary learning research, we predicted that given a particular contextual situation, an augmenting effect could be obtained rather than a discounting effect, despite the presence of two workers. When a particular social stimulus (Worker X) was repeatedly paired with a particular social effect (high productivity) in a stimulus compound with an inhibitor of the effect (Worker A), the strength of the causal attributions to X was expected to be increased relative to the attributions to a single Worker X paired with the productivity effect. A 2 X 5 repeated measures ANOVA

revealed marginally significant group differences, $F(1,38) = 3.61, p = .065$. The trials and interaction effects were not statistically reliable.

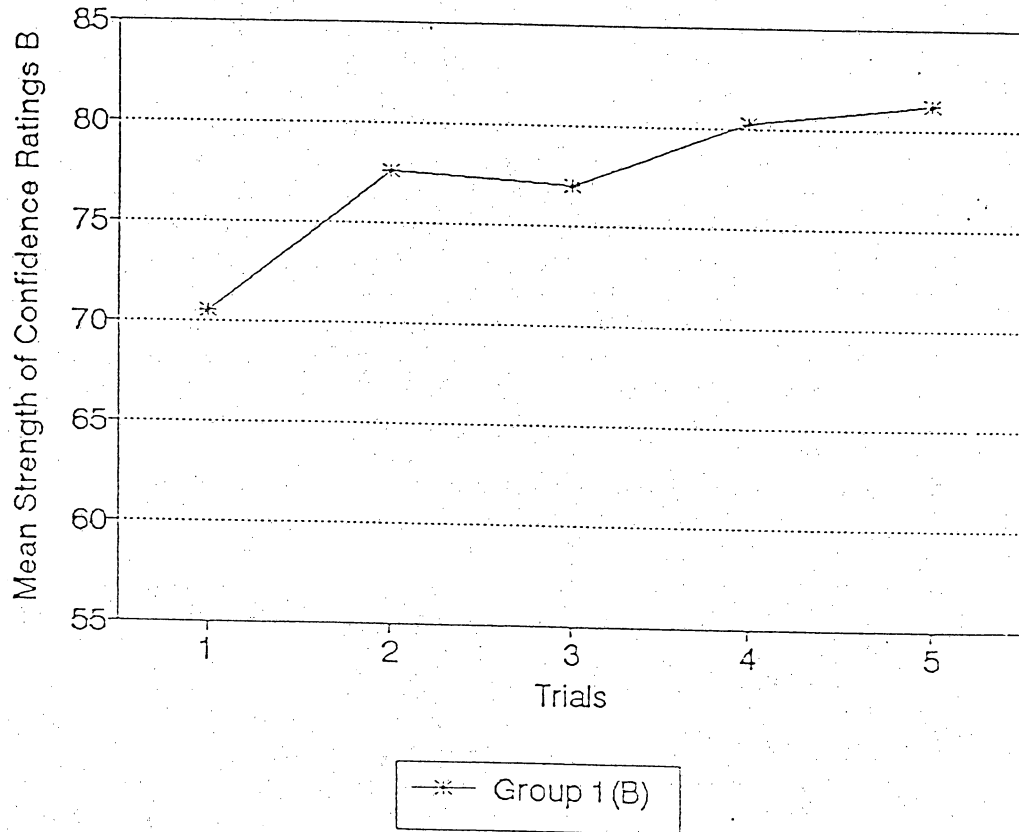
Confidence

As noted above, subjects' confidence in their causal strength estimates were measured in order to more firmly support a conditioning explanation of causal attribution. As expected, subjects' confidence ratings increased over trials for the single stimulus, Worker B trials in Group 1. Figure 4 shows a gradually increasing learning curve for subjects' mean confidence ratings, $F(4,76) = 6.01, p < .001$.

The discounting effect, although in the predicted direction, was not statistically reliable and hence, the "confidence confound" was not an issue. However, a 2×5 repeated measures ANOVA on the subjects' confidence ratings for their evaluation of Worker X in the augmenting comparison revealed no significant difference between group confidence ratings ($M = 82.9$ vs. 75.7), $F(1,38) = 1.11, p > .05$. Such an outcome is consistent with the conclusion that the augmenting effect described above represents a result following from learning principles rather than variation in subjects' confidence in their causal strength ratings.

Figure 4

Acquisition Curve of Confidence Ratings for B+ Trials
in Group 1



DISCUSSION

The goal of the present study was to use modern conditioning theory to examine interesting phenomena in human judgments of causality. The causal attribution research described in the literature, despite being very sophisticated, has primarily focused on a simple contiguity approach or rule governed models. This emphasis has often made certain attribution effects, such as acquisition, blocking and augmenting, for example, difficult to explain. The present study was part of a larger program of research designed to extend learning theory, particularly an "associationist model" to the explanation and prediction of human social causal judgments.

The associative models in philosophy view conditioning as the learning that results from exposure to relations among events in the environment rather than as a response passed from one stimulus to another. Based on this distinction between historical models of conditioning and contemporary learning theory, hypotheses analogous to those developed by modern conditioning researchers were tested. More specifically, we generated hypotheses to test acquisition, discounting, and augmenting effects in social attribution.

In examining the acquisition and augmenting effects found in the current study, the concept of contiguity was

not disregarded altogether, although a simple contiguity model for cause and effect relationships has been shown to be insufficient for explaining some of those results. Thus, attribution theory was extended by testing specific predictions about how causal attributions acquire strength over repeated presentations of relevant information, and by specifying group differences based on different cause and effect (CS/US) pairings.

Acquisition Effects

The acquisition effect hypothesis was tested by repeatedly pairing a single worker (CS analog) with a company's productivity information (US analog) across a series of five trials. We predicted that when the neutral stimulus (CS) was repeatedly paired with the US, it would contribute to the cue's acquisition of causal strength (See Rules of Correspondence 1-5 noted above). Specifically, when we repeatedly paired a single Worker (B) with information about a company's level of productivity, acquisition of causal strength was evidenced by a familiar negatively accelerated learning curve for "invariance seeking action" across evaluation trials.

The observation of an acquisition effect is not a trivial matter. Furthermore, such an observation does not merely represent the result of an exercise designed to demonstrate that human social causal judgments are "like"

classical conditioning. In fact, acquisition effects argue strongly against rule-governed interpretations of causal attributions. Shanks and Dickinson (1987) argued that while rule-governed models and in fact, attribution models based upon principles of simple-contiguity (Kelley, 1973) can explain many contextual effects in the attribution process, acquisition effects are most parsimoniously explained by the conditioning approach. Experiments designed to evaluate terminal attributions do not provide the opportunity to observe any changes in attributions that might result from experience in the form of repeated presentations of stimulus events. In the present study, the design allowed for the opportunity to observe change in causal estimates resulting from the subjects' experience and acquisition effects were predicted and observed.

Discounting

The discounting effect hypothesis was tested by pairing a neutral compound social stimulus, Worker X and Worker A paired with a company's productivity information. We predicted that the strength of causal attributions to each worker would be weaker relative to attributions to a single worker paired with the same productivity effect. In other words, we expected that the discounting effect would be a function of two workers "sharing" the causal strength. Although results were in the predicted direction, a

statistically reliable discounting effect was not evidenced.

Several reasons may explain why we failed to support the discounting hypothesis. One post hoc explanation may lie in the instructions given to the subjects prior to the start of the experiment (see Appendix A). Subjects were given an opportunity to respond to three practice questions in order to help them become familiar with the task and with using the computer keyboard. On the first question, subjects were instructed to respond with a rating score of "50". We chose this number because it represented the midpoint of the scale used to measure subjects' causal estimates. Recall that the scale used in the present study ranged from 0-100. An inspection of Table 1 indicates that the mean scores for the Discounting Group were over 50 across all five trials. Although the mean scores for the Discounting Group were lower than the Augmenting and Acquisition Group means, they were still above the artificial floor" of 50. The practice question may have inadvertently "primed" the subjects to respond to the question about the worker's effectiveness, in a group that expected lower scores on average to obtain a significant discounting effect.

Another explanation for the failure to observe a discounting effect may be that subjects view humans as "always-at-cause", and rating the worker below "50" may have been seen as indicating that the worker was "not-at-cause". Hence, a rating score of "50" may be viewed

by subjects as being neutral (i.e. neither "at-cause" nor "not-at-cause". Therefore, judgments of causality would not be expected to begin at a "zero" level. Again, this may have resulted in a "floor effect", in which the behavior being measured (and predictably discounted) was theoretically limited to go only so low.

Augmenting Effects

The augmenting effect hypothesis was tested by repeatedly pairing a social stimulus, Worker X, with a social effect, company productivity, in a stimulus compound containing an inhibitor for making causal attributions, Worker A. We found that causal attributions to Worker X were increased compared to attributions made by a different subject sample to a single Worker X paired with the productivity effect.

The augmenting phenomenon rested on the fact that subjects responded to Worker A as an inhibitor for making causal attributions. Recall that Worker A was paired with Worker B, who in the previous five trials was predictive of high company productivity. However, on the AB trials, both workers were paired with a "no US" analog ("No Report Required"). Subjects rated the inhibitor, Worker A, with a mean score of approximately 50, indicating that the worker was viewed as neither "not at cause" nor "at cause" for the productivity effect.

The observation of an augmenting effect supports the importance of the role context plays in attributions in the workplace. More specifically, the results have significant implications for situations in which employees are working together and are being evaluated by supervisors. Not all situations that include two workers produce a discounting effect in which one worker is given less causal priority than if he were working alone. This study supports the idea that certain contextual situations exist in which an augmenting effect can be observed when two employees are working together. Whereas two workers in a discounting scenario may be individually perceived as less at cause for the overall level of performance than in situations where the employee worked alone, a context that produces an augmenting effect appears to be advantageous to the worker. In other words, situations that include an inhibitor for making causal attributions, seem to produce an augmentation of causal strength ratings of the employee being evaluated.

Confidence Ratings

Theoretically, group differences in the subjects' causal judgments were expected to be the result of experimental manipulations affecting the associative process, not the result of increases or decreases in confidence in making the judgments themselves. To determine that subjects'

causality judgments were not confounded by their confidence in their judgments, subjects were asked to rate their confidence in their judgments using a 0-100 point scale. Consistent with a priori predictions, confidence ratings increased across the evaluation trials, indicating increased confidence resulting from experience, but the confidence ratings did not differ between the experimental groups (see Figure 4). Subjects were not confused, rather they responded in a predictable manner, making orderly judgments to the stimuli presented. This outcome is consistent with confidence ratings reported by Shanks and Dickinson (1987), and provides additional support for the associative learning model of causal judgment strength.

Limitations on Reported Effects

Like the results from any theory-generated research program, the results from the present study should be interpreted within a narrow range of conditions (Logan, 1959). In fact, the method used here served as an explicit statement of some of the boundary conditions, particularly in regard to the discrete trials procedure such as the repeated CS/US analog pairings. In social psychology, investigations regarding the strength of causal judgments use descriptions of social actions in which subjects are asked to make attributions based on information from a single observation. The present study, however, focused on causal

judgments in which information about behavior was presented over time. Using analogies of familiar learning principles allowed multiple presentations of the stimuli. Although Kelley's covariation principle pertains to attributions resulting from multiple observations, the context effects reported here, using an analog of the short delay conditioning paradigm, may only be generalizable to situations where information is presented repeatedly rather than simply described. This assumption may be somewhat pessimistic. Shanks (1991) argued that attributions made from described situations could result from remembering stimulus relationships developed over time. Further, studies using both instrumental and Pavlovian learning models have successfully included conditioning analogies to investigate a multitude of social phenomena such as: Attraction (Clore & Byrne, 1974; Cramer, Weiss, Steigleder, & Feinberg, 1978); altruism (Weiss, Buchanan, Altstatt & Lombardo, 1971); and male sex-role action (Cramer, Lutz, Bartell, Dragna, & Helzer, 1989).

Implications for Future Research

Because of the trend toward forming small groups of students, employees, and teams, continued research is warranted for situations in which multiple participants are performing together and being evaluated. One focus for future research may be in modifying and repeating the

discounting experiment. Two specific changes in the procedure of the current study may be "key" in order to obtain a statistically reliable discounting effect. As mentioned earlier, subjects may have been "primed" to respond with high rating scores due to the use of prior practice questions instructing subjects to respond with a score of 50, and thus, creating a possible "floor effect". In order to eliminate this effect, subjects would be allowed to choose any score between 0-100 during the practice session without being "primed" by the experimenter to respond with a specific practice rating.

Another possible solution may be to use a different rating scale. Although successfully used by Shanks and Dickinson (1987), and in previous research from our laboratory, the scale may not be consistent with observing a discounting effect. The scale we used was anchored with the phrases, "Totally Ineffective" to "Totally Effective". Therefore, a score of 50 represents, in theory, a score of 0, neither "not at cause" nor "at cause". In future research, a scale using anchors which indicate increasing levels of causal strength from 0-100 may more accurately represent our intent to measure causal strength ratings. Arguably, such a scale may be more conceptually representative of the subjects' causal strength ratings, and as a result, more sensitive to the observation of a discounting effect.

Not only are acquisition, blocking, and augmenting effects more difficult to explain using rule-governed models, so are magnitude of US effects (Rules of Correspondence #10). Important future research would involve manipulating the size or intensity of the US. Using the current study's analogous variables, one would vary the size of the company's level of productivity. Would a worker paired with a larger effect size be seen as more at cause? From a learning viewpoint, the more intense the US, the more causal strength the worker would elicit.

Educational Implications

In addition to the social areas described above (attraction, competition, altruism, and male sex-role action), causal judgments also play a fundamental role in our understanding of learned helplessness specifically and clinical psychology generally (e.g. Seligman, 1975). Within education settings, teachers are constantly assessing the academic performances of their students. In an attempt to understand individual performances, teachers assign causality to the level of success of each of their students. Given the importance of context effects on human social causal attributions and based on the results from our current research, it is reasonable to apply augmenting effects to the educational environment in order to better understand teachers' causal judgments of their students.

Let us say that a 7 year old girl goes to school where the classroom size exceeds 40 students, the teacher is a new instructor, there are no teacher aids, and many students who have discipline problems are constantly disrupting the classroom. Despite these apparent challenges, this particular student receives straight A's and tests high in all subject areas. The teacher's causal attributions of the student's performance may be augmented. Compare this situation with one in which the same student was in a classroom of less than 15 students, the teacher not only has 25 years of experience but has received many professional accolades, and discipline problems were minimal. The student still performed equally well. However, the teacher in the second scenario may not view the student as being as "at cause" for her performance, due to the augmentation of cause in the prior scenario where many inhibitors existed. In other words, a student's performance may be augmented in the context where a multitude of distractions that may inhibit academic success exist. Hence, it is important to note that augmenting effects, not unlike expectancy effects, represent the student's specific contributions to his or her performance (Dweck & Goetz, 1978; Dweck & Elliot, 1983).

APPENDIX A

Instructions for Group 1

Preliminary Instructions. In this study we are interested in testing a computerized employee evaluation system. Your cooperation is necessary for testing the usefulness of this automated program. In order to carefully test the effectiveness of the system, you will need to assume the role of a supervisor in a small company. You will be given information about three part-time employees, Ted, Sam, and Joe, and their company's level of productivity. After reviewing a monthly productivity report, it will be your responsibility as Ted, Sam, and Joe's supervisor to evaluate their performance and how effective they were in causing the company's level of productivity. Ted, Sam and Joe are college students who are only available for part-time employment. Therefore, it is important to evaluate Ted, Sam, and Joe carefully each month because they may be considered for full-time employment upon graduation.

Instructions Prior to Practice Trial. On the left side of the screen a picture representing a part-time employee, Joe or Ted or two part-time employees, Ted and Sam or Sam and Joe will be presented. On the right side of the screen, a graph depicting the company's monthly productivity level will be presented. Productivity is measured on a 0-10 point scale. The company's monthly productivity goal is set at level 5.

Instructions Prior to Estimates of Causal Strength. Following each monthly productivity report, you will be asked to rate the employee on his overall performance on a 0-100 point scale. After reading each item carefully, please respond by using the numeric keyboard on the right side of the keyboard. After entering any number between 0-100 (including 0 or 100), please wait for the next evaluation item to appear.

APPENDIX B

Instructions for Group 2

Preliminary Instructions. In this study we are interested in testing a computerized employee evaluation system. Your cooperation is necessary for testing the usefulness of this automated program. In order to carefully test the effectiveness of the system, you will need to assume the role of a supervisor in a small company. You will be given information about a part-time employee, Joe or two part-time employees, Sam and Joe, and their company's level of productivity. After reviewing a monthly productivity report, it will be your responsibility as Sam and Joe's supervisor to evaluate their performance and how effective they were in causing the company's level of productivity. Sam and Joe are college students who are only available for part-time employment. Therefore, it is important to evaluate Sam and Joe carefully each month because they may be considered for full-time employment upon graduation.

Instructions Prior to Practice Trial. On the left side of the screen a picture representing a part-time employee, Joe, or two part-time employees, Sam and Joe will be presented. On the right side of the screen, a graph depicting the company's monthly productivity level will be presented. Productivity is measured on a 0-10 point scale. The company's monthly productivity goal is set at level 5.

Instructions Prior to Estimates of Causal Strength. Following each monthly productivity report, you will be asked to rate the employee on his overall performance on a 0-100 point scale. After reading each item carefully, please respond by using the numeric keyboard on the right side of the keyboard. After entering any number between 0-100 (including 0 or 100), please wait for the next evaluation item to appear.

APPENDIX C

Instructions for Groups 2 and 3

Preliminary Instructions. In this study we are interested in testing a computerized employee evaluation system. Your cooperation is necessary for testing the usefulness of this automated program. In order to carefully test the effectiveness of the system, you will need to assume the role of a supervisor in a small company. You will be given information about a part-time employee, Joe, and his company's level of productivity. After reviewing a monthly productivity report, it will be your responsibility as Joe's supervisor to evaluate his performance and how effective he was in causing the company's level of productivity. Joe is a college student who is only available for part-time employment. Therefore, it is important to evaluate Joe carefully each month because he may be considered for full-time employment upon graduation.

Instructions Prior to Practice Trial. On the left side of the screen a picture representing a part-time employee, Joe will be presented. On the right side of the screen, a graph depicting the company's monthly productivity level will be presented. Productivity is measured on a 0-10 point scale. The company's monthly productivity goal is set at level 5.

Instructions Prior to Estimates of Causal Strength. Following each monthly productivity report, you will be asked to rate the employee on his overall performance on a 0-100 point scale. After reading each item carefully, please respond by using the numeric keyboard on the right side of the keyboard. After entering any number between 0-100 (including 0 or 100), please wait for the next evaluation item to appear.

APPENDIX D

CONSENT FORM

I am volunteering to participate as a subject in this study. I understand that the purpose of this study is to test the efficiency of a computerized employee evaluation system. I understand that the information will be presented to me via a computer monitor and that I will be asked to assume the role of a production supervisor in a small company,

I understand that my name will NOT be included in the experiment itself and that my anonymity will be maintained at all times. I also understand that my participation in this study is voluntary and that I may refuse to answer any questions at any time. I also understand that I may withdraw from this study at any time without penalty or prejudice. I also understand that any questions I may have regarding this study will be answered.

I understand that all the information collected in this study will be treated as confidential with no details about my responses released to anyone outside the research staff without my separate and written consent.

I understand that I may derive no specific benefit from participation in this study, except perhaps from feeling that I have contributed to the development of psychological knowledge.

I hereby allow this research group to publish the results of this study in which I am participating, with the provision that my name and/or other identifying information be withheld.

This study is being conducted by psychology students under the supervision of Dr. Robert Cramer, PS-220, extension 5576. I understand that if I have any questions or concerns about the study or the informed consent process I may also contact the Psychology Department Human Subjects Review Board at CSUSB.

Participant's Signature: _____

Participant's Name (Printed): _____

Date: _____

APPENDIX E

DEBRIEFING STATEMENT

The present study is part of a series of research projects designed to investigate human social causal judgments. Unfortunately, in order to adequately investigate this phenomenon a small deception of the subjects was necessary. Rather than directly asking questions concerning your causal judgments, we explained the study as testing the efficiency of a computerized Employee Evaluation System. The company, its employees, and the evaluation system were fictitious. We apologize for this deception, however, if we had asked directly about your causal judgments your responses may have been effected.

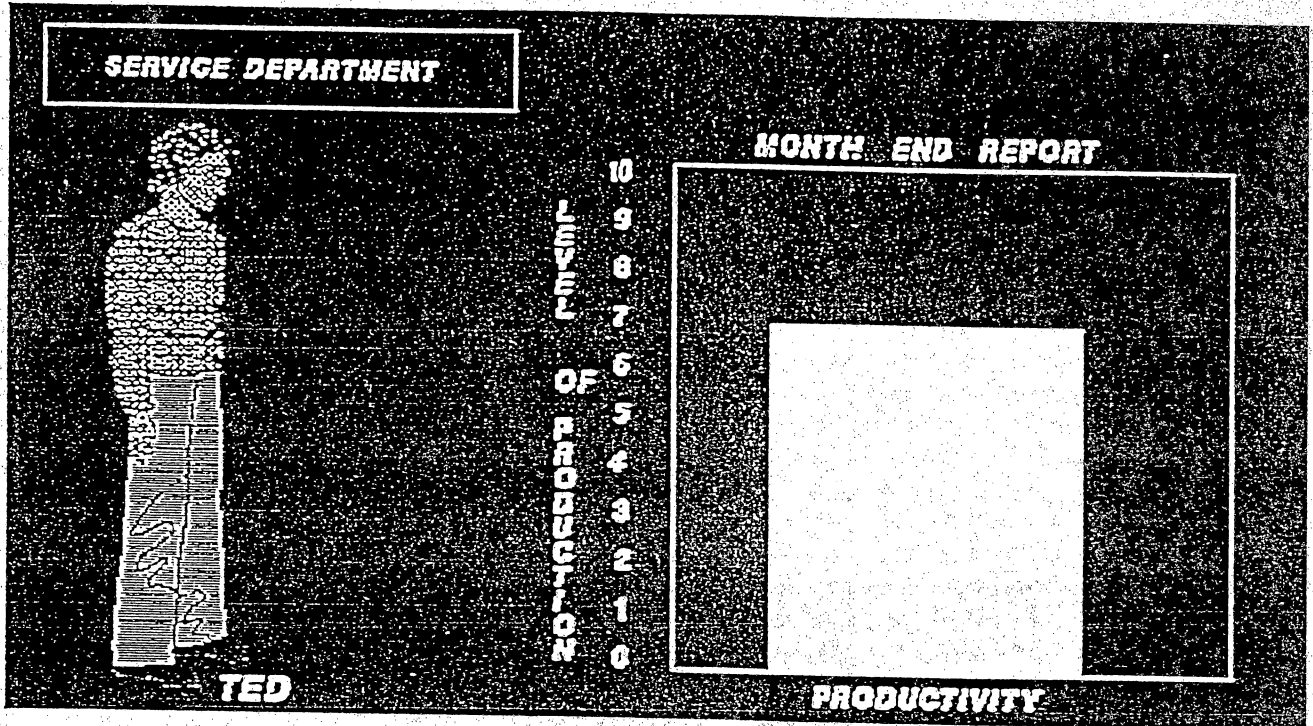
(STOP. ARE THERE ANY QUESTIONS?)

It is our sincere hope that the necessity for the deception is understood. It is important for the completion of this study that you do not speak with other students on campus about your experience here today. If other potential subjects are aware of the purpose of the experiment, the results of the study might be compromised.

The present study conforms to the ethical principles established by the American Psychological Association. We are interested in obtaining your comments or reaction regarding your participation in our experiment. This information would serve as a basis for checking and evaluating the quality and care with which our research is conducted. Please feel free to comment or ask questions. For results concerning this study contact Dr. Robert Cramer at (909) 880-5576. THANK YOU!!!!

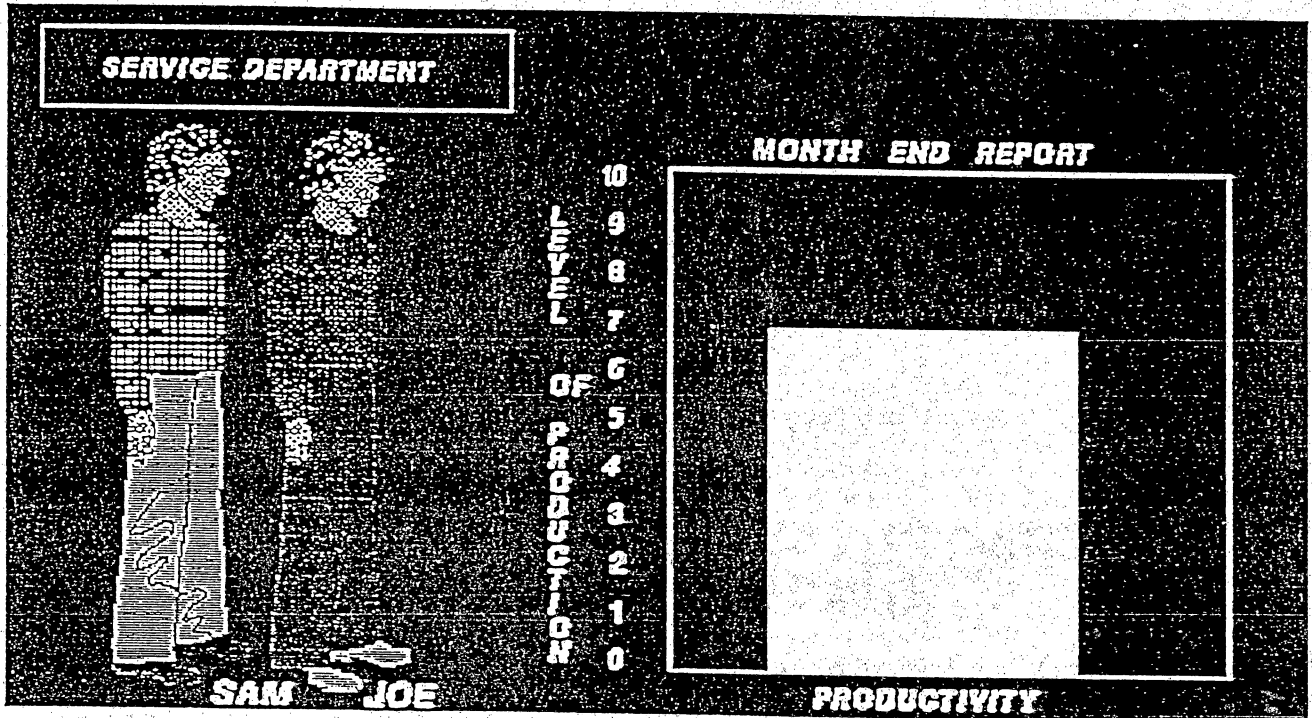
APPENDIX F

CS/US Acquisition Trial



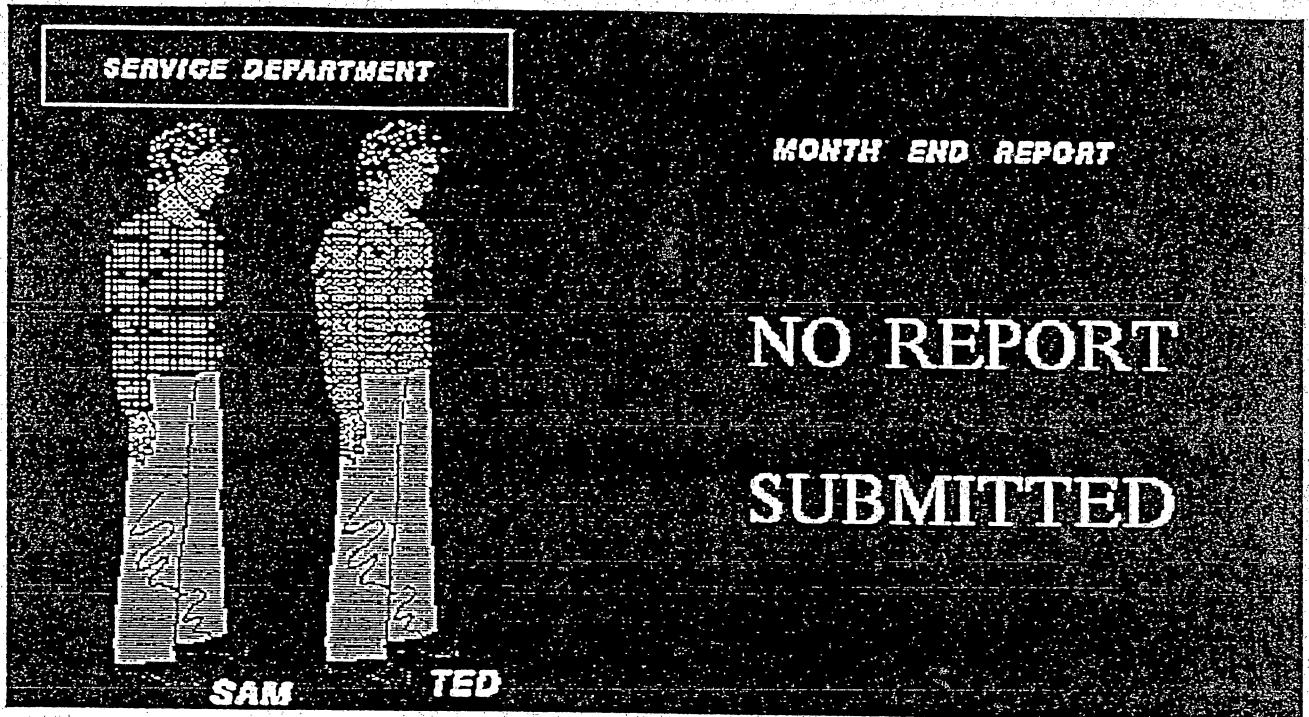
APPENDIX G

CS/US Discounting Trial



APPENDIX H

CS/No US Inhibition Trial



REFERENCES

- Abramson, L. Y., Seligman, M. E. P., & Teasdale, J.D. (1987). Learned helplessness in humans: Critique and reformulation. Journal of Abnormal Psychology, 87, 49-74
- Allan, L.G. (1993). Human contingency judgments: Rule bases or associative? Psychology Bulletin, 114(3), 435-448.
- Alloy, L. B. & Tabachnik, N. (1984). Assessment of covariation by humans and animals: The joint influence of prior expectations and current situational information. Psychological Review, 9(1), 112-149.
- Algom, D. & Bizman A. (1983). Attribution theory: A conditioning interpretation. Perceptual and Motor Skills, 56, 767-774.
- Baker, A. G., & Baker, P. A. (1985). Does inhibition differ from excitation? Proactive interference, contextual conditioning, and extinction. In R. R. Miller & N. E. Spear (Eds.), Information processing in animals: Conditioned inhibition. Hillsdale, N.J.: Erlbaum.
- Boakes, R. A., & Halliday, M. S. (Eds.). (1972). Inhibition and learning. London: Academic Press.
- Campbell, N. R. (1920). Physics, the elements. Cambridge, England: Cambridge University Press.
- Chapman, G. B. (1991). Trial order effects cue interaction in contingency judgment. Journal of Experimental Psychology: Learning, Memory and Cognition (in press).
- Chapman, G. B., & Robbins, S. J. (1990). Cue interactions in human contingency judgment. Memory and Cognition, 18, 537-545.
- Cramer, R. E., Weiss, R. F., Steigleder, M. K., & Balling, S.S. (1985). Attraction in context: Acquisition and blocking in person-directed action. Journal of Personality and Social Psychology, 49(5), 1221-1230.
- Crittenden, K.S. (1983). Sociological Aspects of Attribution. In Annual Review of Sociology, pp. 425-446. Palo Alto Annual Review.
- Dickinson, A., Shanks. D. R., & Evenden, J. (1984).

- Judgment of act-outcome contingency: The role of selective attribution. Quarterly Journal of Experimental Psychology, 36A, 29-50.
- Dollard, J. & Miller, N.E. (1950). Personality and Psychotherapy. New York: McGraw Hill.
- Dweck, C.S. & Elliot, E.S. (1983). Achievement motivation. In P.H. Mussen (Ed.), Handbook of Child Psychology: Personality and Social Development (Vol 4). New York: Wiley.
- Dweck, C.S. & Goetz, T.E. (1978). Attribution and learned helplessness. In J.H. Harvey, W. Ickles, & R.F. Kidd (Eds.), New Directions in Attribution Research (Vol. 2). Hillsdale, NJ: Erlbaum.
- Fowler, H., Kleiman, M. & Lysle, D. (1985). Factors controlling the acquisition and extinction of conditioned inhibition suggest a "slave" process. In R. R. Miller & N. E. Spear (Eds.), Information processing in animals: Conditioned inhibition. Hillsdale, N.J.: Erlbaum.
- Harre, R. (1972). Philosophies of science, Oxford, England: Oxford University Press.
- Harvey, J. J., & Weary, G. (1981). Perspectives on attributional processes. Dubuque, Iowa: Wm. C. Brown Company Publishers.
- Heider, F. (1958). The Psychology of Interpersonal Relations. New York: Wiley.
- Hesse, M. (1966). Models and analogies in science. Notre Dame, Indiana: University of Notre Dame Press.
- Hesse, M. (1974). The structure of scientific inference. Berkeley, California: University of California Press.
- Hesse, M. (1980). Revolutions and reconstructions in the philosophy of science. Bloomington, Indiana: Indiana University Press.
- Hull, C. L. (1943). Principles of behavior. New York: Appleton-Century-Crofts.
- Hull, J. G., & West S. G. (1982). The discounting principle in attribution. Personality and Social Psychology Bulletin, 8, 208-213.
- Hume, D. (1964). A treatise of human nature. Aalen West Germany: Scientia Verlag. (Original work published 1739)

- 1739; reprint of the new edition, London 1886).
- Hume, D. (1969). Treatise of human nature (edited by T. V. Smith and Marjorie Grene). Chicago: University of Chicago Press. (Originally published in 1739).
- Hume, D. (1988). A treatise of human nature. L. A. Selby-Bigge (Eds.). Oxford: Clarendon.
- Hume, D. (1951). Enquires concerning the human understanding the principles of morals. London: Oxford University Press. (Originally published in 1977).
- Jones, E. E. & Davis, K. E. From acts to dispositions: The attribution process in person perception. In L. Berkowitz (Eds.), Advances in Experimental Social Psychology (Vol. 2, pp. 219-266). New York: Academic Press, 1965.
- Jones, E. E., Davis, K. E., & Gergen, K. J. (1961). Role playing variations and their informational value for person perception. Journal of Abnormal and Social Psychology, 63, 302-310.
- Kamin, L. J. (1968). "Attention-like" processes in classical conditioning. In M. R. Jones (Eds.), Miami Symposium on the Prediction of Behavior 1967 Aversion Stimulation (pp. 9-31). Coral Gable, FL: University of Miami Press.
- Kamin, L. J. (1969). Predictability, surprise, attention, and conditioning. In B.A. Campbell & R.M. Church (Eds.), Punishment and Aversive Behavior (279-296). New York: Appleton-Century Crofts.
- Kelley, H. H. (1967). Attribution theory in social psychology. In D. Levine (Ed.), Nebraska Symposium on Motivation, 1967, (pp. 192-238). Lincoln, Nebraska: University of Nebraska Press.
- Kelley, H. H. (1972). Attributions in social interactions. In E. Jones, D. Kanouse, H. Kelley, R. Nisbett, S. Valins, & B. Weiner (Eds.). Attribution: Perceiving the causes of behavior (pp. 1-26). Morriston, New Jersey: General Learning Press.
- Kelley, H. H. (1973). Processes of causal attribution. American Psychologist, 28, 107-128.
- Kelley, H. H. & Michela, J. L. (1980). Attribution theory and research. Annual Review of Psychology, 31, 457-501.

- LoLordo, V. M., & Fairless, J. L. (1985). Pavlovian conditioned inhibition: The literature since 1969. In R. R. Miller & N. E. Spear (Eds.), Information processing in animals: Conditioned inhibition. Hillsdale, N.J.: Erlbaum.
- Lott, A. J. & Lott, B. E. (1968). A learning approach to interpersonal attitudes. In A. G. Greenwald, T. C. Brock, & T. M. Ostrom (Eds.), Psychological foundations of attitudes (pp. 67-88). New York: Academic Press.
- Lott, A. J. & Lott, B. E. (1972). The power of liking: consequences of interpersonal attitudes derived from a liberalized view of secondary reinforcement. In L. Berkowitz (Ed.), Advances in experimental and social psychology (vol. 6, pp. 109-148). New York: Academic Press.
- Lovibond, P. F. (1988). Predictive validity in human causal judgment and Pavlovian conditioning. Biological Review, 27, 79-93.
- Masterman, M. (1980). Braithwaite and Kuhn: Analogy-clusters within and without hypothetico-deductive systems in science. In D. H. Mellor (Ed.), Science, belief, and behavior (pp-86). Cambridge, England: Cambridge University Press.
- Mackintosh, N.J. (1971). An analysis of overshadowing and blocking. Quarterly Journal of Experimental Psychology, 23, 118-125.
- Mill, J. S. (1972). A system of logic ratiocinative and inductive. (8th ed.). London: Longmans, Green, Reader, & Dyer.
- Miller, N. E. (1959). Liberalization of basic S-R concepts: Extensions to conflict behavior, motivation and social learning. In S. Koch (Ed.), Psychology: A study of a science (Vol 2, pp. 196-292). New York: McGraw-Hill.
- Oppenheimer, R. (1956). Analogy in science. American Psychologist, 11, 127-135.
- Pavlov, I. P. (1927). Conditioned reflexes. London: Oxford University Press.
- Regan, D. T. (1978). Attributional aspects of interpersonal attraction. In J. H. Harvey, W. J. Ickes, & R. F. Kidd (Eds.), New directions in attribution research (Vol. 2). Hillsdale, N.J.:

Lawrence Erlbaum Associates.

- Rescorla, R. A. (1968). Probability of shock in the presence and absence of CS in fear conditioning. Journal of Comparative and Physiological psychology, 66, 1-5.
- Rescorla, R. A. (1986). Pavlovian conditioning: It's not what you think. American Psychologist, 43, 151-160. Rescorla, R. A. (1988). Behavioral studies of Pavlovian conditioning. Annual Review of Neuroscience, 11, 329-352.
- Rescorla, R. A. and LoLordo, V. M. (1965). Inhibition of avoidance behavior. Journal of Comparative And Physiological Psychology, 59, 406-412.
- Rescorla, R. A. & Wagner A. R. (1972). A theory of Pavlovian conditioning: Variations in the effectiveness of reinforcement and nonreinforcement. In A. H. Black & W. F. Prokasy (Eds.), Classical Conditioning II: Current Research and Theory (pp. 64-99). New York: Appleton Century-Crofts.
- Rudy, J. W. & Wagner A. R. (1975). Stimulus selection in associative learning. In W. K. Estes (Ed.), Handbook of Learning and Cognitive Processes Vol. 2. Conditioning and Behavior Theory (pp. 269-303). Hillsdale, NJ: Elbaum.
- Seligman, M. E. P. (1975). Helplessness. San Francisco: Freeman.
- Shanks, D. R. (1985). Continuous monitoring of human contingency judgment across trials. Memory and Cognition, 13(2), 158-167.
- Shanks, D. R. (1985). Forward and background blocking in human contingency judgments. The Quarterly Journal of Experimental Psychology, 37B, 1-21.
- Shanks, D. R. & Dickerson, A. (1987). Associative accounts of causality judgments. The Psychology of Learning and Motivation, 21, 229-261.
- Spence, K. W. (1956). Behavior theory and conditioning. New Haven, Conn.: Yale University Press.
- Steigleder, M. K., Weiss, R. F., Cramer, R. E., & Feinberg, R. A. (1978). Motivating and reinforcing functions of competitive behavior. Journal of Personality and Social Psychology, 36, 1291-1301.

- Wagner, A. R., Logan, F. A., Haberlandt, K. & Price, T. (1968). Stimulus selection in animal discrimination learning. Journal of Experimental Psychology, 76, 171-180.
- Wagner, A. R. & Rescorla, R. A. (1972). Inhibition in Pavlovian conditioning: Application of a theory. In R. A. Boakes & M.S. Halliday (Eds.), Inhibition and learning. New York: Academic Press, 1972.
- Wasserman, E. A. (1990). Attribution of causality to common and distinctive elements of compound stimuli. Psychological Science, 1, 298-302.
- Wells, G. L. & Ronis, D. L. (1982). Discounting and augmentation: Is there something special about the number of causes? Personality and Social Psychology Bulletin, 8, 566-572.

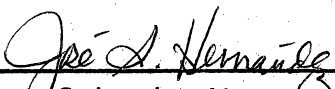
THE EFFECTS OF PARENT VOLUNTEERS ON A
CHILD'S LITERACY GROWTH

A Project
Presented to the
Faculty of
California State University,
San Bernardino

by
Francesca Marie Formolo

December 1995

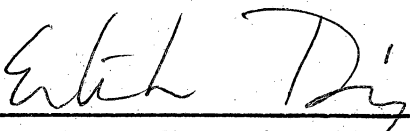
Approved by:



Jose Salvador Hernandez, First Reader

12-11-95

Date



Esteban Diaz, Second Reader

Abstract

Research has shown that the more active parents are in their child's education the more likely their child is to achieve academic success. Based on these findings this research project focused on how parent volunteers influenced their child's literacy growth. It is hypothesized that as the parent spends time in the classroom they are given more opportunities to interact with other members of the classroom community. It is believed that this interaction will influence the way in which the parent works with their child and have a positive influence on their child's literacy growth.

The sample for this study consisted of eight students and four parent volunteers. The students were divided into two groups of four, one group had parent volunteers and the second group did not have parent volunteers in the classroom. Interactive journal writing samples were collected and assessed to find out if there was a significant difference between the two groups of students. This research project suggested that the group with parent volunteers scored higher than the group without parent volunteers.

Table of Contents

| | |
|-----------------------------------|------|
| Abstract..... | iii |
| List of Tables..... | vii |
| List of Figures..... | viii |
| Chapter One | |
| Introduction..... | 1 |
| Background to the Study..... | 2 |
| The Problem..... | 4 |
| Statement of the Problem..... | 4 |
| Research Question..... | 4 |
| Definition of Terms..... | 5 |
| Theoretical Framework..... | 6 |
| Chapter Two | |
| Review of Related Literature..... | 11 |
| Parental Involvement..... | 11 |
| Early Studies..... | 11 |
| Recent Studies..... | 14 |
| Summary..... | 17 |

| | |
|--|----|
| Literacy Acquisition..... | 18 |
| Early Studies..... | 18 |
| Recent Studies..... | 20 |
| Summary..... | 24 |
| Summary of Review of Literature..... | 25 |
| Chapter Three | |
| Design/Methodology..... | 27 |
| Data Needed..... | 27 |
| Subjects..... | 31 |
| Students..... | 31 |
| Parent Volunteers..... | 32 |
| Read Aloud Homework Program..... | 34 |
| Methodology..... | 35 |
| Data Collection..... | 35 |
| Type of Analysis..... | 36 |
| Chapter Four | |
| Analysis and Results..... | 38 |
| Subjects with Parent Volunteer..... | 38 |
| Summary of Students with Parent Volunteer..... | 62 |

| | |
|--|-----|
| Subjects without Parent Volunteer..... | 65 |
| Summary of Students without Parent Volunteer..... | 88 |
| Results..... | 90 |
| Chapter Five | |
| Discussion..... | 93 |
| Interpretation..... | 93 |
| Conclusions..... | 97 |
| Implications..... | 98 |
| Appendix A: Writing Samples of Diana Macias..... | 100 |
| Appendix B: Writing Samples of Angel Salazar..... | 106 |
| Appendix C: Writing Samples of Jennifer Rodriguez..... | 112 |
| Appendix D: Writing Samples of Vivian Garcia..... | 118 |
| Appendix E: Writing Samples of Krystal Corona..... | 124 |
| Appendix F: Writing Samples of Nancy Vaca..... | 130 |
| Appendix G: Writing Samples of Dania Partida..... | 136 |
| Appendix H: Writing Samples of David Cabrera..... | 142 |
| References..... | 149 |

List of Tables

| | |
|---|----|
| Table 1. Written Growth of Students with Parent Volunteers..... | 64 |
| Table 2. Written Growth of Students without Parent Volunteers.... | 89 |
| Table 3. Comparison of Literacy Growth..... | 95 |

List of Figures

| | |
|---|----|
| Figure 1. Contextual Interaction Model..... | 7 |
| Figure 2. Characteristics of Literacy Growth..... | 28 |
| Figure 3. Writing Sample of Diana Macias on August 31..... | 40 |
| Figure 4. Writing Sample of Diana Macias on February 22..... | 42 |
| Figure 5. Writing Sample of Diana Macias on April 6..... | 43 |
| Figure 6. Literacy Growth of Diana Macias..... | 45 |
| Figure 7. Writing Sample of Angel Salazar on November 9..... | 47 |
| Figure 8. Writing Sample of Angel Salazar on March 28..... | 48 |
| Figure 9. Literacy Growth of Angel Salazar..... | 50 |
| Figure 10. Writing Sample of Jennifer Rodriguez on January 6.... | 52 |
| Figure 11. Writing Sample of Jennifer Rodriguez on March 30... 53 | |
| Figure 12. Writing Sample of Jennifer Rodriguez on May 18..... | 55 |
| Figure 13. Literacy Growth of Jennifer Rodriguez..... | 57 |
| Figure 14. Writing Sample of Vivian Garcia on September 21..... | 59 |
| Figure 15. Writing Sample of Vivian Garcia on November 9..... | 60 |
| Figure 16. Literacy Growth of Vivian Garcia..... | 63 |
| Figure 17. Writing Sample of Krystal Corona on September 22.. | 66 |
| Figure 18. Writing Sample of Krystal Corona on November 28.... | 68 |
| Figure 19. Writing Sample of Krystal Corona on February 16..... | 70 |

Figure 20. Literacy Growth of Krystal Corona..... 71

Figure 21. Writing Sample of Nancy Vaca on January 11..... 74

Figure 22. Writing Sample of Nancy Vaca on March 31..... 75

Figure 23. Literacy Growth of Nancy Vaca..... 77

Figure 24. Writing Sample of Dania Partida on November 28..... 78

Figure 25. Writing Sample of Dania Partida on May 22..... 81

Figure 26. Literacy Growth of Dania Partida..... 82

Figure 27. Writing Sample of David Cabrera on November 10.... 84

Figure 28. Writing Sample of David Cabrera on May 22..... 86

Figure 29. Literacy Growth of David Cabrera..... 87

Figure 30. April Writing Samples of Vivian Garcia and
Krystal Corona..... 96

Chapter One

Introduction

The process of becoming literate is important to educators and parents alike. To successfully teach literacy one needs to understand that reading and writing consists of separate processes that are also interwoven. We need to understand that students need to be involved in both reading and writing to help literacy acquisition (Mooney, 1990). Interactive journal writing is an excellent literacy activity because the adult and child are involved in meaningful communication in which both interact by reading and writing to each other (Flores, 1990). In most interactive journals the child is writing to a teacher, but would there be a difference if a child's parent became involved in this written interaction?

Research studies have been conducted on the benefits of interactive journals and parent volunteers as separate areas of focus, but there is a lack of research on parent volunteers and the use of interactive journals. Would the interactive journal activity become more important to the student because they were writing to their parent rather than the teacher? Further, as the parent becomes empowered with the knowledge of how their child comes to

know reading and writing, will this knowledge transfer to the home and become a part of family life?

~~This~~ ^{The} chapter will provide background information on the social context of interactive journals and parent involvement in the writing process. The reader will also be provided with the statement of the problem, the research question, and the theoretical framework.

Background to the Study

~~how~~ Within the area of bilingual education there is great concern for how an English language learner comes to understand the writing process. Research is discovering new information about literacy acquisition that may be changing the way teachers are instructing the non-English speaker in writing (Flores, 1990). Many instructors are finding that social interaction helps the writing process. Interactive journal writing is just one of several teaching strategies that uses social interaction to help students understand the writing process and other social situations need to be incorporated with journals. Some suggested interactive situations are shared book experiences, reading and copying environmental

labels, reading and writing patterned/repetitive stories through cooperative stories.

Unfortunately language minority parents are being left behind as educators learn new methods to teach the writing process. Many of these parents have to struggle with speaking in their second language, are unaware of how their child becomes literate and have difficulty helping them in the writing process. We have a responsibility as educators to help the language minority parent understand the teaching strategies that are being used and how research supports these changes.

✓ It is recommended that an educator can help language minority parents become more aware and knowledgeable of the writing process by encouraging parental involvement. Parental involvement can be encouraged by increased communication through parent letters or meetings (Saland & Schliff, 1988; Ramirez, 1990) organized by the teacher to inform the parents of strategies that they can use at home to help simplify the writing process.

Another suggestion in which parental involvement can be encouraged is by inviting the parents into the classroom to work with their child, interact with the teacher, other parents and

students. As a volunteer the parent could observe what the teacher does in the classroom to teach the students and participate in actual teaching methods. By inviting parents into the classroom they are given the opportunity to learn through a variety of experiences and observations how their child goes through the writing process.

The Problem

Statement of the Problem

According to Fuentes (1986) an active parent does make a difference in the academic growth of their child. So then, if a language minority parent becomes active in their child's education by volunteering in the classroom, would there be a positive or negative effect on their child's written growth? There is not much research concerning the impact an active parent volunteer has on their child's literacy growth.

Research Question

Does a language minority parent volunteer influence their child's literacy growth through the use of interactive journals?

Definition of Terms

Parent Volunteers:

A parent volunteer is one who comes into the classroom at least once a week, stays for the morning, and assists with groups and preparation of materials. This person is reliable and comes on a regular basis.

Literacy Growth:

Literacy growth is the process by which a child comes to know writing skills. For this project there will be five stages in the development of children's writing: 1. presyllabic, 2. syllabic, 3. syllabic/alphabetic, 4. alphabetic, and 5. early writer. (Flores, 1990; Batzle, 1992)

Interactive Journals:

An interactive journal is a notebook for the child to draw pictures in and write about their drawing. As the child reads their writing, the adult is responsible for responding to the child based on what the child wrote. In this way the child is given an opportunity to share their knowledge with an adult, while the adult is sharing their knowledge of how to write through their response. During this interaction the child learns reading and writing in a child centered

situation.

Theoretical Framework

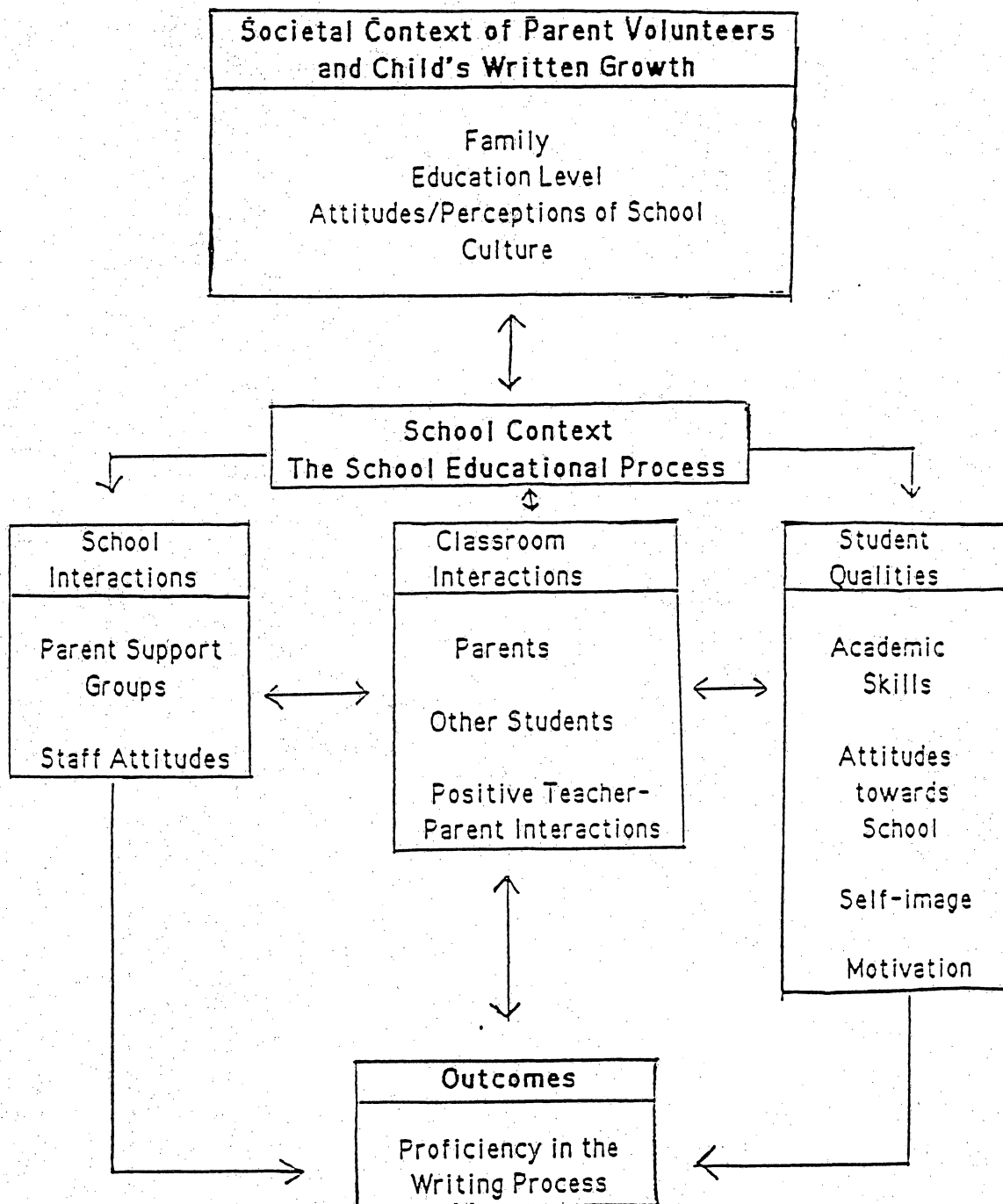
Social interaction occurs when two or more people exchange information. There is reciprocity and both participants are actively involved in the exchange of information, bringing together two sets of cultural experiences based on individual backgrounds (Garton, 1992). This exchange of knowledge between two people provokes learning; that is to say, that the learner constructs knowledge as a result of their own thoughts and actions, facilitated through the mediation of language and social interactions with others.

An adaption of Cortes' (1986) Contextual Interaction Model has been constructed to explain how the exchange of information about literacy development takes place in the various social contexts of this project. (see Figure 1)

At the top of the model is the social context provided by the home environment. This is where the parent and child begin the literacy process through social interaction with family and other community members. In this context most students are exposed to literacy by having stories read to them, looking at the newspaper, or

Figure 1

Contextual Interaction Model



by being taught to write their name. Other students, however, arrive at school with very little of this rich preparation by the family. A family's educational perceptions toward school, and culture may be influencing factors to how much exposure to literature a student receives before entering school.

The second section to the model focuses on the school context, or the educational process. This section is divided into three subsections: school interactions, classroom interactions, and student's qualities. When a parent and student begin the educational process they are given the opportunity to interact with different members within this social context such as teachers, family members of their peers, and principals. These members can share their knowledge of the writing process with them, which could help their child in the written literacy growth.

This brings us to the second classification of the school context, the interactions that take place within the classroom. Both the parent and the student will begin interacting with greater frequency with the classroom teacher, other parents from the class, teacher assistant, and other children that are not family members. Since these interactions will occur with more frequency, this is

where the most exchange of information on the writing process will take place. The parent volunteer will be given the opportunity to see what other children are learning in order to compare what their child has learned. The parent volunteer might decide to add to their support at home, again adding or rejecting new information on the writing process based on what they already know. The child, on the other hand, is also interacting with their peers who are sharing their knowledge of the writing process with them. In turn, the child will either accept or reject information based on what they already know.

The third subsection deals specifically with the individual student, since this is the person who is coming to know the writing process. Academic preparation from the home environment will play a large role in the child's written growth. If a child receives large amounts of literacy exposure at home, the less likely the child is to have problems when coming to know the writing process. Many times a young child's attitude toward school will depend on the family's attitudes toward education. If a family places value on education then the child will be motivated to come to school and excited to learn about the literacy process.

The arrows in between these three subsections suggest that social interaction is being exchanged between these contexts. So it can be concluded that the student's qualities may be enhanced depending on the information of the writing process that the child adds or rejects to their prior knowledge.

The ultimate goal is to become proficient in the writing process. The outcome will be the focus of this study. As a parent volunteer and a student interact within these social contexts, will there be an influence on the student's written growth as collected in their interactive journal?

Chapter Two

Review of Related Literature

The literature review focuses on the research question: How does a parent volunteer influence their child's literacy growth through interactive journals? This review will begin with an examination of both early and more recent research concerning the social context of parental involvement and their child's education. The second section focuses on literacy growth and the process a child goes through as he/she comes to know how to write. This section will finish the review focusing on interactive journals as a teaching strategy used to help literacy acquisition through social interaction between an "expert" and "learner."

Parental Involvement

Early Studies

According to the Contextual Interaction Model, a child's educational foundation begins at home when the child socially interacts with family members. This interaction continues as the child's formal education begins in which the parent is given the opportunity to become involved in the educational process. Research

has shown evidence that parental involvement in their child's education helps in school achievement, and has been encouraged since the 1960's, (Fuentes, 1986).

There are two forms of parental involvement: a passive influence or direct involvement, (Rosenbusch, 1987). An example of the way that a parent passively influences a child's achievement is by their attitude toward education and the value of school. A parent's positive or negative attitude toward the benefits that come out of education is a passive, almost innate, way they influence their child's attitude toward school. Usually when the parent's attitudes support the benefits of education the child's attitude, motivation, and self-esteem will be higher in the classroom than the child whose parents maintain a negative, defeated attitude toward the benefits of education.

There have been projects organized to create a positive attitude toward education in language minority families. It is the hopes that this passive influence of the family's viewpoint will more positively influence the child. Unfortunately, this philosophy is based on the "deficit hypothesis" (Auerbach, 1989) which assumes that language minority parents lack the essential skills to

promote school success in their children. Auerbach included extensive research that found indirect, passive factors in the home environment that positively influenced the language minority child's achievement in literacy acquisition.

The Harvard Families and Literacy Study completed by Chall & Snow in 1982 discovered a strong passive involvement through the availability of a high level of literacy used in the homes of working-class, minority, and language minority students. Delgado-Gaitan (1987) supports this finding in her study on Mexican immigrants in which families used a wide range of text types such as letters written by family members, newspapers and children books which exposed their children to literature.

Rosenbusch (1987) contrasts passive parental influence with direct involvement in which the parent's role is seen through their active participation in the school. Recently there has been a push toward helping the language minority family become more directly involved in the American school system with the hopes of creating a more positive attitude toward the majority language and culture.

Direct involvement can be as demanding as working in the Parent/Teacher Association, volunteering in the classroom, or participating

in fund raising activities. Other, examples of direct involvement would be attending programs, writing or calling the teacher when concerned about an event in school, or attending parent/teacher conferences.

Early research describes how the social context of the family passively influences the child's education, but is lacking in details that describe how direct involvement can influence the child academic achievement. Research has shown that there is a strong passive influence in the language minority home (Delgado-Gaitan, 1987), but is there strong direct parental involvement?

Recent Studies

In more recent research there has been a trend to encourage direct involvement through parent education projects. Ramirez (1990) points out that minority parents are depending on educators to help them strengthen their ability to raise their children and improve their role as the child's first teacher. Another challenge faced by language minority parents is a language barrier. Since many parents are unable to speak or read English it can be difficult for them to understand how the educational system works (Delgado-Gaitan, 1992). Through education projects such as the Family

English Literacy Program or the Even Start Program (Ramirez, 1990) parents are gaining valuable knowledge on acquiring English as a second language and teaching methods that can be used at home to help their children achieve academic success.

This notion of educating the parents is reiterated by Farris (1991) who suggested ways in which a teacher can encourage illiterate parents to instill a desire to read and write in their children. Farris states that teachers need to take on part of the responsibility to get parents to participate with their child's academic success. One suggestion for accomplishing this goal would be by having parent sessions that shows them how to promote and nurture literacy in the home.

In addition to direct involvement the Contextual Interaction Model points out that there are passive influences such as cultural beliefs that affect the social interactions between family members and the school context. According to Delgado-Gaitan (1992) it would be a new experience for many Mexican parents to voice concerns to the teacher about their child's progress or behavior. In the six families studied by Delgado-Gaitan, there were two distinct ways parents reacted to negative reports from the teacher. Some parents

accepted the teacher's report without question and punished the child, while others called or wrote a note to the teacher requesting more information.

This reaction is significant because when parents solicit more details from the teacher they are provided with additional information and send a message to the teacher and administrator that they care about their child's education. Whereas the parents that didn't solicit additional information demonstrate a lack of interest according to the American culture. This "lack of interest" is interpreted by the teacher and administrator that the parents aren't concerned with their child's education (Delgado-Gaitan, 1992).

Recent research elaborates on the benefits of direct involvement through parent education projects that attempt to teach teaching methods skills along with English as a second language. It is also pointed out that we still need to bridge the American culture and the minority culture in order to improve the passive influences that come from cultural misunderstandings.

Summary

Early studies and recent studies tend to support each another in the area of parental involvement and passive influences found in the home social context. Early studies attempt to invalidate the "deficit hypothesis" by stating that the language minority parent can positively influence a child's academic success through passive influences such as attitudes/perceptions toward education and having literature available in the home. While direct involvement isn't elaborated on, early research does point out that this form of influence on a child's education is more active and visual as parents are physically more involved in the school.

Recent studies support the notion of direct involvement by encouraging parent education projects in which educators facilitate English acquisition and teach teaching methods skills. Further elaboration is given on cultural passive influences that affect the interpretation of parent reaction by the school context. Many times an appropriate reaction in the language minority's culture is interpreted as a lack of interest by the American culture.

Literacy Acquisition

Early Studies

Acquiring literacy is a process that can be distinguished by different stages within the process of psychogenesis. According to Goodman (1986) "...psychogenesis can be defined as the history of an idea or concept as influenced by the learner's personal intellectual activity." In other words, psychogenesis focuses on the development of literacy. In order to better understand this definition, Ferreiro (1986) breaks down the psychogenetic process into three stages of literacy development.

In the first stage the child is able to distinguish between pictures and the written print. That is to say, the child concludes that the same types of lines are used to draw or write, but the difference is in the organization and meaning of the lines. Letters are an arbitrary representation of an object, drawings are what and object looks like. The second stage occurs when the child understands that the organization of letters will influence their meaning. In other words, if letters are organized in a different order, then this changes the meaning of the word. Finally, in the third level the child has realized that letters follow a phonetic

hypothesis, in which there are rules that govern the letters in order to determine the proper letter sound when writing or reading.

Research shows that the use of social interaction facilitates the development of literacy (Auerback, 1989; Ferreiro, 1986; Goodman, 1986; Pontecorvo & Zuccheromaglio, 1986) within the social context of the classroom as seen in the Contextual Interaction Model. Ferreiro (1986) suggests that since children learn in social, not isolated situations, there are certain pedagogical implications for educators. In the classroom students need to be offered opportunities to socially interact with peers, or other students of similar academic background, and “experts,” or adults/older students. As the learner interacts with the “expert” or peer he/she is able to test learned information about the literacy process against the understandings of others. Students are then able to work together to develop ways to take learned information and appropriate it to their individual learning style.

Pontecorvo and Zuccheromaglio (1986) further describes how the learner interacts with the “expert” and peer in two types of social contexts: asymmetrical and symmetrical. Asymmetrical social interaction is between an “expert” and learner. The “expert”

is the person who has more experience and broadens the cognitive knowledge of the learner through a process known as scaffolding. Scaffolding is an instructional structure that supports the learner in the early stages of knowledge acquisition. Symmetrical social interaction occurs when equal peers help each other learn new information through the use of social interaction and building upon each others' prior knowledge.

Early studies demonstrated the importance of social interaction between "experts" and peers as the learner develops literacy proficiency. These social interactions can be asymmetrical, between "expert" and learner, or symmetrical, between peers. In order to facilitate psychogenesis it is important for the teacher to provide both asymmetrical and symmetrical social interactions as the learner develops literacy proficiency. Early studies did not explain how an instructor can facilitate literacy development through the use of both types of social interaction.

Recent Studies

According to Garton (1992), Vygotsky believed that language development depends on cognitive factors such as prior knowledge, memory, attention, etc., and social forces. It is pointed out that

social forces, or social interactions, are necessary for the development of the higher mental function of concept development, logical reasoning and judgement. Through social interaction the child gradually assumes more responsibility and becomes more self-directed.

A teaching method that allows children to learn how to write through the use of cognitive factors and social forces is interactive journal writing. Interactive journal writing is a way of using written language in a learning situation that is real, meaningful, and socially constructed between the student and teacher (Flores, 1990). In an interactive journal the child is asked to "write" an entry in whatever way they can. Frequently this can be in the form of scribbles, pictures, letters, or their name. The teacher's, or the "expert's," role is to respond in writing to what the child "wrote." Through the use of interactive journals the students can attain success because they are able to work at their own cognitive level in the writing process. Social interaction is utilized when the teacher writes a response to the student's journal entry.

According to Flores (1990) the learner comes to know that writing is a form of communication that is different from spoken

language. The student experiences ownership because they are allowed to choose their own topic and write on a daily basis. In this social context, the child is allowed to experience the function and process of literacy while developing a close personal relationship with the teacher through writing. As an educator, one is able to assess and record the students' literacy growth. There is opportunity for individual social interaction on a daily basis, and the teacher has the opportunity to mediate how the child comes to the writing process. Within this setting the teacher is given the valuable opportunity to learn about each child's interests, ideas, culture, etc.

In order to help the instructor assess literacy growth within journal entries, Batzle (1992) identifies three stages of writing development: early, emergent, and fluent. The emergent writer is imitating writing through the use of scribbles, picture, letters from his/her name, and is able to read what they wrote. The early writer has grasped the concept that written language is really speech written down. Some characteristics of this stage are approximate spelling of words, initial and final consonant sounds are being used correctly, and print in the environment is being used in order to

facilitate the writing process. Finally, the fluent writer is writing with ease because he/she is able to control writing conventions and letter formations. At this stage the writer has shifted from the mechanics of writing to the development of a written topic, subject, or story. For example there is a beginning, middle and end of a written journal entry. The child shows concern for the quality of what was written and is able to self-edit in order to form revisions of written work.

Flores (1990) has described the writing process in four stages: presyllabic, syllabic, syllabic/alphabetic and alphabetic. Some characteristics of the presyllabic stage include scribbling, writing letters or numbers, and the ability to distinguish between drawing and writing. In the syllabic stage, the writer begins to consistently represent each syllable in a word with one symbol, usually a letter or number, but not necessarily the correct letter or number. At the syllabic/alphabetic stage the writer is now able to represent the sound/letter correspondences in a word, thus showing how the child is coming to know the phonetic hypothesis. Finally, in the alphabetic stage the writer seems to be using sound/letter association, or the phonetic hypothesis, as the driving force in writing, and frequently

an adult can read what the child has written.

While researchers agree that there are different stages in the writing process, it seems that Batzle (1992) extends the stages into a higher level of thinking. Many characteristics of an emergent and early writer are similar to Flores' (1990) four stages, but the fluent writer tends to include the higher thinking skills of formulating a story line that makes sense and being able to self-edit.

The goal of the Contextual Interaction Model is to help the learner become proficient in the writing process through the use of social interaction. Recent studies have supported early studies on the importance of social interaction in the development of literacy but the focus was on interactive journals, a teaching method that incorporated the use of social interaction and literacy development.

Summary

It seems that early and recent research tends to build upon each other. The research supports the notion that as a child acquires literacy there are different stages that build upon each other.

Whether there are three or four stages, each stage has criteria that must be mastered as the child comes to know literacy.

Social interaction has been found to facilitate the literacy

process. Social contexts can be formed between two peers or an “expert”, such as a teacher or a parent, and a learner. In either context, research shows that a person’s learning development can be stimulated through social interaction.

Interactive journal writing is a teaching method that incorporates asymmetrical and symmetrical social interactions. The student writes a story in a journal, being allowed to interact with their peers as they develop their journal entry. Upon completion of the entry, the “expert” is able to interact with the learner as he/she write a response to the journal entry.

Summary of Review of Literature

The review of the literature was broken down into two sections. The first section on parental involvement presented research concerning the importance of parents as active and passive participants in the school. Both early and recent research tend to show a positive relationship between parental involvement and academic success. The second section of the review focused on literacy growth and interactive journals. In this section literature was discussed that shows how a child acquires literacy through stages that are socially influenced. It is suggested that interactive

journals might be one teaching strategy that uses the social contexts found in the Contextual Interaction Model in order to facilitate literacy acquisition.

There was a lack of research found that integrated the active parent and literacy growth. The research question is based on the premise that an active parent does make a difference in academic growth. This project attempts to show a correlation between literacy growth and an active parent that volunteers in the classroom.

Chapter Three

Design/Methodology

This research project is an interpretative case study that focused on eight kindergarten students, their parents, and interactive journal writing. These students were partitioned into two groups of four. One group had a parent volunteering in the classroom, while the second group did not. One activity the parent volunteer participated in was writing in interactive journals with a small group of students as the teacher offered assistance and guidance. Frequently the parent could work directly with their own child in their journal.

The study lasted eleven months to learn if parent volunteering in the classroom influences a student's written growth. The study used interactive journals to compare the writing growth between the two groups of students.

Data Needed

Necessary data for this study were students' writing samples that assessed the level of literacy growth. All students were assessed based on a new writing rubric (see Figure 2) compiled from sample rubrics developed by Flores (1990) and Batzle (1992).

Figure 2

Characteristics of Literacy Growth

Presyllabic

- *scribbles, numbers, random letters
- *copies text
- *able to distinguish between drawing and writing
- *uses drawings in their written language
- *left to right movement when writing and reading

Syllabic

- *uses a written symbol, such as scribbles, numbers, or letters, per syllable in a word
- *able to read what they wrote
- *letter/sound approximations are more accurate

Syllabic/Alphabetic

- *uses initial and final consonants/vowels
- *begins using invented spelling
- *coming to know the phonetic hypothesis
- *experiments with punctuation

Alphabetic

- *phonetic hypothesis is a driving force in writing
- *invented spelling is evident
- *an adult can read what was written
- *understands how to use periods
- *places space between words
- *begins using personal voice in writing

Early Writer

- *places capitals at the beginning of sentences
- *is aware of commas, question and exclamation marks
- *recognizes misspellings
- *complete sentences with a beginning, middle and end
- *uses personal voice in writing

A new rubric was compiled to break down Batzle's emergent writer into written growth stages that built upon one another as identified in Flores' rubric of literacy growth. The early writer stage was added to show further literacy growth that was not included in Flores' original rubric.

The characteristics of Batzle's emergent writer stage were integrated into Flores' four primary characteristics of literacy growth: presyllabic, syllabic, syllabic/alphabetic, and alphabetic. Since Flores' rubric lacked in further detailed characteristics of higher writing stages, the early writer is primarily taken from Batzle's rubric.

A presyllabic writer is identifiable through the usage of scribbles or drawings that might include numbers and random letter formations or copied text. This child writes from left to right and knows the difference between what he/she has written and their picture.

As the child moves into the syllabic stage he/she can read what they wrote based on their writing rather than on their picture. When a "word" is written the reader can identify a written symbol per syllable in a word. The syllabic writer writes "words" with

more phonetic accuracy.

During the syllabic/alphabetic stage the reader will find that the child uses initial and final consonants or vowels in their “words.” Often the early writer will invent a way to spell a “word” as the child connects phonetic rules to letter/sound symbols that form a word. Finally the journal entry at this stage will include experimentation with punctuation.

In the alphabetic stage an adult can read what the child has written since invented spelling is more accurate as the phonetic hypothesis becomes mastered by the writer. Other characteristics that simplify reading during this stage are that the child uses the period properly and leaves spaces between words. In this stage the child begins to experiment with writing on their own instead of copying a sentence starter or print from the environment.

The highest stage necessary for this study is the early writer stage in which the child is beginning to conform to conventional writing that follows known grammar rules. In this stage the reader will see the child place capitals at the beginning of sentences and becomes aware of other punctuation besides the period. Sentences convey a complete thought that contain the writer’s personal voice

rather than copying from the environment. Frequently the writer will begin recognizing when a word is misspelled, so the self-correcting process in writing has begun.

Subjects

The subjects involved in this research were the parent volunteers, students whose parent volunteers and students whose parent did not volunteer in the classroom. Each group will be described according to their background and instructional training.

Students

There were eight Hispanic kindergartners from low income background with Spanish as their primary language involved in this study. The first group of students, three girls and one boy, who had parents volunteering in the classroom entered kindergarten as presyllabic writers. The second group of students, three girls and one boy, who did not have parents volunteering in the classroom were chosen based on gender and their presyllabic stage of writing.

To prepare the subjects for journal writing the teacher began an adaptation of interactive journal writing the second week of school. Instead of allowing the subjects to draw and write picture on their own the students were read a story in which they had to

draw a picture of their favorite part of the story. This adaptation was necessary to coincide with the homework read aloud program that includes a form of interactive writing at home.

Students were then asked to describe their picture by writing in Spanish about what they drew. Since this was the first time most of these students were asked to write many did not think they knew how to write. The teacher explained the different ways their writing might look like. Some students might be writing with a variety of letters, numbers, or lines and curves (scribbles).

Students were instructed to focus on what they wanted to say through their writing rather than their drawing.

Parent Volunteers

There were four parent volunteers participating in this study.

All are of Hispanic descent and can be considered as coming from

low socio-economic backgrounds. One mother is a single parent,

raising her children with the help of her parents, and she is

unemployed. Two other mothers are supported by the child's father

and are not employed. Only one mother is employed and has two jobs

for additional income and lives with the child's father. Two of the

mothers speak, read, and write English and Spanish fluently, while

the remaining two are only literate in Spanish.

The four volunteers have a variety of training. The mother who works out of the home is a trained bilingual teaching assistant and has worked with kindergartners for seven years. She has attended meetings on literacy development of the young child. Another mother has been working as a parent volunteer for two years, while the other two mothers have been volunteers for the first time this year. All participants helped in organizing work for the students and directed small groups instruction.

Parents were first allowed to observe interactive journals several times before being asked to run their own groups of seven to nine students. During the observations the parent volunteer listened and responded to students' writing during journal writing time with teacher guidance. When responding to a journal entry the adult needs to listen to what the child "reads" in their writing and writes back to the child based on what the child "read." It is important that the adult does not write down what the child says, but writes a response that builds upon the child's written message. Until the child can read what the adult writes it is up to the adult to mediate by reading to the child what they wrote. If the parent volunteer was

unsure of how to respond to an entry, then the teacher would be available as support.

Read Aloud Homework Program

At this time it is important to explain the homework read aloud program since this program contains many interactive journal writing qualities. Once the eight students began writing at home with their parents the journal writing at school showed much growth and improvement.

In January all parents were asked to attend an informative meeting that explained the new homework read aloud program that their child was to begin receiving. As previously mentioned, within this program is a component in which the students are expected to draw a picture of their favorite part of the story they have heard. Below their picture the students were expected to write about their picture, just like their journal. The parents observed a video taping of the teacher interacting with several students as they completed the homework included in the read aloud program. The purpose of this tape was to show parents how to allow their child to write according to their ability and asking the child to read what they wrote. Parents were not expected to respond to their child's writing

in the homework program.

Methodology

This will be a case study of how two groups of students come to know the writing process. The focus of the study will be the students writing growth based on information collected in their interactive journals. The writing growth of the group of students with parent volunteers will be compared to the writing growth of the group of students without parent volunteers. The students were taught how to write in their journals in small cooperative groups of seven to nine students. At first the students were shown how to draw a picture and write about their picture. Students were given an example of conventional writing when the teacher responded to what the student wrote.

As a student writes in his/her journal, the teacher is observing how the child writes so that literacy growth can be assessed. Included in each journal is the rubric of the characteristics of literacy growth that helped the assessment of each child.

Data Collection

The data collected will be writing samples from the subjects'

interactive journals. Students will write in their journals once a week in small group instruction. A teacher, assistant, or parent volunteer will respond to the child's writing. There were thirty-three samples from each of the eight student participants, creating 264 journal entries.

Type of Analysis

There will be two types of analysis. A quantitative one which gives each stage of the writing process a numerical value that will be used to compare the two groups. There will also be a qualitative analysis of student work which involves an examination of the characteristics displayed in children's writing samples as they progress over time.

For the quantitative analysis, journal samples were collected for eleven months and assigned a score each month. The presyllabic stage is given a value of one, syllabic a value of two, syllabic/alphabetic a value of three, alphabetic a value of four, and early writer a value of five. Each student will have a total score for the eleven months, and these scores will be aggregated to arrive at a group score. From the group score a group mean will be calculated for each group. This will allow for a comparison of mean scores for

the two groups. The higher score will help decide if parent volunteering in the classroom influences a child's written growth.

For the qualitative analysis the students will be assessed to find out what stage in the writing process each child has reached during each of the eleven months. Each child will write in their journal approximately three to four times a month. The teacher will then choose the best sample for that month to assess written growth according to the new rubric of the characteristics of literacy growth. Characteristics mastered in the writing sample will determine which stage the child has reached in the writing process during that particular month. In other words, if the child's journal entry shows that most of the presyllabic characteristics have been mastered and has begun experimenting with syllabic characteristics then the child will be placed into the higher stage.

Chapter Four

Analysis and Results

Data collection began in July 1994 and continued until May 1995. Data analysis is organized into two separate subsections: subjects with parent volunteers and subjects without volunteers. These sections shall describe the literacy development of each child, as seen in a qualitative and quantitative analysis of their individual interactive journals.

Through individual interactive journals a qualitative analysis of each subjects' written growth will be presented to give detailed descriptions of individual literacy growth. With this information one can differentiate between the characteristics of the five stages as the child comes to know the writing process. This description will include a quantitative analysis of each child's final score. A comparison of the mean scores between the two groups will be included in the results.

Subjects with Parent Volunteer

Diana Macias

Diana had chicken pox in July, so data collection did not begin until August 15. (see Appendix A) Diana was working at the

presyllabic stage in which she could distinguish between pictures and words, wrote from left to right and read what she wrote. It is noteworthy that Diana's drawings are done with clarity and detail not seen in other students included in this study. (see Figure 3) On August 31, while responding to the story Caps for Sale, Diana took the time to organize the caps according to the different colors like the man did in the story. Based on the response of the parent volunteer, evidently Diana was describing the part in the story when the monkeys threw down the caps and the man picked them up to organize them. The detailed drawing is significant because it shows Diana's maturity of her eye/hand coordination that is necessary to copy or write letters that might be necessary in future writings.

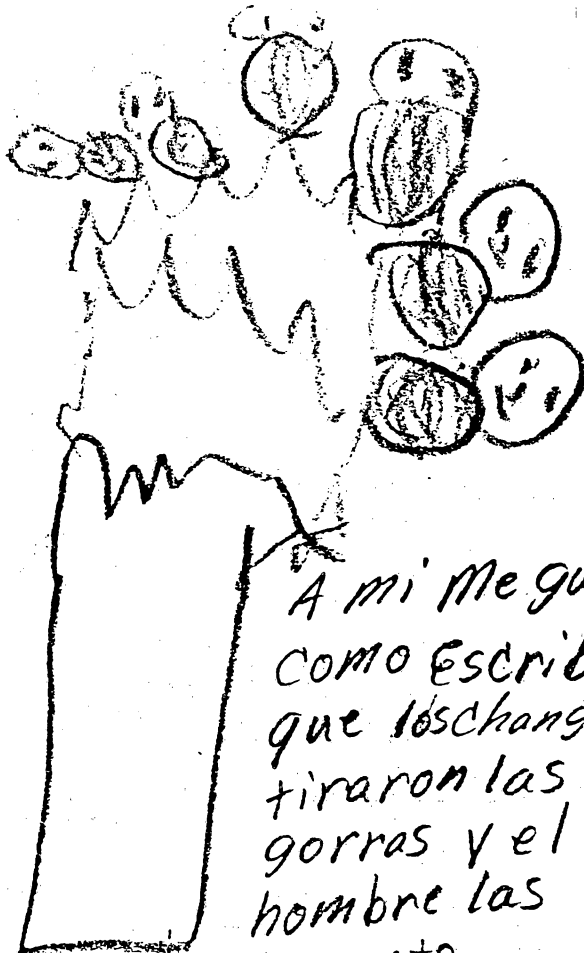
During the next two months Diana remains in the presyllabic stage as she comes to know the writing process. In September Diana starts mixing numbers with her letters, but remains focused on the meaning her written language is conveying. Once Diana began copying print from the environment during November, she quit mixing numbers with written language and she began experimenting with the location of the period. In December Diana begins to move into the syllabic stage since she has been reading what she wrote all

Figure 3



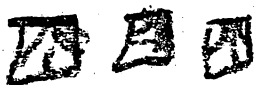

Writing Sample of Diana Macias on August 31

AUG 31 1984

P M A C
C r a y o l
i p b i m



A mi me gusta
como escribiste
que los changos
tiraron las
gorras y el
hombre las
levanto.

-  red
-  purple
-  black
-  blue

these months.

Diana remains in the syllabic stage from December until the end of March. On February 22 Diana writes the words "la" and "nina" within her entry, thus showing that she is beginning to write letter/sound approximations with more accuracy. (see Figure 4) With the introduction of lines at the bottom of the page, it is easier for Diana to write from left to right and organize her sentences. In this sample Diana can go from top to bottom when starting a new line.

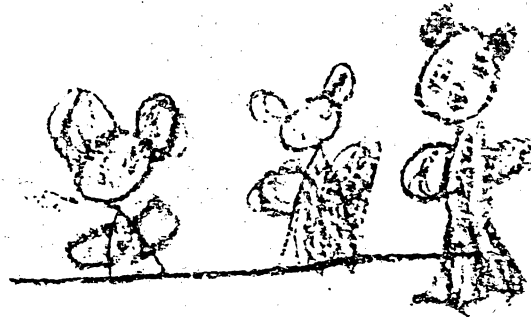
The effects of the homework read aloud program begins to spread into Diana's journal writing in March. The sentence pattern "A mi me gusta la parte...." is still heavily relied upon to begin writing, but initial and final consonants/vowels are being used to spell words that finish the sentence starter. On April 6 an adult can read her entry, thus placing Diana in the alphabetic stage. (see Figure 5) In this sample there are invented spelling and the phonetic hypothesis as a driving forces to her writing. Diana has not experimented much with the period, but in this entry the location of the period is correct.

In summary, Diana spent four months, August - November, in

Figure 4

Writing Sample of Diana Macias on February 22

FEB 22 1990



★ la niña croo

★ croo yo

yo e croo roo croo

A mi tambien me gusta croo croo.

Diana

Figure 5

Writing Sample of Diana Macias on April 6



AMIMEGUSTCADO

LA YCI SE DESAYO

ISUMAMI LOADA POCO

¿Tu crees que se desmayó de un susto? ¿?

the presyllabic stage, three months, December - February, in the syllabic stage, one month, March, in the syllabic/alphabetic stage, and reached the alphabetic stage in April and May. (see Figure 6) At this point Diana needs to use her personal voice rather than relying on the sentence starter and begin formatting her sentences with the proper punctuation and spacing between words. Based on the qualitative data collected, Diana reached the alphabetic stage which is given a numerical value of four in the quantitative analysis.

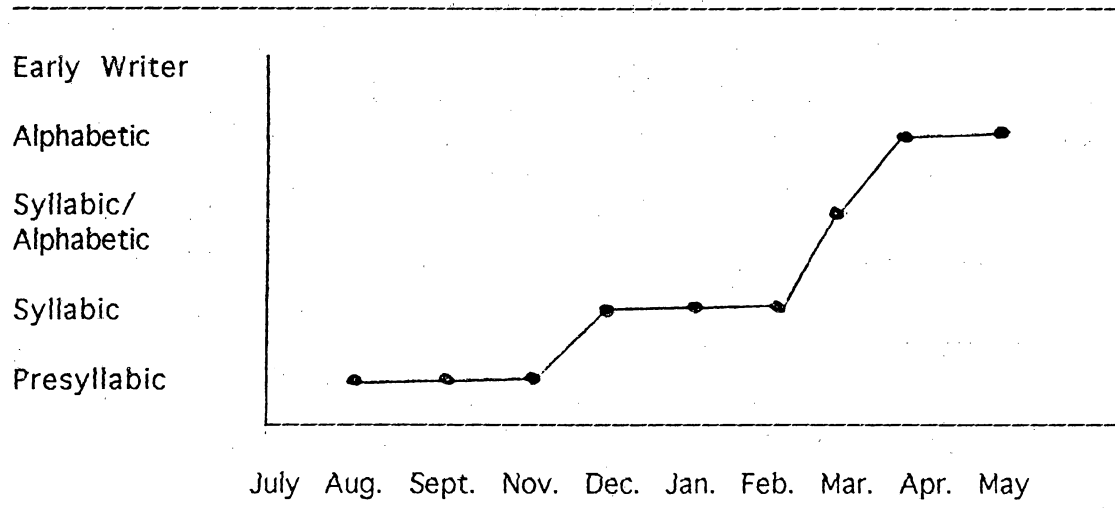
Angel Salazar

Data collection begins in July through the end of May for Angel. (see Appendix B) In July Angel relies primarily on his pictures to convey meaning, but is aware of the fact that he should be reading his scribbles. Thus Angel knows that there is a difference between pictures and symbolic scribbles as writing, identifying him as a presyllabic writer. He begins incorporating letters and numbers in September and has mastered the left to right directional movement when writing and reading his scribbles. As Angel learned different letters and numbers he began incorporating this knowledge into his writing during September.

Angel remained in the first stage until November 9 in which he

Figure 6

Literacy Growth of Diana Macias



copied from text in the environment and wrote left to right, placing him into the syllabic stage. Based on the response from the volunteer it seems that Angel puts his own meaning on the written print rather than reading what he copied. (see Figure 7) Angel copied "o do gras a mi ma" ("Yo doy gracias a mi mama.") which means that he's thankful to his mother. Yet according to what the volunteer wrote, he is thankful for his father because he takes him to lots of places. During the following months Angel practices letter/sound approximations as he comes to know the phonetic hypothesis. In January and February one sees more accurate drawings, further growth with periods and longer sentences.

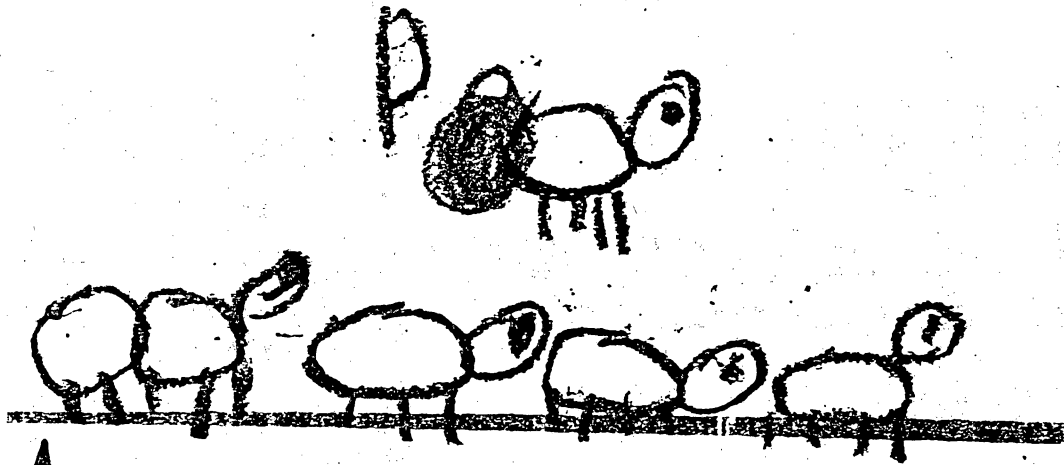
Angel makes tremendous growth in March as he grows into the syllabic/alphabetic stage. On March 28 Angel is putting spaces between his words, can identify and write down initial and final consonants/vowels, and begins using invented spelling. (see Figure 8) This growth may be the result of the interaction taking place at home with his mother during the homework read aloud program since the teacher has not worked with the students to "teach" them how to put spaces between their words.

Angel only spends one month in this stage before he moves into

Figure 8

Writing Sample of Angel Salazar on March 28

MAR 28 1995



★ A mi me gustan

★ La pte Mahorono LO

A mi me gustan las hormigas.

the alphabetic stage during the months of April and May. At this time invented spelling is evident as the phonetic hypothesis becomes the driving force when Angel writes and reads in his journal. Although he is placing spaces between his words, Angel needs to work on punctuation and branch away from the sentence starter of "A mi me gusta la parte...."

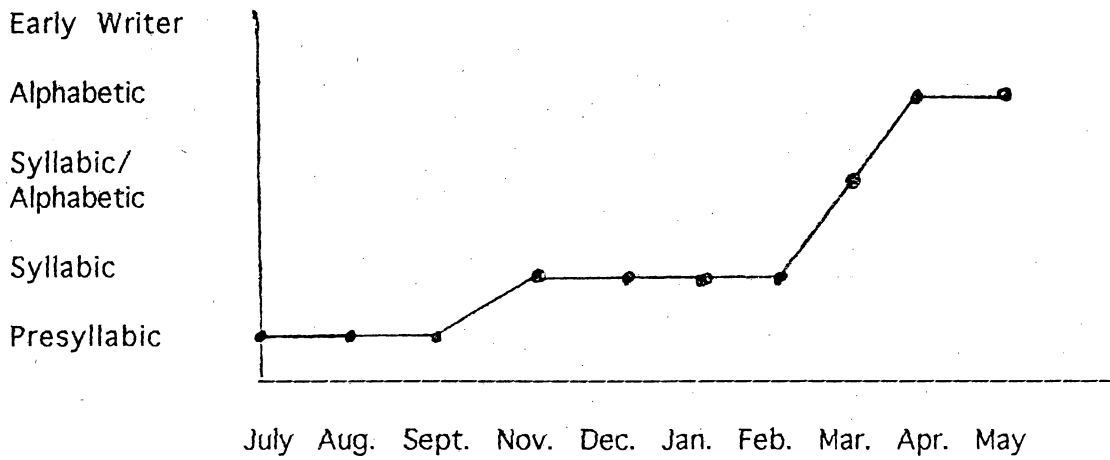
In Summary, Angel spent three months in the presyllabic stage, July - September, four months in the syllabic stage, November - February, one month in syllabic/alphabetic, March, and achieved the alphabetic stage in April - May. (see Figure 9) Angel needs to become more aware of grammar rules such as misspelled words, capitals, commas, or question marks before moving into the early writer stage. Based on the qualitative data Angel has reached the alphabetic stage which is given a numerical value of four in the quantitative analysis.

Jennifer Rodriguez

As with the others, Jennifer's data collection (see Appendix C) begins in the presyllabic stage, willing to take risks in writing, but unable to read what she wrote, thus expressing meaning through drawings. Jennifer began reading what she wrote in August, so she

Figure 9

Literacy Growth of Angel Salazar



made a connection between her symbolic scribbles as a means to communicate rather than the pictures. During September the scribbles began taking the form of letters mixed with numbers. To facilitate sentence formation Jennifer began copying print from the classroom environment during November.

In December Jennifer moves into the syllabic stage since she has mastered all characteristics in the first stage, and could read what she wrote since August. At this point Jennifer's sentences flow from left to right and letters/numbers become her primary form of written language. In January Jennifer introduced her personal voice by writing about her vacation and what Santa Claus had given her. (see Figure 10)

When the read aloud program was introduced in February there was a major difference observed in the way that Jennifer approached writing in her journal. Jennifer began repeating words repeatedly, sounding them out, trying to figure out the right letter that went with the sounds she was hearing/saying.

On March 30 the length of writing grew tremendously. (see Figure 11) It was not possible for the teacher to write down everything she wrote, so it is not certain yet if there is a symbol

Figure 10

Writing Sample of Jennifer Rodriguez on January 6

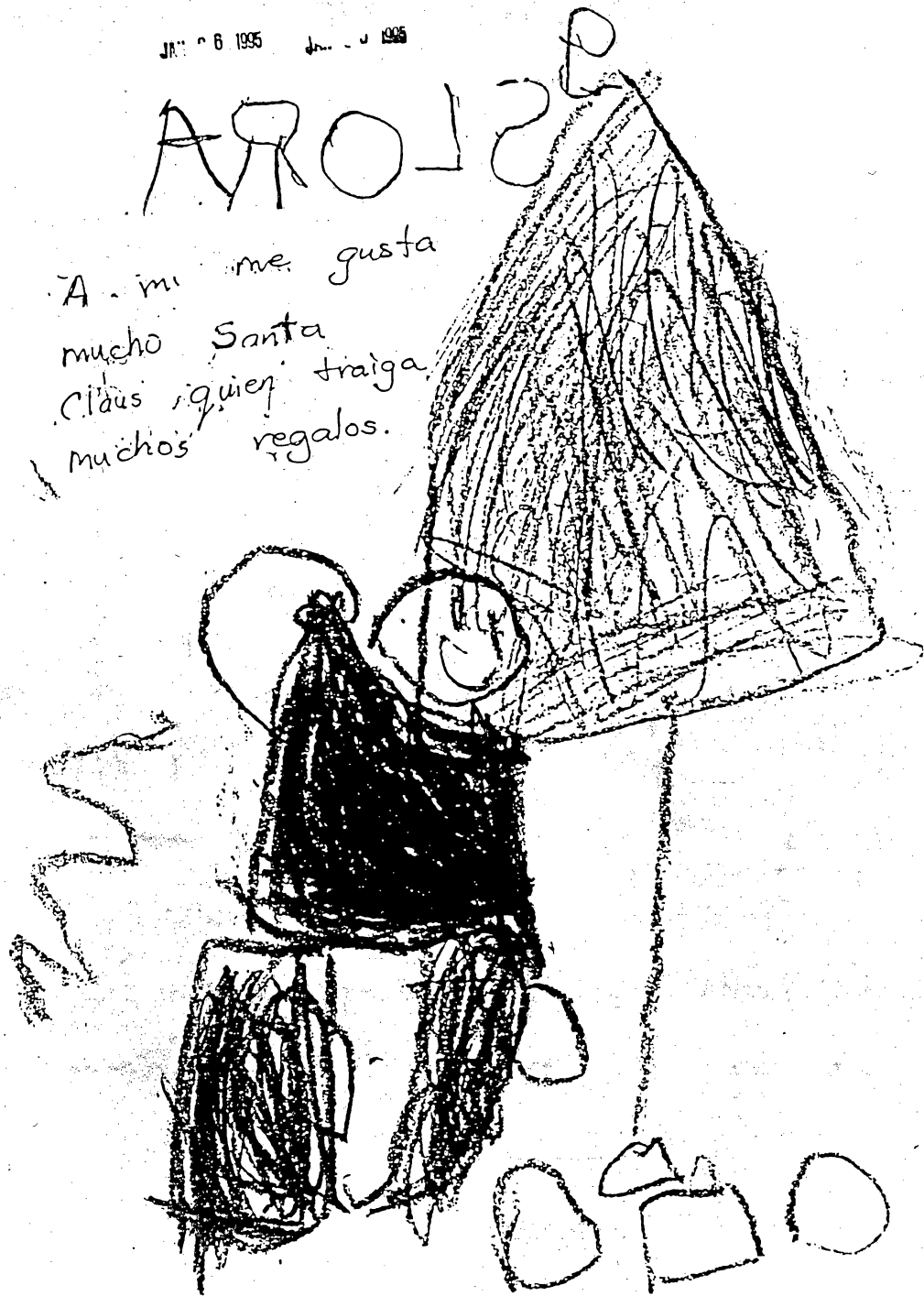
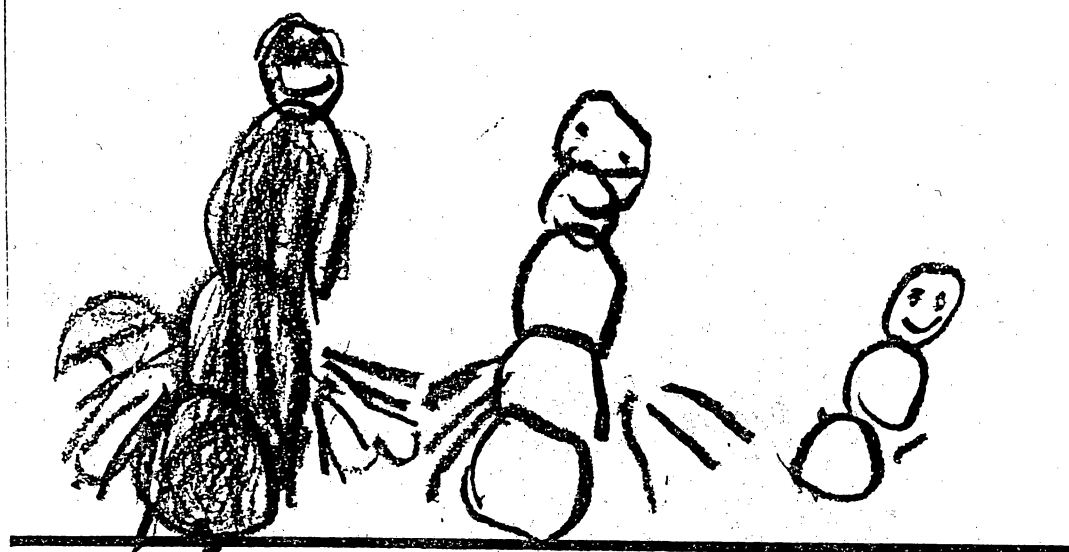


Figure 11

Writing Sample of Jennifer Rodriguez on March 30

MAR 30 1995



A me gusta Xezoi

BAILAR AÑORABO

NOTA SADOCTERAS

A mi me gusta bailar.

per syllable, but she was reading what she wrote letter by letter. The length of this entry is noteworthy since Jennifer is still struggling as she sounds out letters to decide what to write down. She spent at least fifteen minutes writing this entry.

At the beginning of April, during free explore time, Jennifer drew a picture of an ice cream cone and wrote the word "hLaDo" (helado). As she wrote she was interacting with another student who helped her understand how to write this word accurately. This places her into the syllabic/alphabetic stage since this writing uses initial, middle, and final consonants/vowels. The accuracy of the spelling of this word is important since the Spanish "h" is silent.

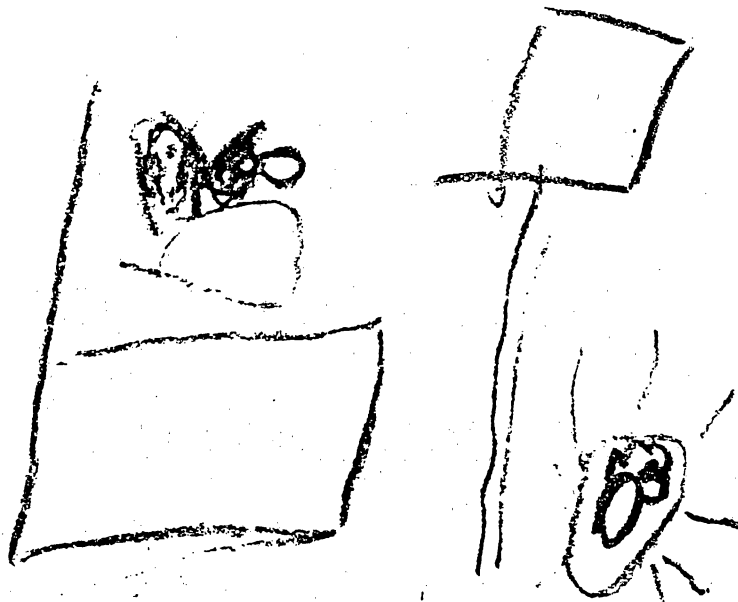
At this point the instructor tried to explain to Jennifer that she did not need to write so much, but that writing one word was enough during journal writing time. She struggles so much with the phonetic hypothesis when trying to write that Jennifer might feel more success if she could write one word accurately rather than a sentence that did not make sense. But Jennifer chose to write complete sentences, sounding out every step of the way.

On May 18 Jennifer wrote with tremendous accuracy in her entry when working with a volunteer. (see Figure 12) This entry is

Figure 12

Writing Sample of Jennifer Rodriguez on May 18

MAY 18 1995



A M E N S K L O A R O N

S U A N I B M A B M I

A R V I B S U M A

A mi me Gusta que su mama lo arruyaba, y lo arruyaba.

in response to the story I'll Love You Forever and Jennifer's favorite part was when the mother rocked the child back and forth, back and forth. In Jennifer's writing she accurately writes the word "lo" and comes very close to the spelling of "ArullB" (arullaba). She seems to have written three separate sentences, as there are two periods at the end of the lines, thus she is coming to know how to use the period.

In summary, Jennifer remained in the presyllabic stage for four months, July - November, spent four months in the syllabic stage, December-March, and reached the beginnings of the syllabic/alphabetic stage in April and May. (see Figure 13) While Jennifer continues to come to know the phonetic hypothesis she needs to become more aware of letter and number reversals.

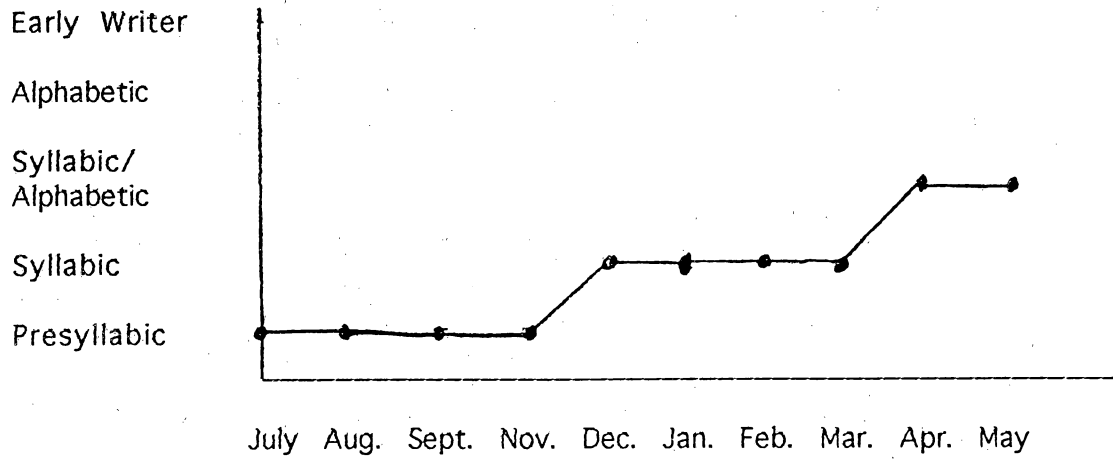
According to the qualitative data collected Jennifer reached the syllabic/alphabetic stage, which is given a numerical value of three in the quantitative analysis.

Vivian Garcia

From the data collection of Vivian (see Appendix D) one can see that she begins as a high presyllabic writer who has already come to know several characteristics in the writing process. She can write

Figure 13

Literacy Growth of Jennifer Rodriguez



with letters in a left to right directional movement, distinguish between pictures and written language, and read back what she wrote. There is no evidence of scribbles, nor does Vivian mix letters and numbers. She has already internalized this information and knows the proper time to use these skills.

So it is no surprise that by September 21 Vivian begins to use the phonetic hypothesis to form words like PeRO, (perro), and GADO, (gato), as she identifies her pictures, placing her into the syllabic stage. (see Figure 14) In this sample Vivian copied words and sentence patterns from examples to write "AMIME...", which demonstrates that she is coping the beginning of my sentence "A mi me"

Much independent growth is seen on November 9 when Vivian begins writing on her own: UioDGrasArturo, (Yo doy gracias a Arturo.), yOiODGraSA mi MaMa, (Yo doy gracias a mi mama.), JOLED GrsA A MiPaPa, (Yo le doy gracias a mi papa.). (see Figure 15) In this entry Vivian has written three complete sentences that can be read by an adult without Vivian's help, thus placing her as a high syllabic/alphabetic writer.

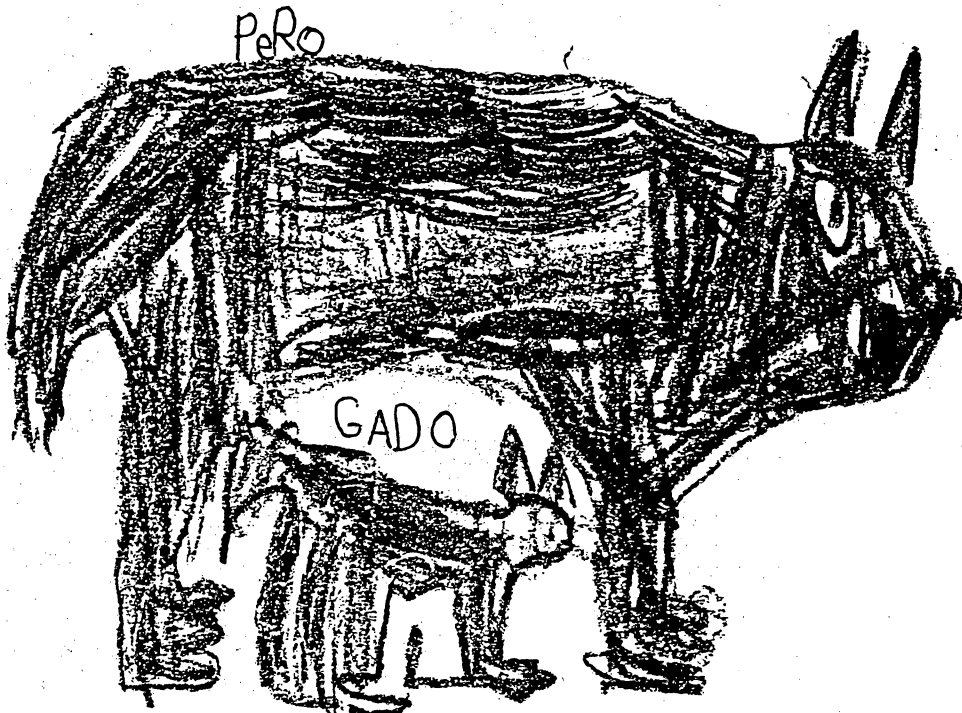
Since the rest of the journal entries are a combination of

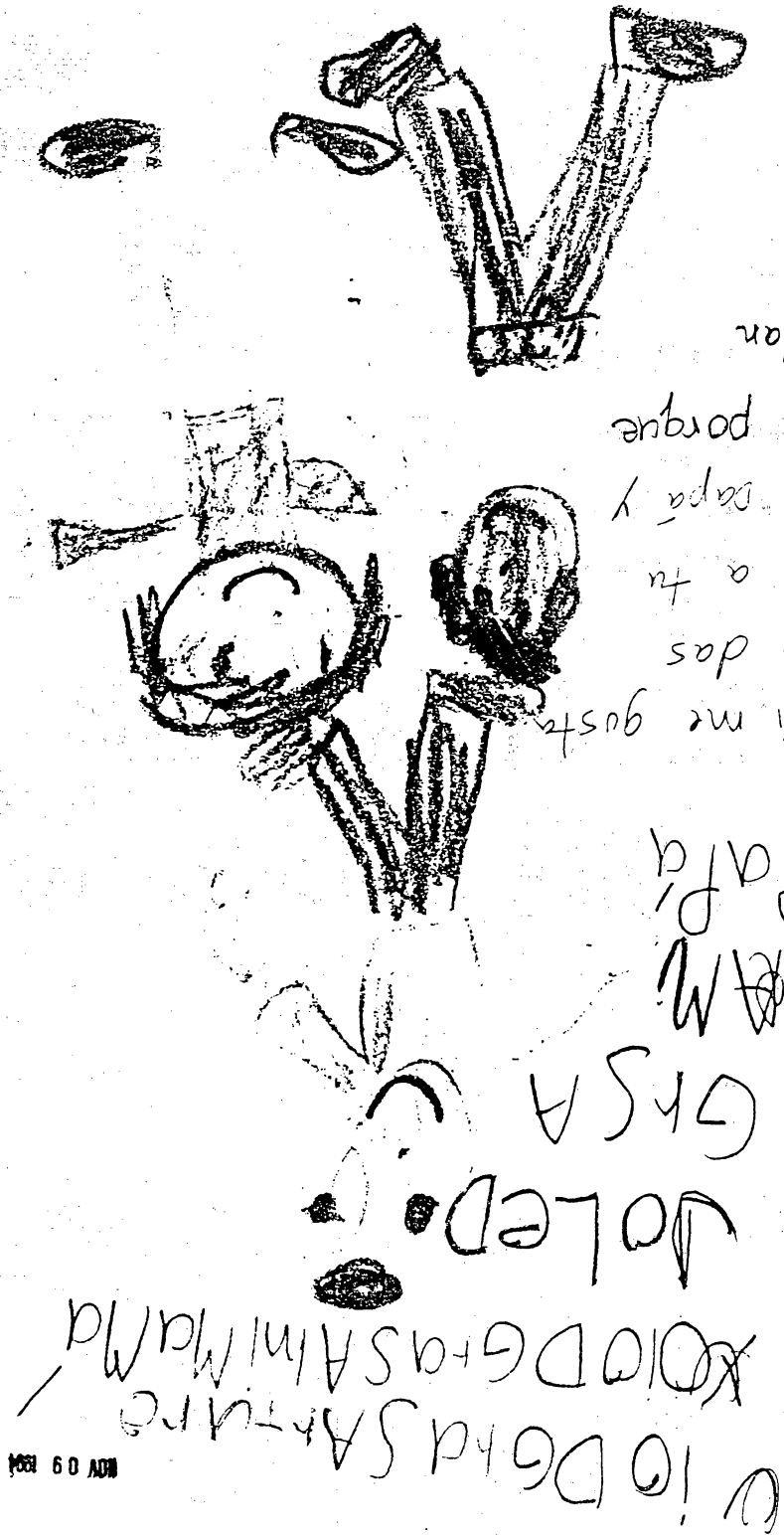
Figure 14

Writing Sample of Vivian Garcia on September 21

SEP 21 1994

AMIMBIGPRO I EN GAO





Writing Sample of Vivian Garcia on November 9

Figure 15

phonetics and copying Vivian was not placed into the alphabetic stage until her December entry. Evidently the phonetic hypothesis was the driving force behind her written language as one can now read what she wrote and the period is being placed in the proper location.

Vivian remains in the alphabetic stage from the months of December through February. During this time she demonstrates all characteristics in this stage except the usage of her personal voice in her writing. Vivian is beginning to self-edit while struggling with words she does not know, and she becomes aware of words that she spells incorrectly. Vivian can read what the teacher writes to her and responds to the question.

Vivian did not move into the next stage since she has not broken away from the sentence starter of "A mi me gusta la parte...." and needs to use more of her personal voice in her writing. She only broke away from the pattern once, on March 2, when she was placed into the early writer stage. During the months of March through May Vivian's writing grew with clarity as she began using spaces between her words and used complete sentences to convey her thoughts.

In summary, Vivian remained in the presyllabic stage for two months, July - August, spent only one month in the syllabic stage, September, and one month in the syllabic/alphabetic stage, November, spent three months in the alphabetic stage, December - February, and was the only one to achieve the early writer stage in March - May. (see Figure 16) Based on the qualitative data collected Vivian reached the early writer stage, which is given a numerical value of five in the quantitative analysis.

Summary of Students with Parent Volunteers

As previously mentioned in chapter three, the quantitative analysis was attained by placing a numerical value on each stage in the rubric. This formed a scale from one to five. During the six months of data collection, all students showed growth in the writing process. (see Table 1) This table shows the beginning and ending numerical value of each stage that each subject attained and the difference between the stages.

Vivian shows the most growth over the year by reaching the early writer stage. There is a difference of a positive four (+4) between the initial and final stages. Diana and Angel are both strong alphabetic writers, which shows a difference of a positive

Figure 16

Literacy Growth of Vivian Garcia

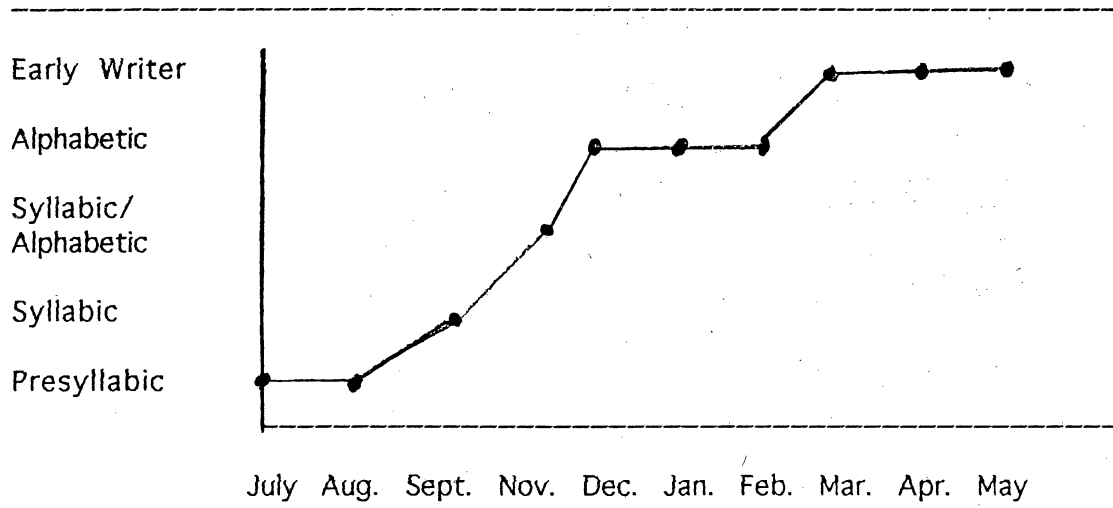


Table 1

Literacy Growth of Students with Parent Volunteers

| Student | Initial Stage | Final Stage | Difference |
|--------------------|---------------|-------------|------------|
| Vivian Garcia | 1 | 5 | +4 |
| Diana Macias | 1 | 4 | +3 |
| Angel Salazar | 1 | 4 | +3 |
| Jennifer Rodriguez | 1 | 3 | +2 |

three (+3) between the initial and final stages. Jennifer has achieved the syllabic/alphabetic stage, which is a positive two (+2) between the initial and final stages.

Subjects without Parent Volunteers

Krystal Corona

During data collection (see Appendix E) Krystal remained in the presyllabic stage for two months. She could distinguish between drawing and written language, write with scribbles and letters from her name, but her drawings were what she read to convey messages to the reader. During these months evidently Krystal can write from left to right and mix numbers in her writing once she broke away from writing her name as a representation of her written communication.

In September Krystal worked with parent volunteers that were being trained in interactive journal writing by the instructor. Unfortunately Krystal would not take a risk in writing in her journal until she worked with the bilingual assistant on September 22. (see Figure 17) In this sample Krystal used invented spelling to write the word CAVAIO, (caballo), to label her picture. Krystal is now beginning to represent the sound/letter correspondence of

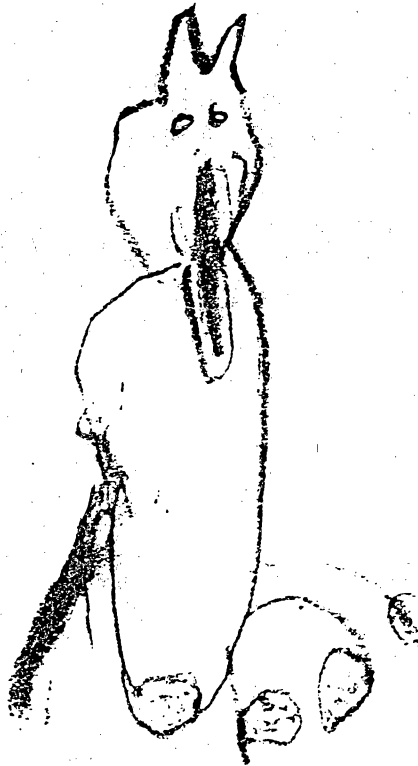
Figure 17

Writing Sample of Krystal Corona on September 22

CAVAD

SEP 22 1994

A mi me gusto tu
caballo y me gusto
como lo escribistes.



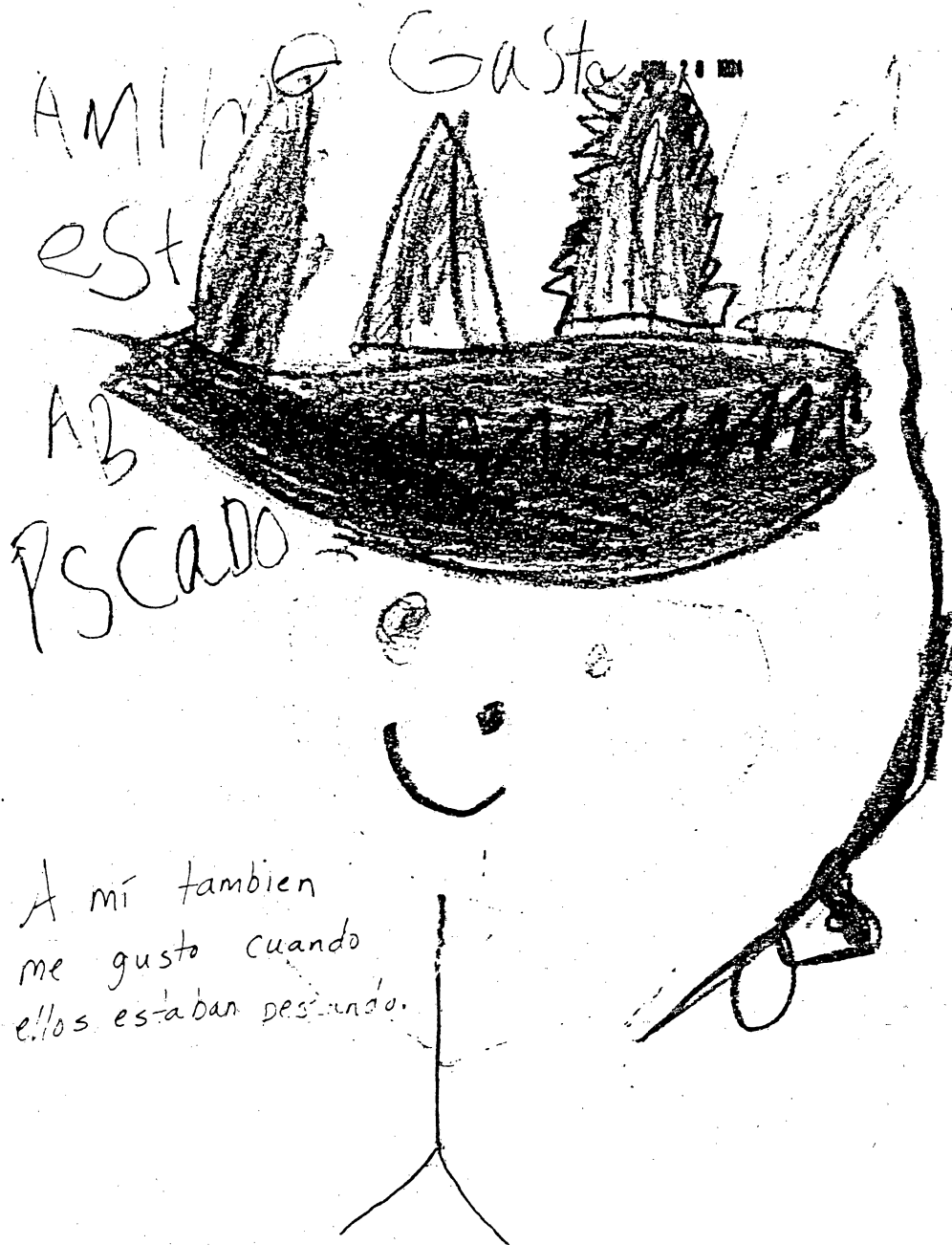
initial and final consonants and vowels which places her beyond the syllabic stage and into the syllabic/alphabetic stage. There is a lack of evidence that Krystal has copied text from the environment, but her letter/sound approximations are more accurate and the final entry of the month shows a written symbol per syllable in a word.

Krystal continues to explore the phonetic hypothesis as she builds into sentence/pattern writing and copying print from the environment. On November 28 she copied a previously taught sentence pattern, "A mi me gusta....," to form the sentence: "A MI me Gusta estAB PSCaDo," (A mi me gusta cuando estaba pescando.) (see Figure 18) During most of November Krystal is copying my examples, but on this session she was responding to the story Hiawatha and was not able to look at an example. She may be building on her previous entries by copying this sentence pattern and finishing with her own words.

During the months of December and January Krystal moves into the alphabetic stage, as she is experimenting with punctuation, using the phonetic hypothesis as the driving force in writing, begins to use spaces between words, and an adult can read what she wrote. On February 16th Krystal wrote a sentence that did not follow the

Figure 18

Writing Sample of Krystal Corona on November 28



sentence starter, but communicated a complete thought that accurately described her drawing. (see Figure 19) Since her personal voice is being used in her writing she was placed into the early writer stage. In this sample she can place the proper spacing between her words and has mastered the location of the period. Krystal is also able to read what the teacher writes to her in the journal.

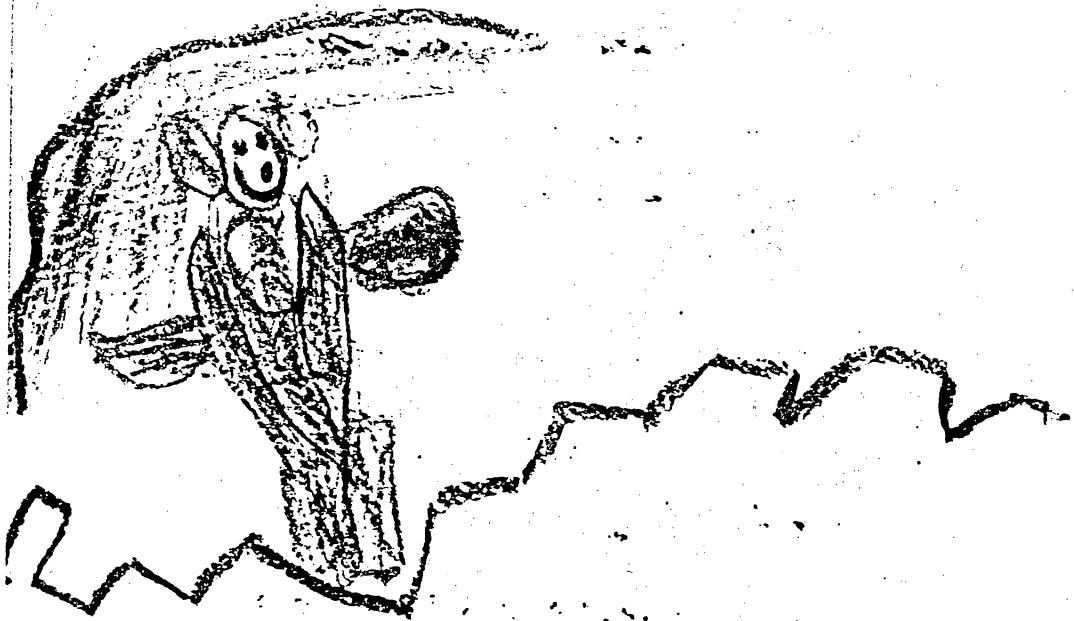
During the months that follow, Krystal grows in forming a beginning, middle and ending in her sentences and there are very few misspelled words. Krystal can use the comma and accents properly when responding to my questions. She uses a capital letter at the beginning of the sentence starter, but needs to transfer this knowledge when she begins the sentence with her own words.

In summary, Krystal was in the presyllabic stage for two months, July - August, skipped to the syllabic/alphabetic stage for three months, September - November, remained in the alphabetic stage for two months, December - January, and achieved the early writer stage for four months, February - May. (See Figure 20) At this point Krystal needs to become more aware of punctuation and misspelled words. Based on the qualitative data collected Krystal

Figure 19

Writing Sample of Krystal Corona on February 16

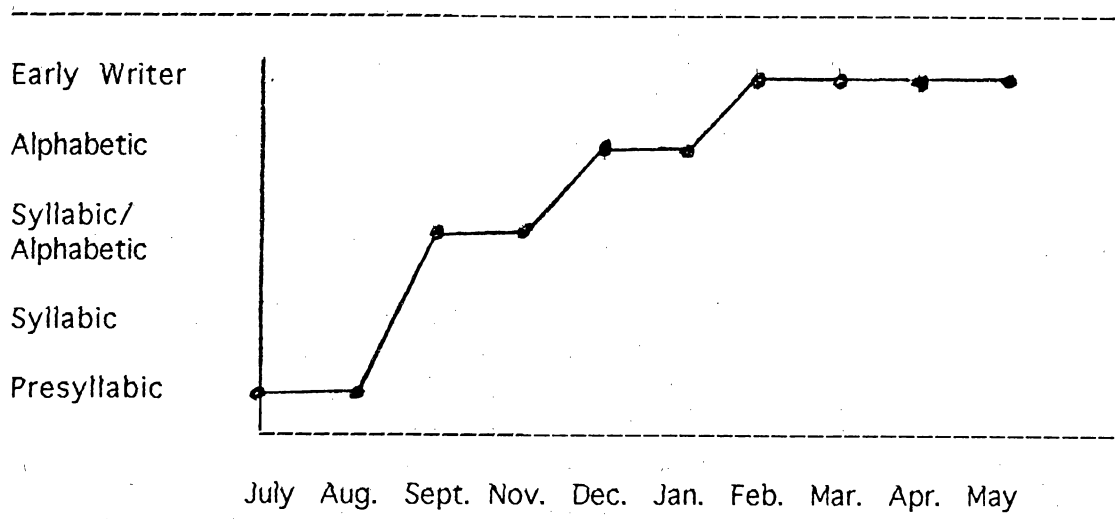
FEB 16 1995



el oso esta en
la escadera. Va a subir
a otro piso.

Figure 20

Literacy Growth of Krystal Corona



reached the early writer stage, which is given a numerical value of five in the quantitative analysis.

Nancy Vaca

Nancy's data collection (see Appendix F) shows that upon entering kindergarten Nancy has already come to know several characteristics of the presyllabic stage. She can distinguish between pictures and written words, uses scribbles to convey meaning, and can read what she wrote. During August Nancy's scribbles form letters as she begins to mix letters from her name into her journal writing. There is only one entry in September since Nancy missed much school when her mother had a baby and could not bring her. At this time Nancy wrote with letters, but would not read what she wrote for the parent volunteer.

In November and December Nancy is copying print from the environment and secures the left to right directional movement, which places her in the syllabic stage. At this point Nancy has shown that she has mastered all the characteristics of the previous stage, but need to focus on letter/sound approximations. Nancy relies on copying text from past entries or the environment.

In January Nancy began writing more and using a written

symbol per syllable in a word, but it became apparent she needed more structure in her journal to know where to continue writing when completing a sentence and going onto another page. (see Figure 21) Nancy begins writing in the proper place, but when she runs out of space she writes above her sentence, unsure of where to go to complete her thought.

In February Nancy secures letter/sound approximations and grows into the syllabic/alphabetic stage. As Nancy is coming to know the phonetic hypothesis she is using initial and final consonants/vowels in her invented spelling of unknown words.

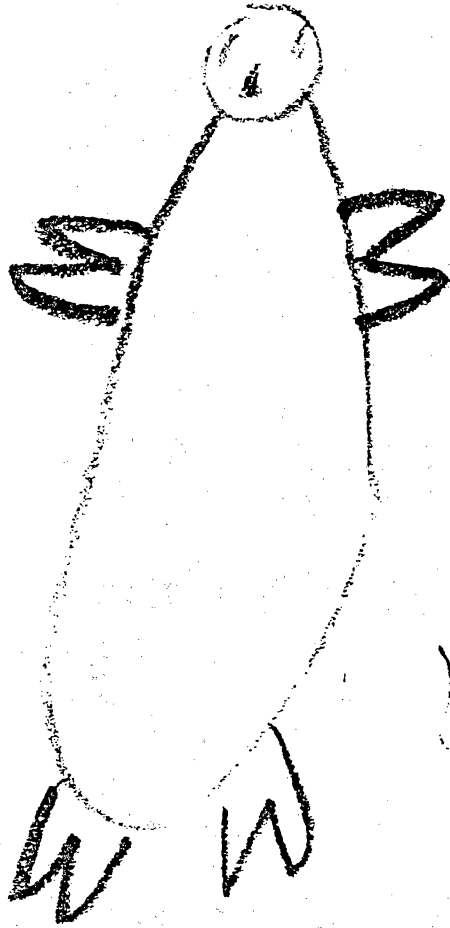
On March 31 an adult could read what Nancy wrote without clarification from her, placing her into the alphabetic stage. (see Figure 22) In this sample the phonetic hypothesis is her driving force as she writes "A mi m Gusta cuanDo Ellos FurERN a matar a La MoDRSa." (A mi me gusta cuando ellos fueron a matar a la morsa.) It is difficult to know if Nancy is putting spaces between her words and she has not used her personal voice in her writing.

In summary Nancy was in the presyllabic stage for four months, July - October, syllabic stage for three months, November - January, remained in the syllabic/alphabetic stage for only one

Figure 21

Writing Sample of Nancy Vaca on January 11

JAN 11



Si, miija,
los penguinos
jugan y nadan
bonitos cuando
están en el
agua.

P I N

EL

CU

NO ME

CUANDO

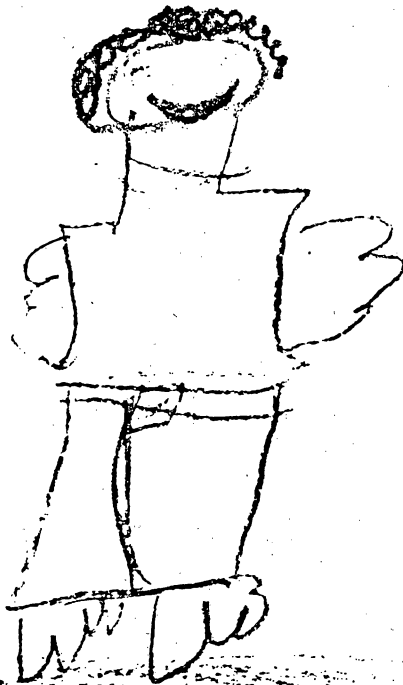
AMIM

ES FA

Figure 22

Writing Sample of Nancy Vaca on March 31

MAR 31 1995



1 mime bus-arcuan

DOFHOEFUFRN

maLARALMODLSa

¿Has visto a una morsa? Sí

month, February, and achieved the alphabetic stage for three months, March - May. (see Figure 23) Further journal entries need to show a greater focus on proper usage of punctuation and spacing between words to facilitate reading of what she wrote. According to the qualitative data collected Nancy reached the alphabetic stage, which is given an numerical value of four in the quantitative analysis.

Dania Partida

As data collection (see Appendix G) began Dania was unwilling to take a risk in writing and, at times, could not bring herself to even draw a picture, placing her into the presyllabic stage. Although Dania did not progress further than the first stage, August was a better month for Dania, as she began interpreting her pictures, wrote her name, and used drawings in her written language.

In September Dania's presyllabic writing skills continue to grow as she incorporates letters and numbers when writing and begins to experiment with writing from left to right. On November 28 Dania wrote a longer sentence using the left to right directional movement, but writes from bottom to top instead of the conventional writing of top to bottom. (see Figure 24) While Dania

Figure 23

Literacy Growth of Nancy Vaca

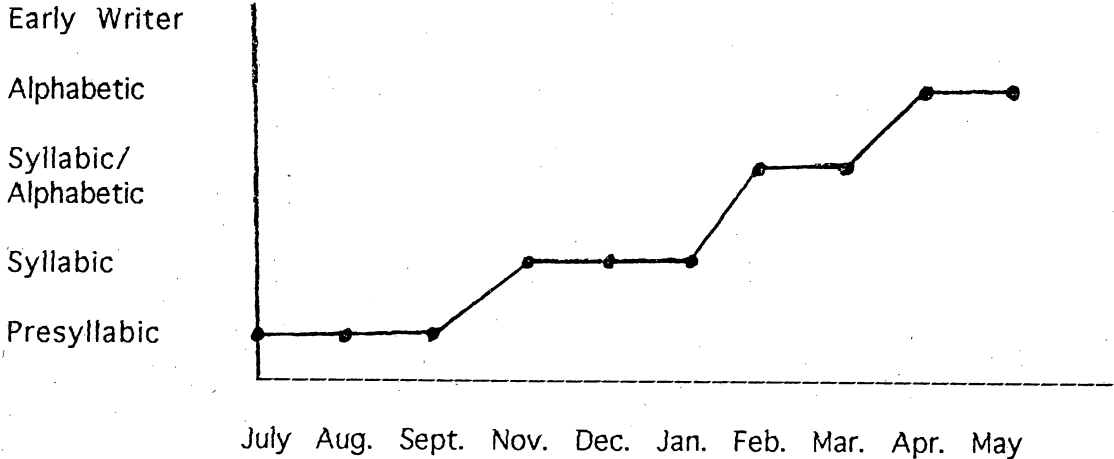
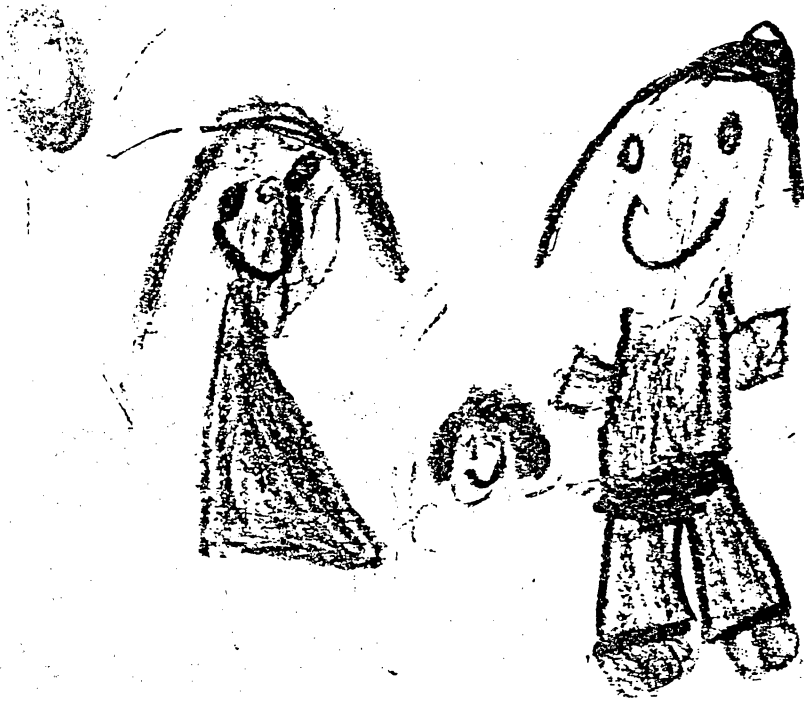


Figure 24

Writing Sample of Dania Partida on November 28

NOV 28 1994



Que bonito es
arullar a un
bebé para que
se duerma.

RHKKOIDUZO

EAGTAMHV

is moving into the next stage, she still has not copied text from the environment and continues to read her pictures rather than what she wrote. It is not certain whether Dania has made the distinction between drawing and writing.

During the months of December through February Dania can distinguish between her drawings and written work as she reads her words rather than the picture. Although Dania has not copied text from the environment she moves into the syllabic stage since she has begun to experiment with the period by placing it at the beginning of the sentence rather than at the end, and can read back what she wrote, following a left to right directional movement. In these entries Dania is beginning to use a written symbol per syllable in a word, but needs to work on letter/sound approximations.

The only time in which Dania copied text was on March 9th, in which she copied from the story Mama, Do You Love Me? in English. Upon reading what she wrote Dania read her sentence in Spanish rather than English. By the end of March Dania has mastered the location of the period, but has not come to know the phonetic hypothesis well enough to write letter/sound approximations accurately.

During April and May Dania continues to work in the syllabic stage as she struggles with identifying the correct letter with the sound she hears in her sentence. On May 22 Dania completed her first sentence, but for some reason was not satisfied and erased what she wrote. (see Figure 25) In this sample Dania seemed to have placed the period incorrectly, but this could have been caused because she was tired as she worked for quite a while on her sentence. In previous entries the location of the period is correctly placed at the end of her sentence.

In summary, Dania spent five months in the presyllabic stage, July - November, and six months in the syllabic stage, December - May. (see Figure 26) Dania needs to be given more time to internalize the phonetic hypothesis so that she can write the correct letter according to the sound she hears. Based on the qualitative data collected Dania reached the syllabic stage, which is given a numerical value of two in the quantitative analysis.

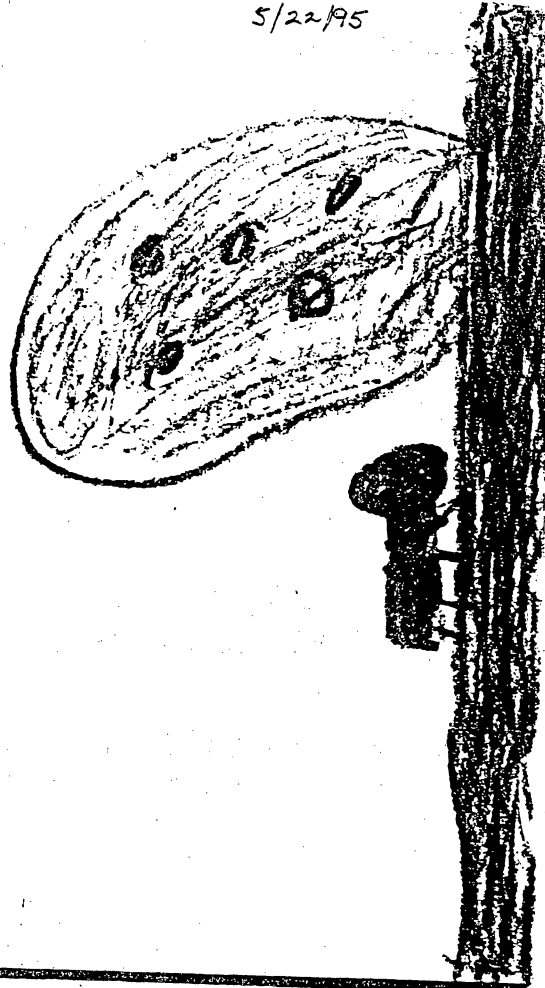
David Cabrera

David's data collection (see Appendix H) shows that when he entered kindergarten he was working in the presyllabic stage in which he was writing with letters and read back what he wrote. In

Figure 25

Writing Sample of Dania Partida on May 22

5/22/95

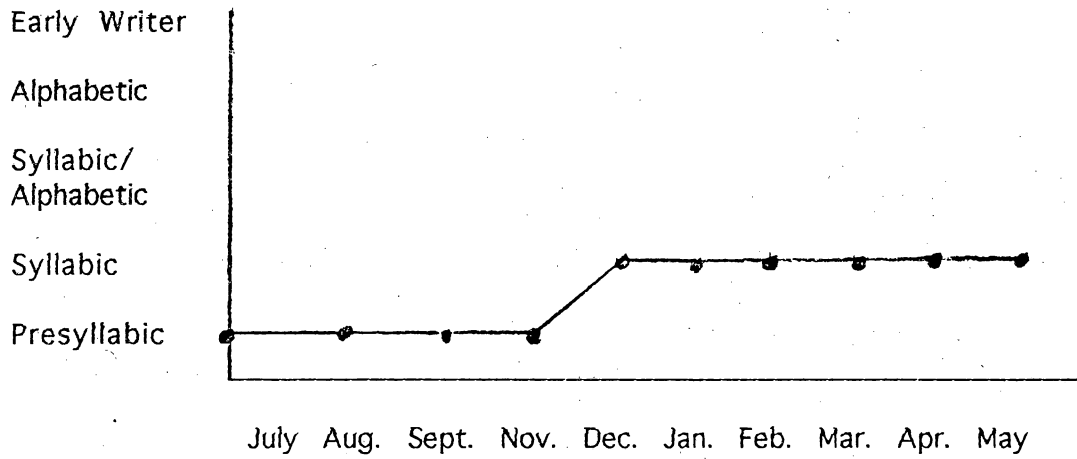


MÓIF I AMWONAXA

Yo creo que ella tenía hambre.

Figure 26

Literacy Growth of Dania Partida



August he started to write his name, but when asked to read what he wrote David described his drawings rather than reading his name. Thus one is unsure if David knows the difference between his drawings and written language at this time of the year. During September David pulled away from writing his name and mixed letters with numbers. In many entries it seems as if David is writing upside down.

On November 10 David copied the teacher's writing example "A mi me gusta el pavo." but changed one word to write "A Mi Me GuSta Mi Pavo." (see Figure 27) This sample demonstrates the David can write from left to right and return to start a new line following the correct conventional way of writing from top to bottom. In this entry the parent volunteer interacted with David when responding to his writing, so it cannot be determined if David read back what he wrote according to the copied text. Another unique feature about this entry is the way that David chose to draw on the left page and wrote on the following page.

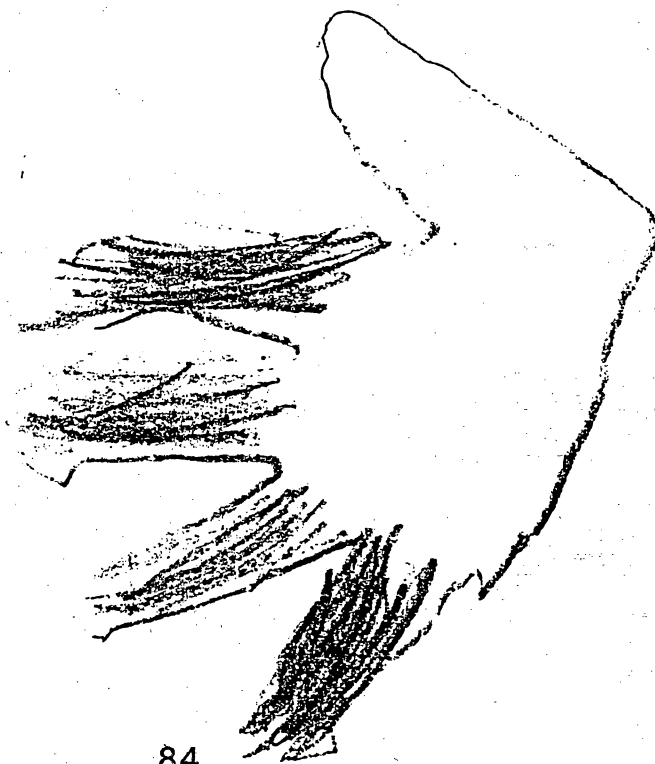
In December and January David grows into the syllabic stage as he is reading his writing rather than his picture which shows that he can distinguish between drawing and writing. From January

Figure 27

Writing Sample of David Cabrera on November 10

DAVID CABRERA
A mi hijo, David.
Amoroso.

David
Amoroso
mi hijo
()



through March David experiments with the period while he continues to come to know the phonetic hypothesis.

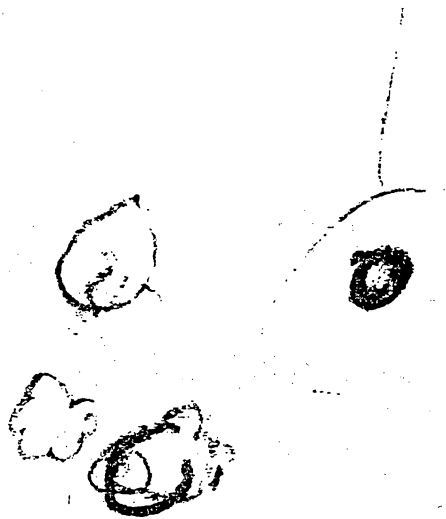
During April and May David struggles as he tries to write the correct letter with the sound he hears in his sentence. On May 22 the teacher took dictation on the opposite page to determine if David can place a written symbol per syllable in a word. (see Figure 28) There might be too many symbols ("LatEFtsa Arir") than the meaning that David attempted to communicate ("Salio la luna.") Yet the picture he drew supported what he read. When asked to respond to the teacher's question David could not sound out the word "amarillo" phonetically when the teacher attempted to facilitate in letter/sound approximations. David wrote "ARNC" for the word "amarillo."

In summary David spent six months in the presyllabic stage, July - December, and five months in the syllabic stage, January - May. (see Figure 29) David needs to continue to practice writing a symbol per syllable as he grows into letter/sound approximations. According to the qualitative data collected David attained the syllabic stage, which is given a value of two in the quantitative analysis.

Figure 28

Writing Sample of David Cabrera on May 22

MAY 22 1935



LUTEFOLCA

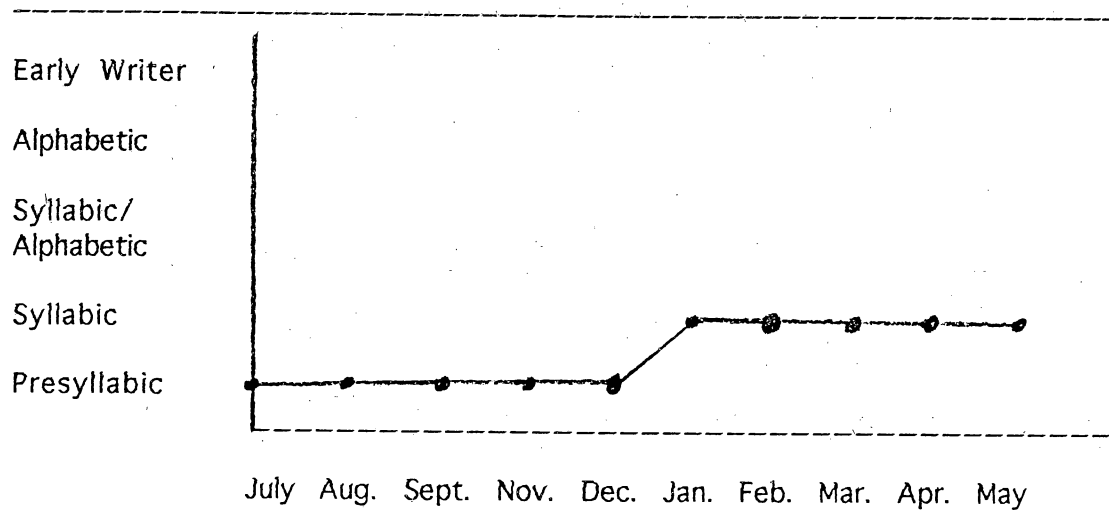
ANIR

¿Qué color es la luna?

ARNIC

Figure 29

Literacy Growth of David Cabrera



Summary of Students without Parent Volunteers

As with the previous group of students, each stage has been given a numerical value of one to five for the quantitative analysis of the data collection. During the eleven months of data collection all students show growth in the writing process, (See Table 2). This table shows the beginning and ending numerical value of each stage that each subject attained and the difference between initial and final stages.

Krystal achieved the most growth by reaching the early writer stage. There is a difference of a positive four (+4) between the initial and final stages. Nancy is working in the alphabetic stage, thus showing a difference of a positive three (+3) between the initial and final stages. Dania and David show the least amount of growth, reaching the syllabic stage. This is a difference of a positive one (+1) between the initial and final stages.

Table 2

Literacy Growth of Students without Parent Volunteers

| Student | Initial Stage | Final Stage | Difference |
|----------------|---------------|-------------|------------|
| Krystal Corona | 1 | 5 | +4 |
| Nancy Vaca | 1 | 4 | +3 |
| Dania Partida | 1 | 2 | +1 |
| David Cabrera | 1 | 2 | +1 |

Results

How does parent volunteering in the classroom influence a child's literacy growth through interactive journals? In the quantitative analysis of the two groups, one can note that the students with parent volunteers reached an average score of four. This score was obtained by adding the numerical values of each stage, which totaled sixteen. This number was then divided by four, which corresponds to the number of participants in the study. Thus, achieving an average score of four, which corresponds to the alphabetic stage.

The students without parent volunteers reached an average score of 3.25, which was obtained by adding the numerical values of each stage, which totaled thirteen. This number was then divided by four, the amount of participants in the study. This an average score of 3.25 was reached, which corresponds to the syllabic/alphabetic stage.

Based on the quantitative data a student attains greater written growth when a parent volunteers in the classroom than the student who does not have a parent volunteer. This is determined because the alphabetic stage is higher than the syllabic/ alphabetic

stage. Thus, the results suggest that the students with parent volunteers showed greater literacy growth than the students who did not have their parents volunteering in the classroom.

When comparing the qualitative data collected there are differences found between the two groups. Those subjects with parent volunteers wrote sentences that were more complex and longer. For 75% of the subjects, an adult could read what was written without the child's mediation. These children could use the phonetic hypothesis to write with accuracy and left proper spacing between their words. The one child who was unable to accurately identify letter sounds in journal entries was verbally sounding out words as she wrote. Fifty percent of the students with parent volunteers can identify and discuss a mistake in spelling and begin to self-correct their errors. This skill was not seen in the group of students without parent volunteers.

When comparing the group without parent volunteers only 50% of the subjects could write complex and long sentences. As with the other students, the invented spelling was accurate enough to be able to read what these two children wrote, but it was more difficult since neither used proper spacing between words. The remaining

50% of the students were still struggling to write a sound/symbol per syllable and were unable to identify the proper sound for a letter in a word.

These qualitative findings suggest that the subjects with a parent volunteer are further along in the writing process than the subjects who did not have the additional support of a parent volunteer. This is determined based on the percentage of students that were able to write sentences that an adult could read without mediation from the child. Another factor that supports these findings is the ability of discussing and identifying errors made in a journal entry that the students with a volunteer were able to do. This skill was not seen in the journal entries of the students who did not have a volunteer in the classroom.

Chapter Five

Discussion

Interpretation

This study focused on the parent/student groups and their influence on students' interactive journal writing. According to the basis of Cortes' Contextual Interaction Model, a parent worked in the classroom regularly which gave them the opportunity to socially interact with teachers, parents, and other students. Through social interaction in the school context the parent gained insights and knowledge of how their child came to know reading and writing. Based on the data collected, as the parent's understanding of the writing process grew there was a positive effect on the interaction between the child and parent.

While the parent interacted with a variety of people, the student's qualities were also being affected. The child grew through their social experiences between the teacher, students, and other adults. The child's knowledge about written communication will also be affected as they learn another way to convey an idea or thought to another person.

To show that parent volunteering helped a child's writing

growth, this study compared the written language growth of two groups of four students in which one group had a parent volunteer and those who did not have a parent volunteer. The quantitative data was used to clarify written growth based on the characteristics of literacy growth that were organized into five stages and given a numerical value. Based on the quantitative data the students with parent volunteers were writing at the alphabetic stage, which is higher than the syllabic/alphabetic stage achieved by the students without parent volunteers. This result implies that when a parent volunteered in the classroom there was an impact on their child's writing growth. (See Table 3)

Upon interpretation of the qualitative data collected from the student's journal writing differences can be seen even between two students that reached the same stage. The journal entries allowed one to identify the characteristics within a stage that each child has mastered.

For example, when comparing Vivian's and Krystal's April journal entries (see Figure 30) the qualitative differences show that Vivian's mastery of the early writer stage is higher than Krystal's. While both children are using spaces between words Vivian's spaces

Table 3

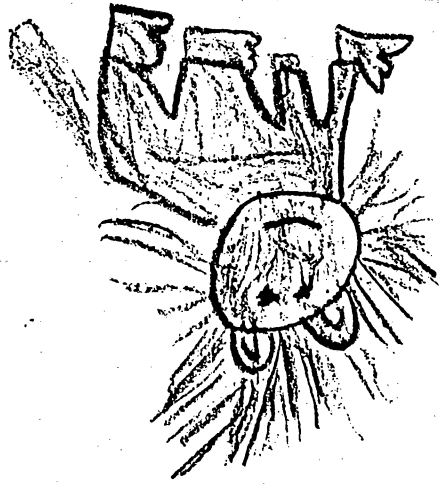
Comparison of Literacy Growth

| Subjects | Numerical Value | Final Stage |
|---|------------------------|---------------------------------|
| Students with Parent Volunteers | 4 | alphabetic |
| Students without Parent Volunteers | 3.25 | syllabic/ alphabetic |

Figure 30

April Writing Samples of Vivian Garcia and Krystal Corona

APR 04 1995



Vivian

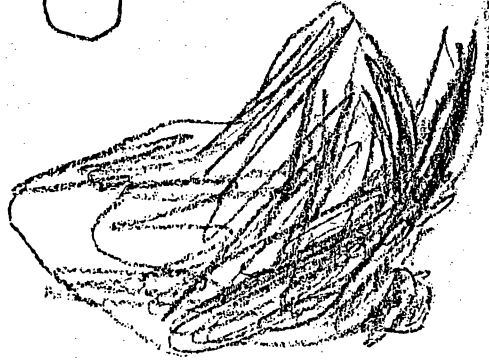
A mi me gusta la

Parte Cyando. Lakerking

Se Pañolashas las.

¿Se mira bonito el Lion King? Si!

APR 04 1995



Krystal

A mi me gusta. Crudo

el negro eso estaba

Para nada. Hay alguien en

tu casa quien ronca? Si, mi Pa pa.

are more distinctive. In future entries Vivian continues to use the spaces while Krystal frequently writes words close together. A major difference is that Vivian has started self-correcting her words when she misspells them, a skill that has not yet been shown by Krystal.

Conclusions

While both groups did make literacy growth, the group who had a parent volunteering in the classroom showed greater growth than the group who did not have a parent volunteering in the classroom. As previously mentioned, the quantitative data showed a .75 difference between the two groups, which can be significant when one analyzes the level each group attained with the stages. The group of students that were working in the syllabic/alphabetic stage were at the very beginning of mastery of this stage. It is during this stage that the child comes to know the phonetic hypothesis which is a key factor in the writing process. Since the group with parent volunteers had mastered this skill, and were working in the alphabetic stage, they were able to write with more clarity and complexity. Based on this result one can conclude that when a parent volunteered in the classroom it had a positive effect on the

child's writing growth.

This is further supported in the qualitative analysis of the results. As seen when examining the qualitative characteristics of Vivian's and Krystal's writing growth it becomes apparent that the differences within a stage can be significant. Krystal needs to master skills that Vivian has already come to know within the early writer stage. It can be concluded that the qualitative differences between the two groups showed a positive effect on a child's writing growth when they had a parent volunteering in the classroom.

Implications

These conclusions showed that literacy growth was facilitated when a parent volunteered in the classroom. Based on these conclusions drawn from the results we may speculate that students do better in interactive journals when their parent volunteers, than when they do not volunteer. This positive correlation between parental involvement and literacy growth implies that as educators we need to involve parents as much as possible in the educational process. If a parent is unable to spend the time as a volunteering in the classroom, then alternative methods of involvement can be

suggested that would encourage the parents to support what is being taught in the classroom.

While there was a positive effect of volunteers on their child's writing growth, one needs to keep in mind the data collected on Krystal who was able to achieve the early writer stage without a parent volunteer in the classroom. Vivian was able to benefit by her mother working with her in the classroom, whereas Krystal's major writing interaction was with the teacher. This brings to focus the role of the teacher and the difference a teacher can make in a child's literacy growth. While Krystal had strong support from home, her writing growth seemed to have been facilitated through the interactions she had with the classroom teacher.

In summary, while writing growth is facilitated through interactions between the teacher and the student, when one gets the parents to become more involved in the writing process it was shown that there was a greater impact on a child's writing growth than when the parent did not volunteer.

Appendix A

Writing Samples of Diana Macias

Journal Entries of Diana Macias

August 15, 1994 & September 07, 1994

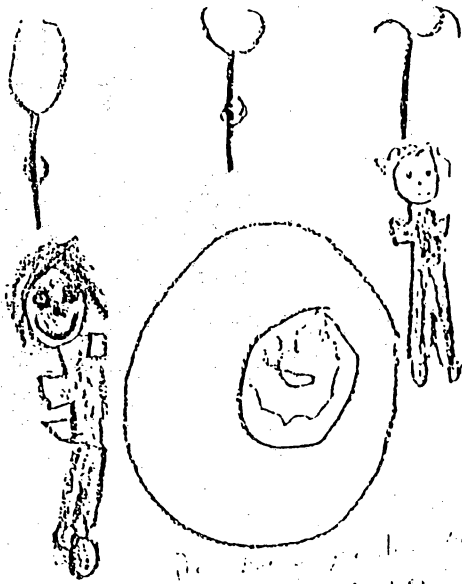
AUG 15 1994

SEP 07 1994

Ami me gusta
compartir que ella
se parece por la voz
y mire Al Parkaño.

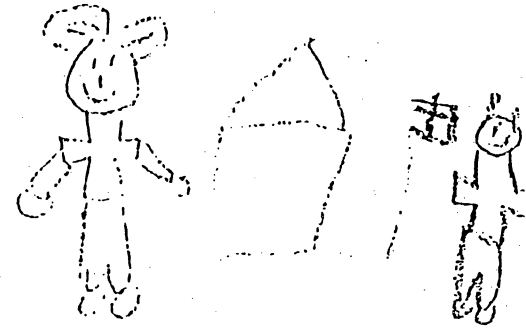
Dio-ha

101



De...
...

Aa m i D
ia m a D p y D



5136pxmi
ГієрБснма
д.ієГмсаHmi

Journal Entries of Diana Macias

November 10, 1994 & December 09, 1994

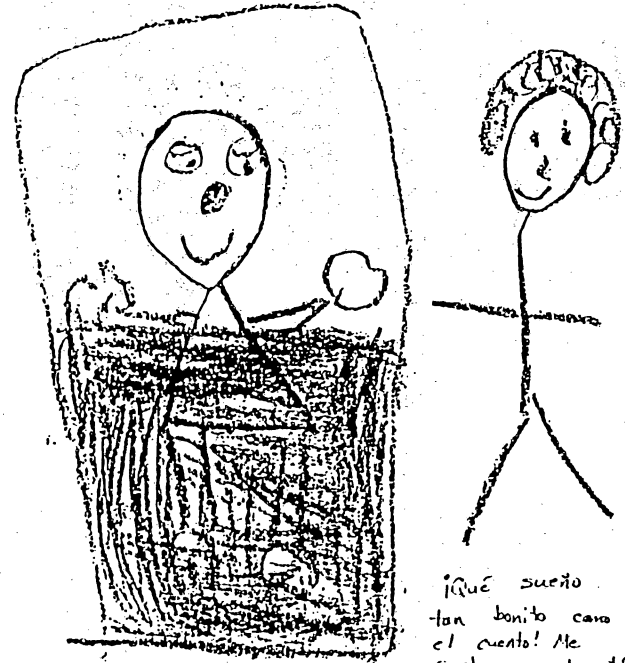
DEC 09 1994

102



A mi me gusta
-tu pavo. Es muy
bonito.

A mi me gusta
el pavo. *OK*



¡Qué sueño
-tan bonito como
el cuento! Me
gusta mucho el
dibujo de la niña
y la mamá.

ENRAISOGV
ERA ESOGV

Journal Entries of Diana Macias

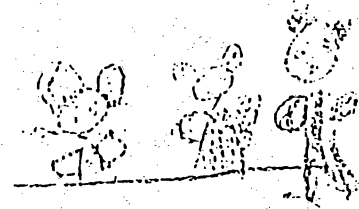
January 06, 1995 & February 22, 1995

JAN 06 1995

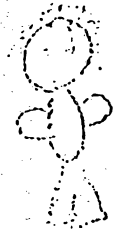


Creo que Santa
te dirá llevo
muchos regalos
porque eres
una niña
linda.

Y
C
O
X
A
S
I
X
I
O



FEB 22 1995



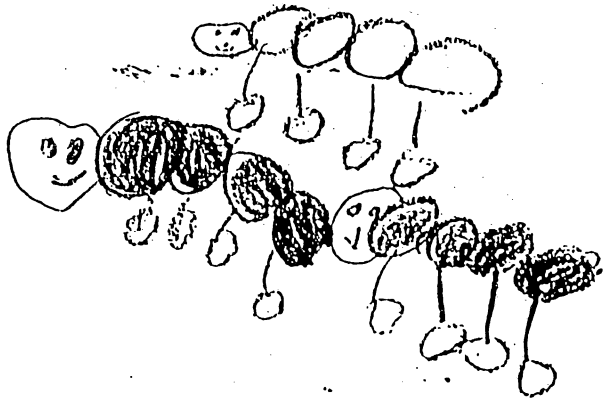
★ la niña creo
★ loo yo
* Y lo que me gusta
tambien me gusta Cordaroy.

Diana

Journal Entries of Diana Macias

March 29, 1995 & April 06, 1995

MAR 29 1995



104

DO NOT WRITE IN THESE SPACES

AMIMEGUSTADA

LOTROR MAMASTVCH

* Odo. Las hormigas marcharon por mucho tiempo.

DO NOT WRITE IN THESE SPACES

AMIMEGUSTADA

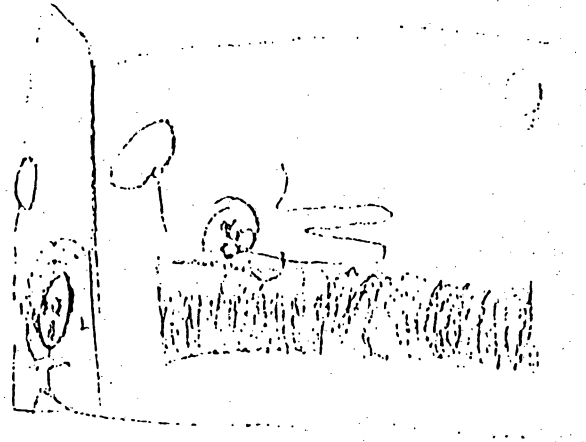
LA YCI SPABAYO

IBUMAMI LA DA PERI
d' la crees que se desmayó de un ...?

Journal Entry of Diana Macias

May 17, 1995

MAY 17 1995



ANMI MPUS

TA SADA

el niño se da un

de un niño se da un

Appendix B

Writing Samples of Angel Salazar

Journal Entries of Angel Salazar

July 12, 1994 & August 15, 1994

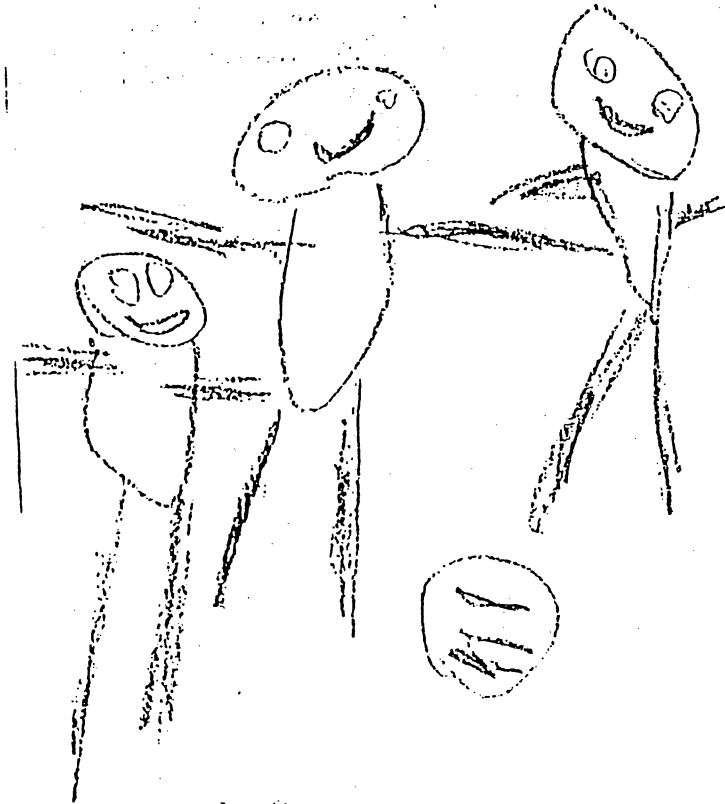
JUL 12 1994



mi familia

Que bueno que tratastes de
escribir "mi familia" con muy
tinitas.

AUG 15 1994



mi familia

Journal Entries of Angel Salazar

September 28, 1994 & November 09, 1994

SEP 28 1994

NOV 09 1994

A mi me
gusta tu
huevo.



Amimeu



O o o g

r q s

q m m g

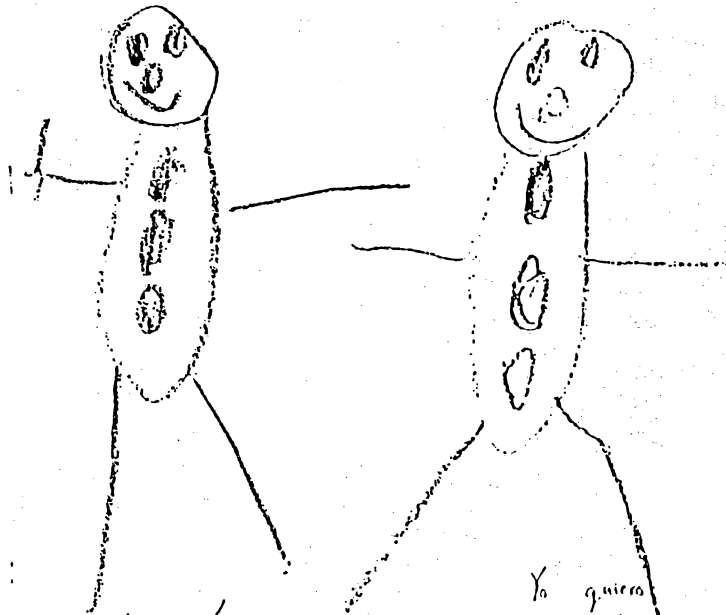
A mi me gusta
como escribistes
que tu le das gracias
A tu papá porque te
saco a todas partes

Journal Entries of Angel Salazar

December 09, 1994 & January 11, 1995

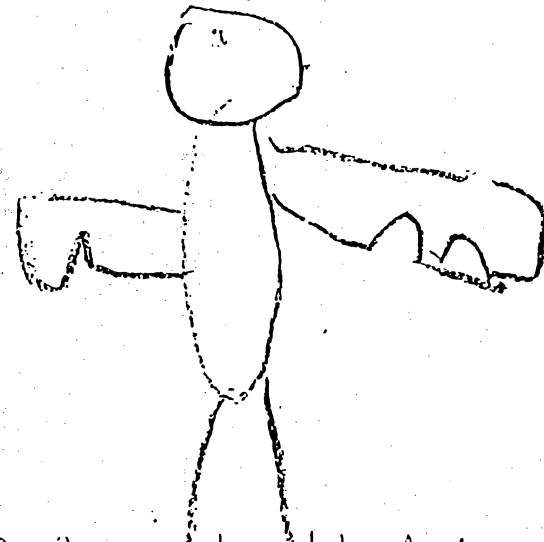
JAN 11 1995

12/9/94



L.M.
A.M. & A.T.A.
9/90

Yo quiero
ir tambien
al país de
dulce como
Maria.



AMILLINT
CGATEL

A mi me gusta tambien
cuando los pinguinos estaban
jugando en la nieve.

Journal Entries of Angel Salazar

February 15, 1995 & March 28, 1995

FEB 15 1995

MAR 28 1995

110

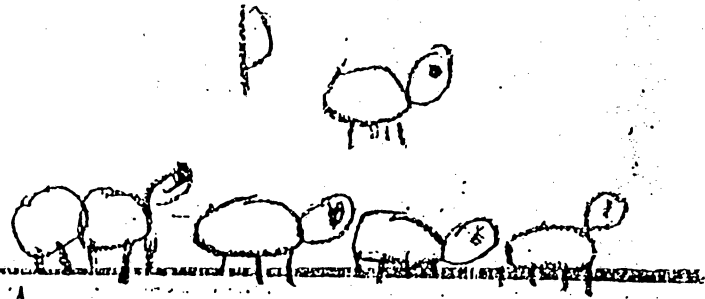


P l o a o s o c D h H g a

R E Q S T n c R o y r a b

A * b e a I U F a s

A mi me gusta
to la niña to kvo-
asa porque Cordaroy va tiene en bogar.



A * A mi me gusta

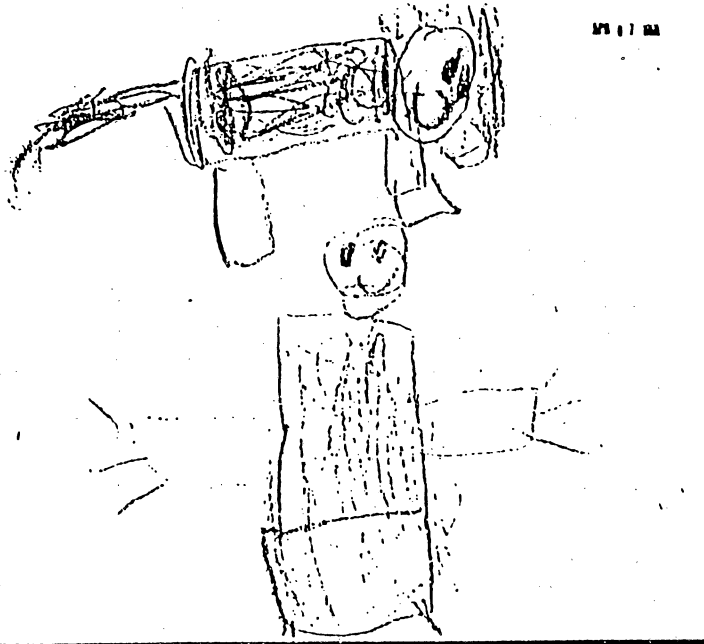
A * La pira nicherona - 2

A * A mi me gustan las hormigas.

Journal Entries of Angel Salazar

April 07, 1995 & May 15, 1995

111

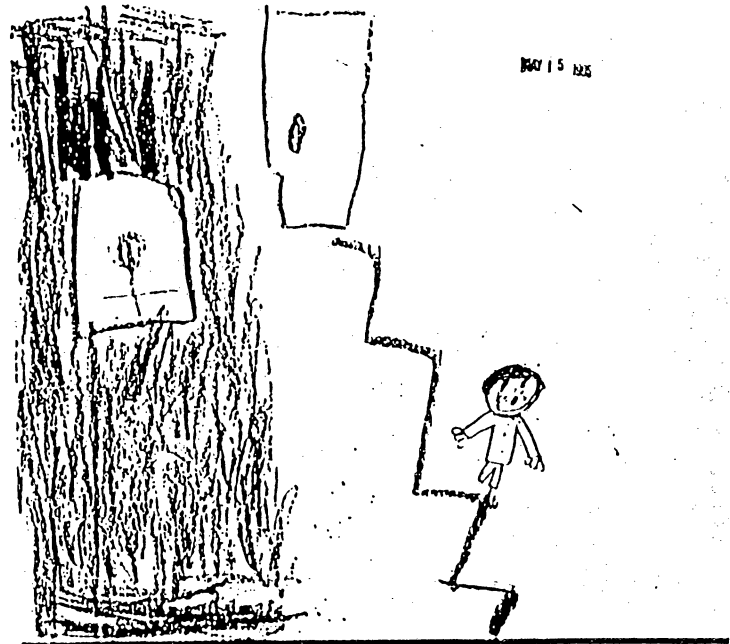


A mi me gusta cuando

Timon gimpi teatrar

don buenos amigos a los di

APR 07 1995



A mi me gusta cuando

supo, asucuarto

me gusta cuando se va a su
cuarto?

MAY 15 1995

Appendix C

Writing Samples of Jennifer Rodriguez

Journal Entries of Jennifer Rodriguez

July 15, 1994 & August 31, 1994

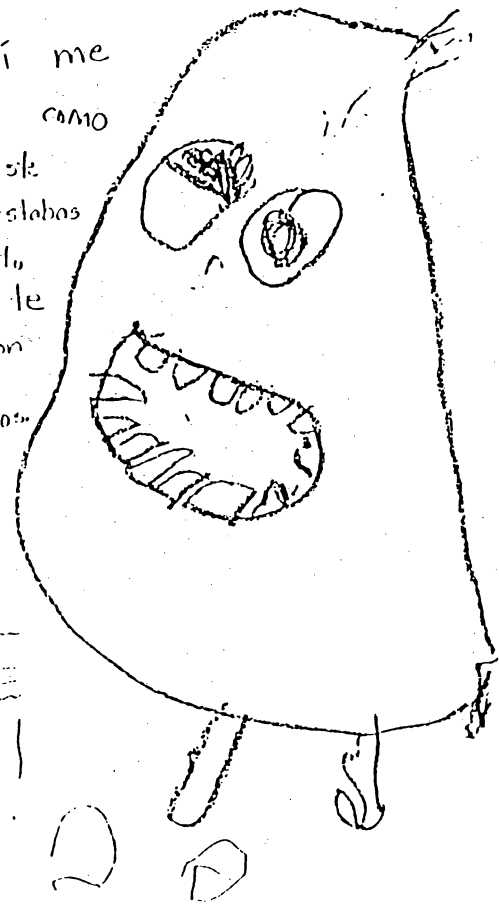
JUL 15 1994

A mi me gusta
tus dibujos etc
su familia.



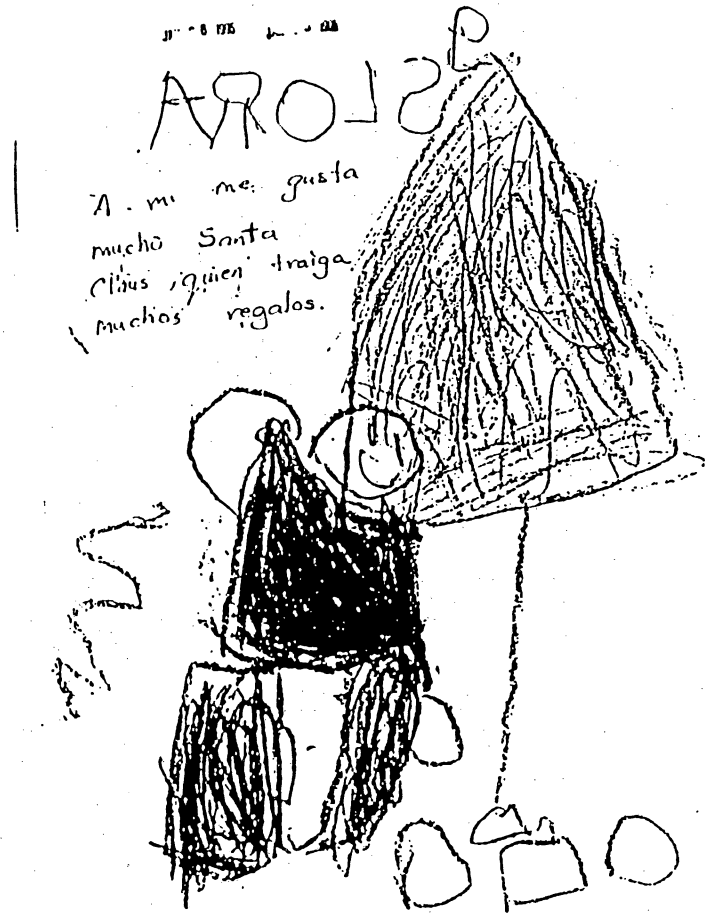
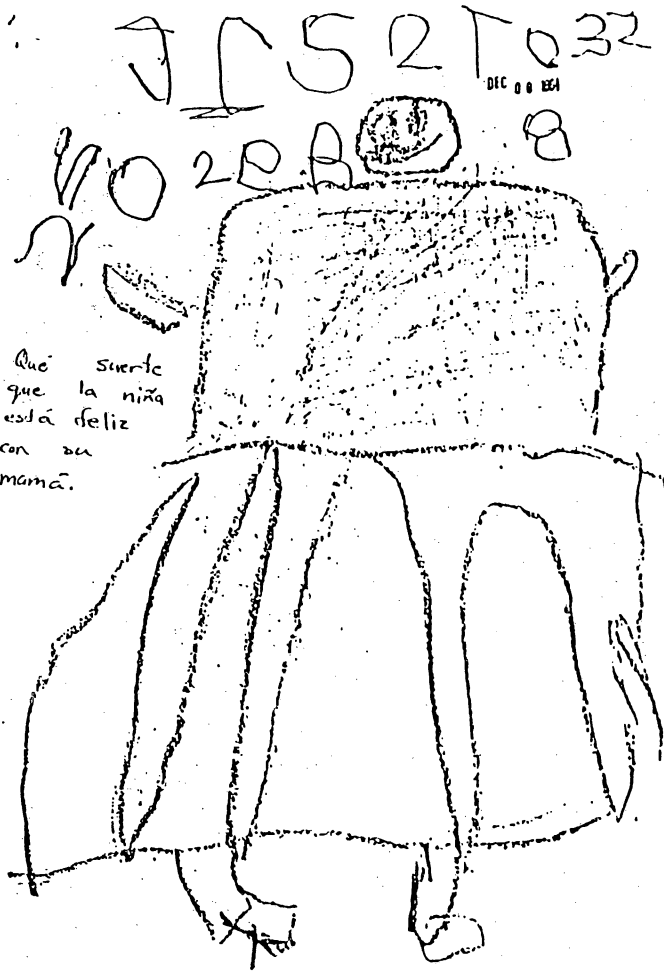
AUG 31 1994

A mi me gusta como
escribiste
que estabas
gritando
porque te
asustaron
los
changitos.



Journal Entries of Jennifer Rodriguez

December 09, 1994 & January 06, 1995

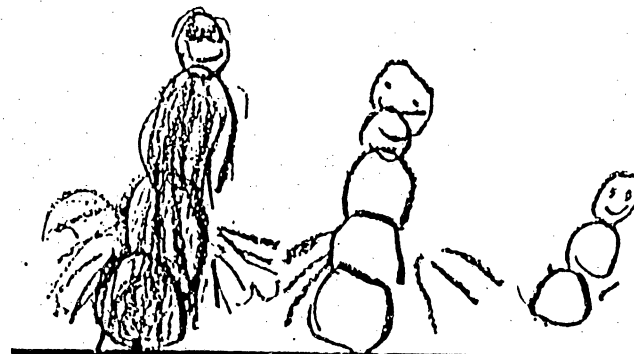
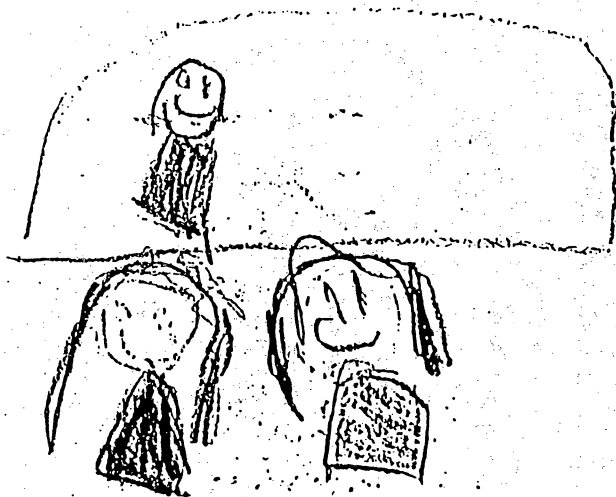


Journal Entries of Jennifer Rodriguez

February 16, 1995 & March 30, 1995

FEB 16 1995

MAR 30 1995



116

* A los estudiantes

* les enseñé

* Pero la niña va a regresar.

A mi me gusta bailar.

BAN AÑADIRAS

NOTA SADOGRAS

A mi me gusta bailar.

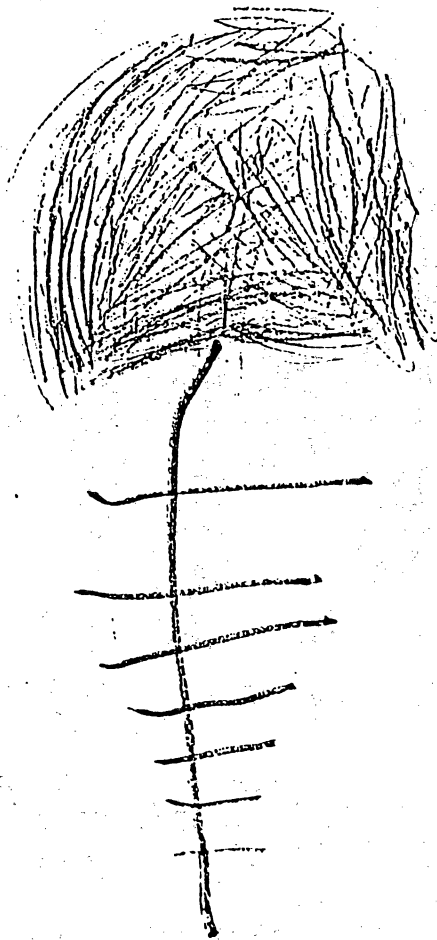
Journal Entries of Jennifer Rodriguez

April 03, 1995 & May 18, 1995

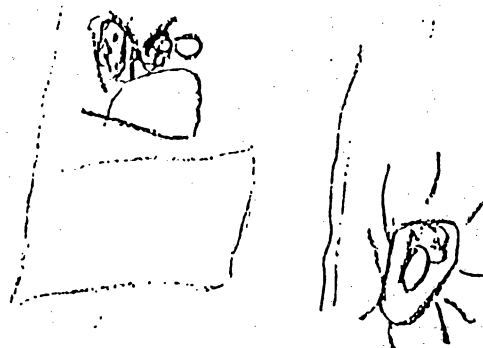
MAY 18 1995

APR 03 1995

117



Handwritten scribbles or notes, possibly including the word 'CANTON'.



AMENSKLQAMN
SWANIBMABML
HUBSUMA

Small, faint handwritten text at the bottom of the page, possibly a signature or a note.

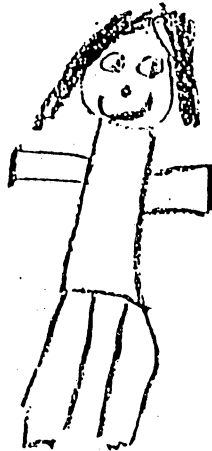
Appendix D

Writing Samples of Vivian Garcia

Journal Entries of Vivian Garcia

July 19, 1994 & August 28, 1994

JUL 19 1994



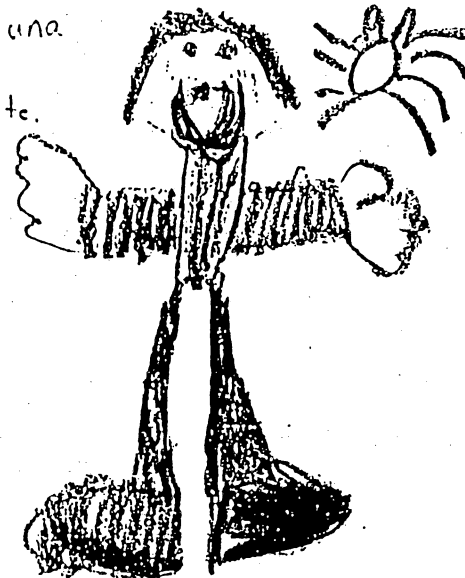
EAOFFP.

Me gusta como escribiste
que estas jugando con tu
mamá y la pelota.

EVOGBL

AUG 28 1994

A mí me gusta
tu dibujo y lo
que escribiste que
hay una
araña
subiendote.



Journal Entries of Vivian Garcia

September 21, 1994 & November 09, 1994

27 11 94

09 09 94

Viendo a los
XOUDO de la familia

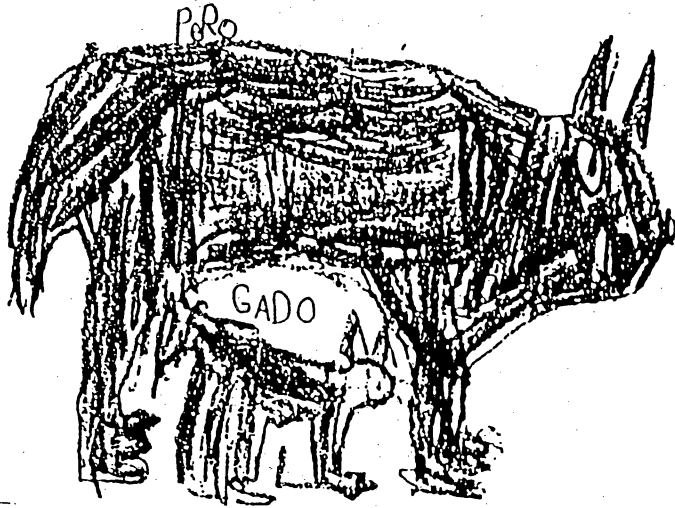
JOLED

GrSA

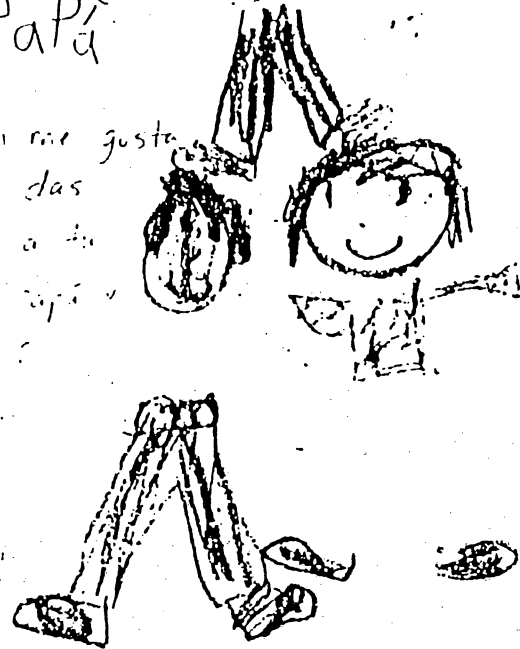
AM
Papá

AMIMBIGPRO I EN GAO

120



Si me gusta
me das
muñecas a tu
papá



Journal Entries of Vivian Garcia

December 08, 1994 & January 06, 1995

DEC 08 1994



No gusta
este parte
tambien. Espero
que un dia
mi principe
venga.

A mi me gusta
el abuelo, este

JAN 06 1995



A mi
me gusta
stayn
arbol.

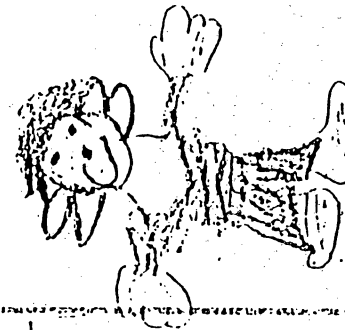
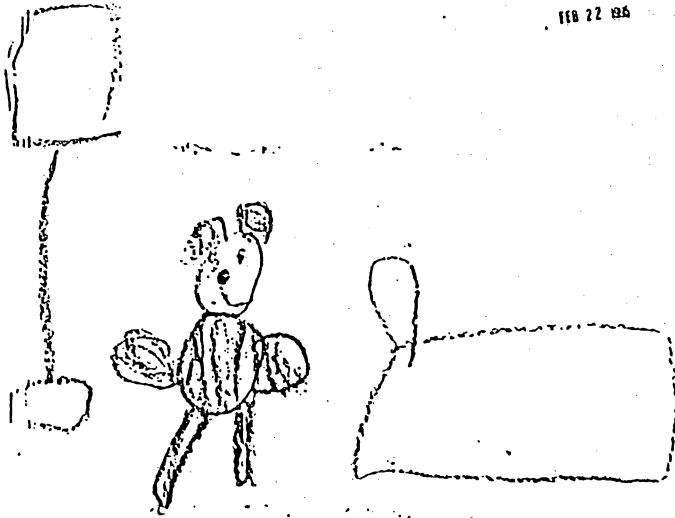
Mi árbol que
estaba en
Michigan era
pequeño, pero
bien bonito.

Journal Entries of Vivian Garcia

February 22, 1995 & March 02, 1995

MAR 02 1995

FEB 22 1995



122

★ A mi mamá

★ ¿Puedes subir a la cama

tuya? Si

★ El Niño está por

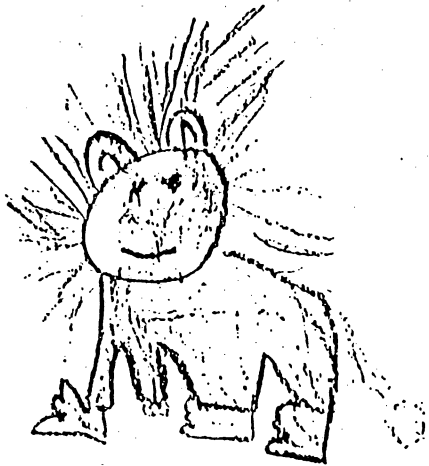
★ Mido.

Que bonito está el niño.

Journal Entries of Vivian Garcia

April 06, 1995 & May 17, 1995

123

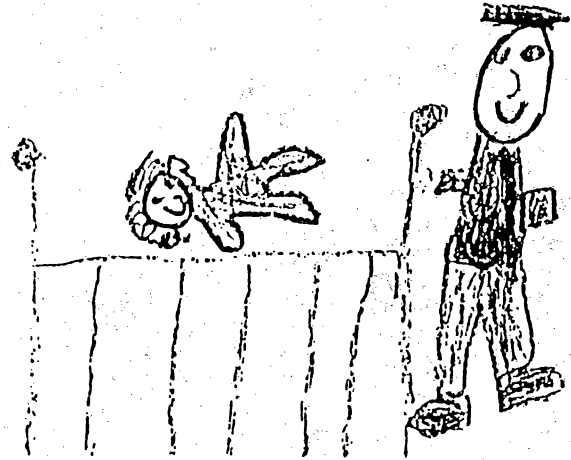


A mi me gusta la

parte cuando le ven King

Se Pañalasta la

¿Se mira bonito el Lion King? Si



A mi me gusta

la parte cuando el

Papá García la

niña

Appendix E

Writing Samples of Krystal Corona

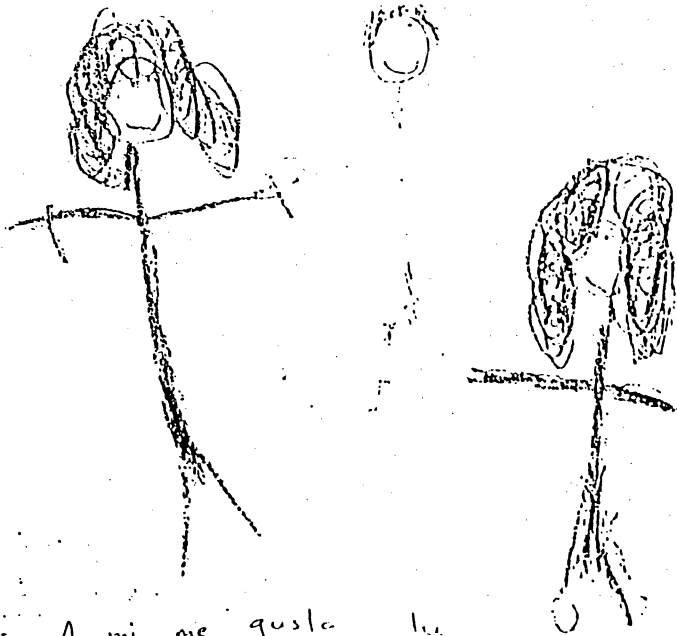
Journal Entries of Krystal Corona

July 13, 1994 & August 30, 1994

JUL 13 1994

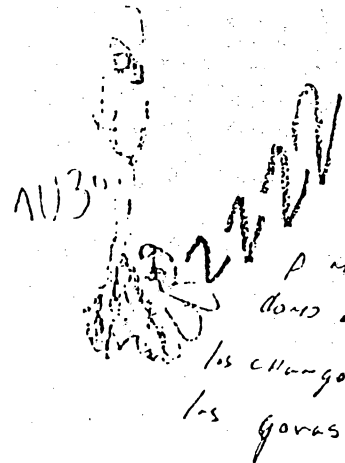
AUG 30 1994

125



A mi me gusta la familia. Es bonita.

[Handwritten signature]



11/3

A mi me gustan los dibujos que los chicos agarraron los gorras.

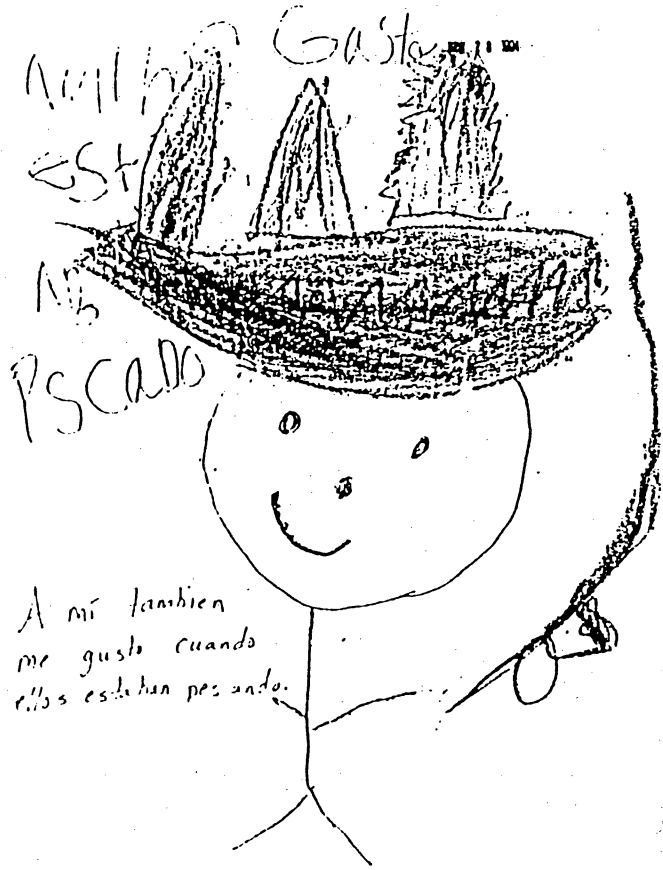
Journal Entries of Krystal Corona

September 22, 1994 & November 28, 1994

CAVALLS

SEP 22 1994

A mi me gustan los
caballos cuando
están comiendo.

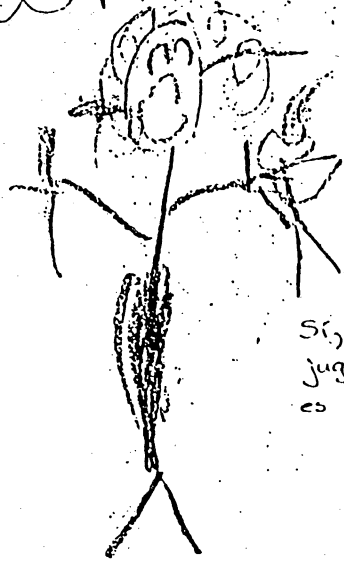


Journal Entries of Krystal Corona

December 09, 1994 & January 12, 1995

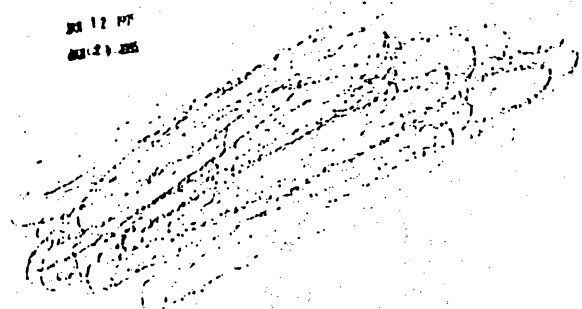
127

DEC 09 1994
A mi mamá
le gusta
taller
una
teta



Sí, mi mamá el
jugete... del partido
es muy bonito.

JAN 12 1995



Yo me gusto
cuando el señor
estaba ayudando
a los
pequinos.



Yo
me
gusto
cuando
el señor
estaba
ayudando
a los
pequinos.

Journal Entries of Krystal Corona

February 16, 1995 & March 30, 1995

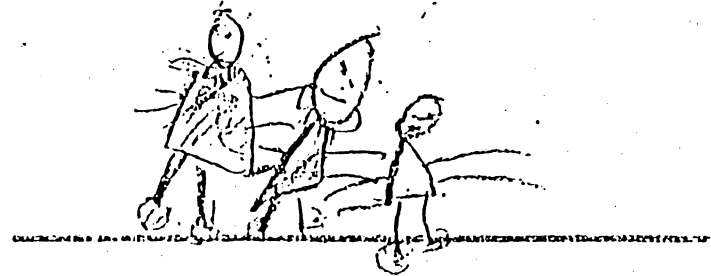
MAR 30 1995

FEB 16 1995

128



el oso esta en
la ascensor. Va a subir
a otro piso.



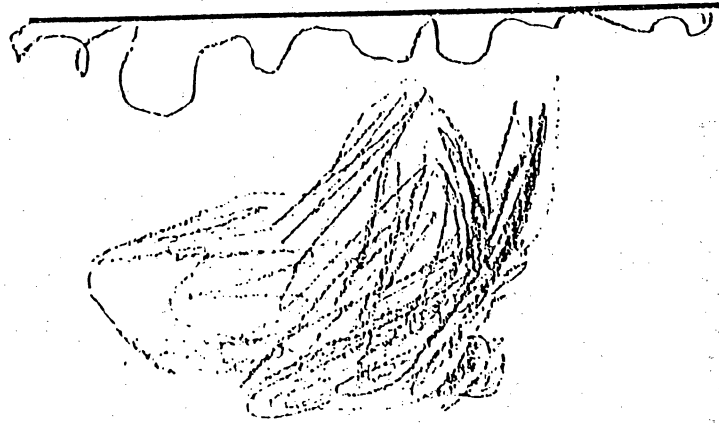
A mi me gusta a las
orugas estan a fier
* marchando. A ti te gusta
marchar a correr? calli

Journal Entries of Krystal Corona

April 04, 1995 & May 23, 1995

WAPA 053

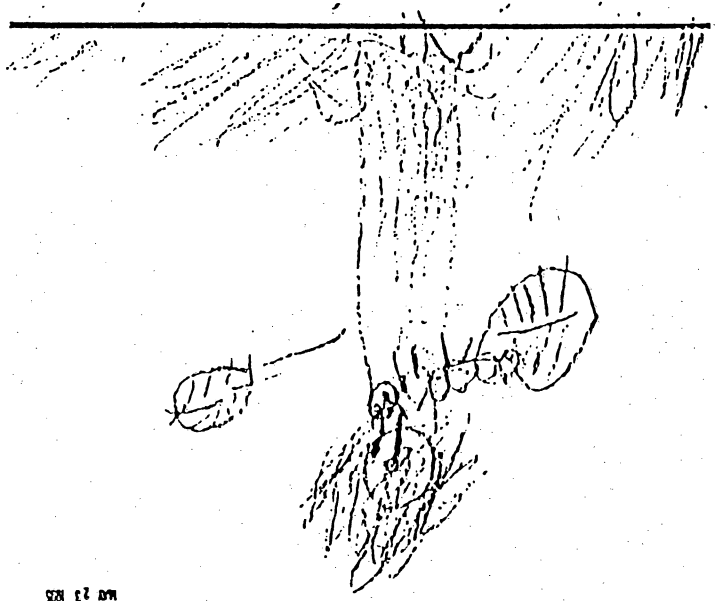
WAPA 053



A mi me gotha. Gwath.

A. Negro 150 est. m.

Carra Ma. Ilay. Objen en
tu casa quien rorred. 21. 6/11/95.



A mi me gotha.

(Cavador) LINTINSEI |

cuise
CANTINERNAHAY.
?tu comes las hojas? No. Ke. como

Appendix F

Writing Samples of Nancy Vaca

Journal Entries of Nancy Vaca

July 13, 1994 & August 30, 1994

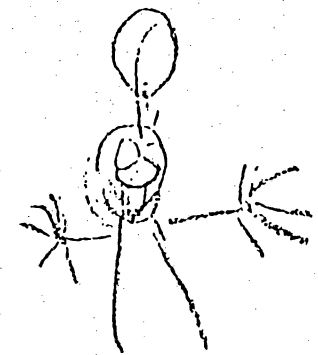
JUL 13 1994

AUG 30 1994

131



Me gustan como escuchas
 Yo quiero a mi familia



Me gusta dibujar
 y que el señor
 este quitando gente
 de la ciudad

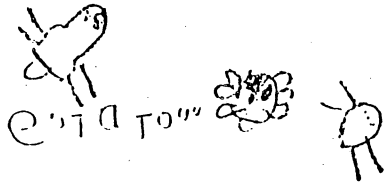
Journal Entries of Nancy Vaca

September 13, 1994 & November 14, 1994

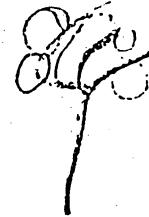
no subir escribir

NOV 14 1994

SEP 13 1994



A mi no gustó lo que
escribiste pero más me
gustó cuando su. uocino
te ruego los animales.



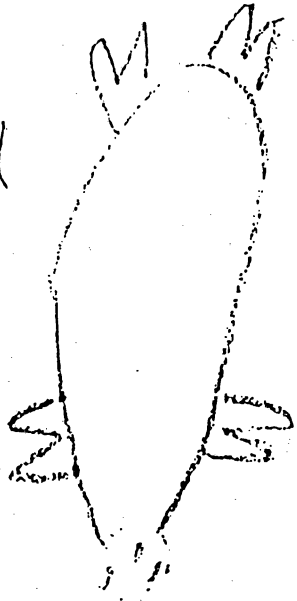
Si, las hojas
se caen a
la zacate.

Animales justos mic.

December 09, 1994 & January 11, 1995

AMIM GQSTK
CQANDD
NOME
ICIA
EL
PIN

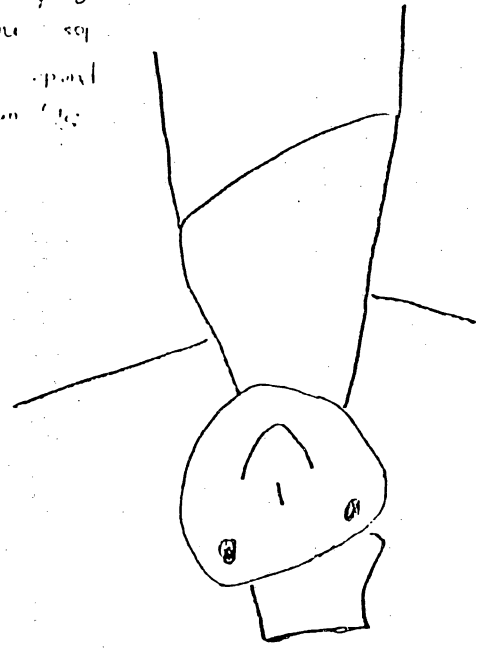
Si mijas
los pinguinos
jugan y nadan
hoyitos cuando
están en el
agua.



DEC 11 1994

AMIM GQSTK
(UANO

Si un pinguino
puede hablar
los niños le
quiere mucho a
los amigos.

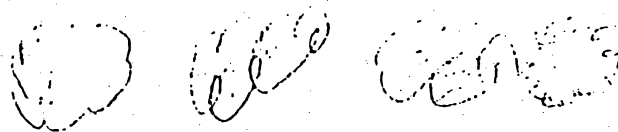


DEC 11 1994

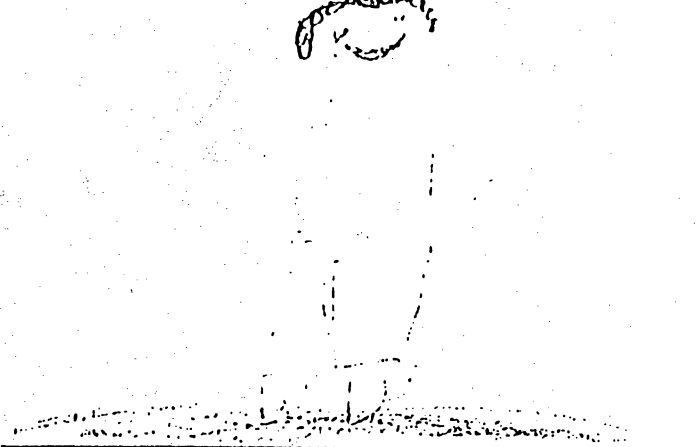
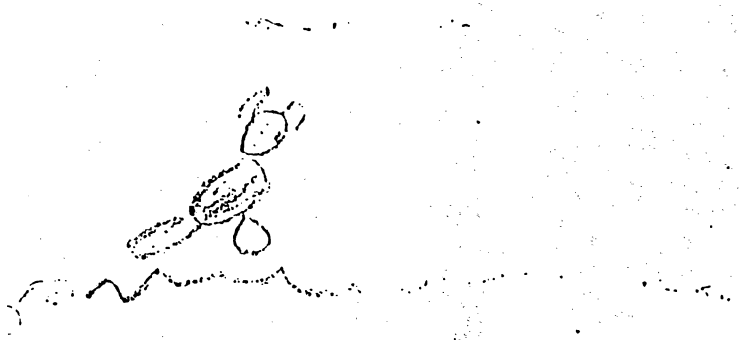
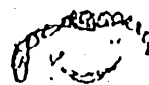
Journal Entries of Nancy Vaca

February 22, 1995 & March 31, 1995

FEB 22 1995



MAR 31 1995



134

★ AMI MICOPTO.

A TIME GILG + N. W. W. W.

★ EL OSO

D. O. F. H. O. F. U. F. P. N. O.

Me gusta el oso.

¿Has visto a una morsa? Sí

Journal Entries of Nancy Vaca

April 06, 1995 & May 30, 1995

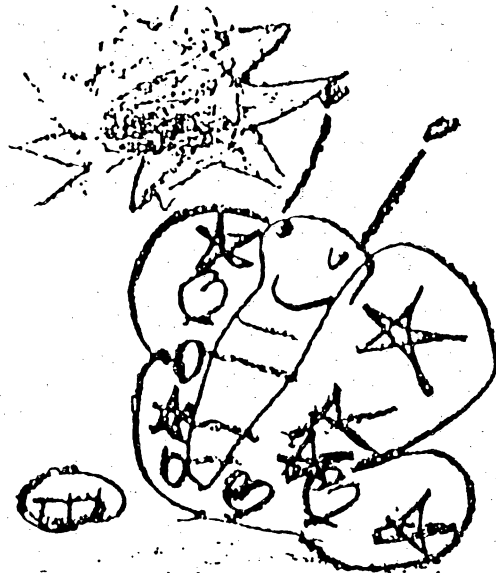
1995



A mi me gusta cuando

El cerpo sale a jugar

Kenovino de las partes que hacen ruido en su caleta



A mi me gusta

cuando

La Mariposa se
Salio Del capullo.

Appendix G

Writing Samples of Dania Partida

Journal Entries of Dania Partida

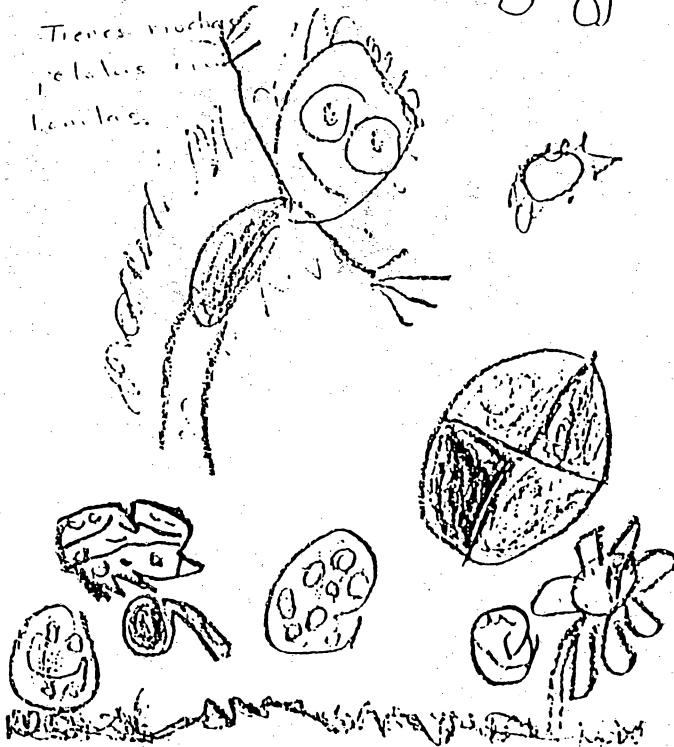
August 15, 1994 & August 30, 1994

AUG 15 1994

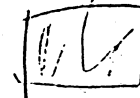
Dania

partida

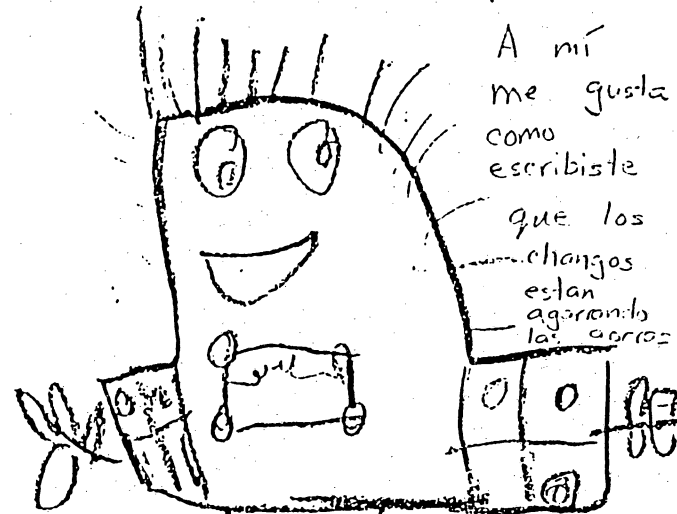
Tienes muchas
pelotas
bambas.



AUG 30 1994



A mí
me gusta
como
escribiste
que los
cambios
están
agarrando
los años



T A D
T A M O S O

Journal Entries of Dania Partida

September 29, 1994 & November 28, 1994

SEP 29 1994



Una manoposa
esta sacando del
huevo

E I H L S O I E F
A A A A I M M F E
a n a i B B A A A A P

138

NOV 28 1994



Que bonito es
acurrar a un
bebé para que
se duerma.

RHKOIDUzd
FI.AOH TmHiv

Journal Entries of Dania Partida

December 09, 1994 & January 18, 1995

139

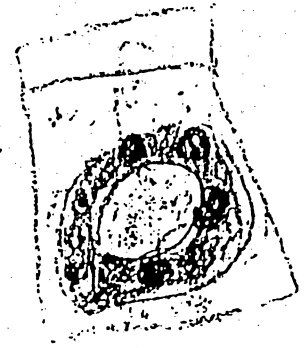


• VQKAIOZSE
• UBY + LMIMI
• RAOSPOSTICA
• N SHIKAKMEKUC
• TAMKEFIOR

Jan 18 1995

• GATKRESOOQ
• Rnaore+Pvin

Yo creo que
es muy triste
cuando alguien
se muere.



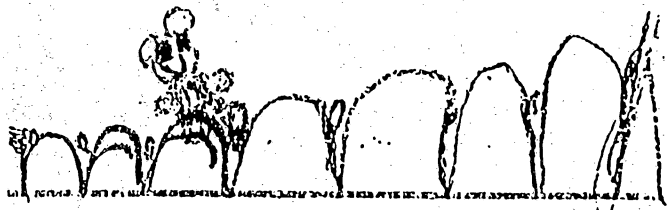
Journal Entries of Dania Partida

February 21, 1995 & March 09, 1995

FEB 21 1995

MAR 09 1995

140



DIUA OMI + OPI

El policía era

simpático.



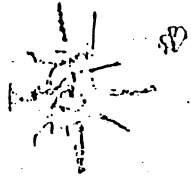
I will love you for ever Ali

Adriana always my dear

Tu mamá también te quiere
mucho a ti!

Journal Entries of Dania Partida

April 05, 1995 & May 22, 1995



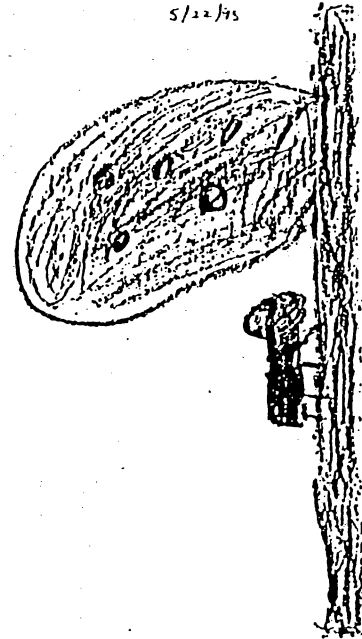
APR 05 1995



Anirpeoñdas.

A mi me gusta tú
* familia de pingüinos.

5/22/95



Móli f' t' Amwóñxc

... que yo ella tenía hambre.

Appendix H

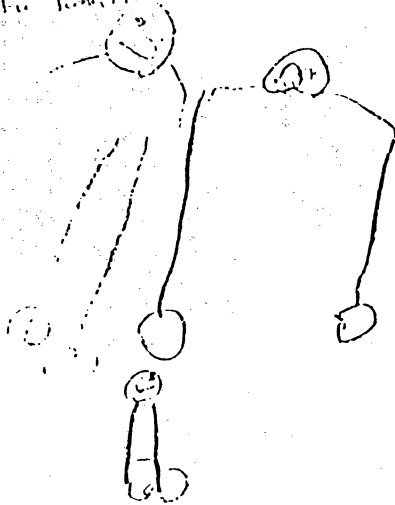
Writing Samples of David Cabrera

Journal Entries of David Cabrera

July 15, 1994 & August 24, 1994

TEOAO

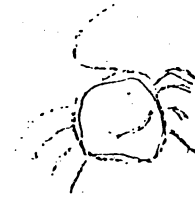
Me gusta como
escribiste "David"
y tu familia.



JUL 15 1994

AUG 24 1994

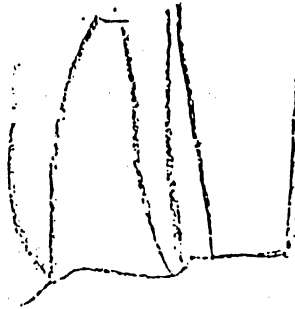
David



A mí
me gusta
como escribiste
la araña.

Journal Entry of David Cabrera

September 28, 1994



SEP 28 1994

Gracias Mpio

A mi me gustó lo que
escribiste que el caballo
vive en la granja.

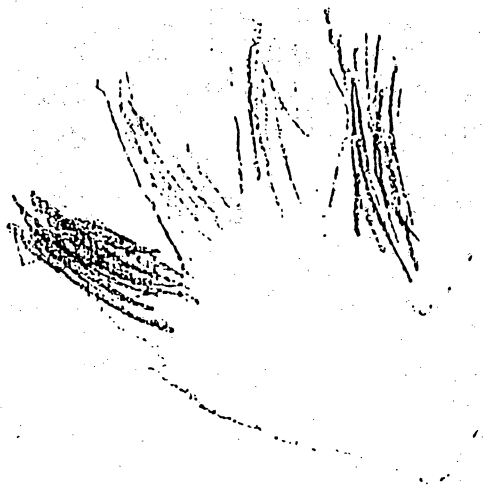
Journal Entry of David Cabrera

November 10, 1994

11/10/94

David

Para para la
misma es el tuyo



NOV 10 1994

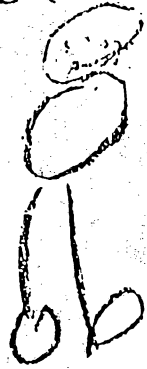
A mi
mami Sta
mipavo.

Journal Entries of David Cabrera

December 09, 1994 & January 12, 1995

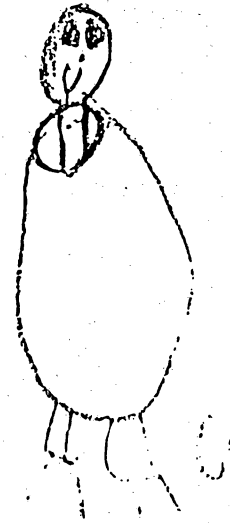
David

DEC 09 1994



WALICOP
AICOPAR

JAN 12 1995



A éluc estaba
haciendo el
pejuino cuando
se metió al
agua?

oe E PK i
E PK P O

Si la corona
era muy linda.

Journal Entries of David Cabrera

February 21, 1995 & March 27, 1995

118 21 125

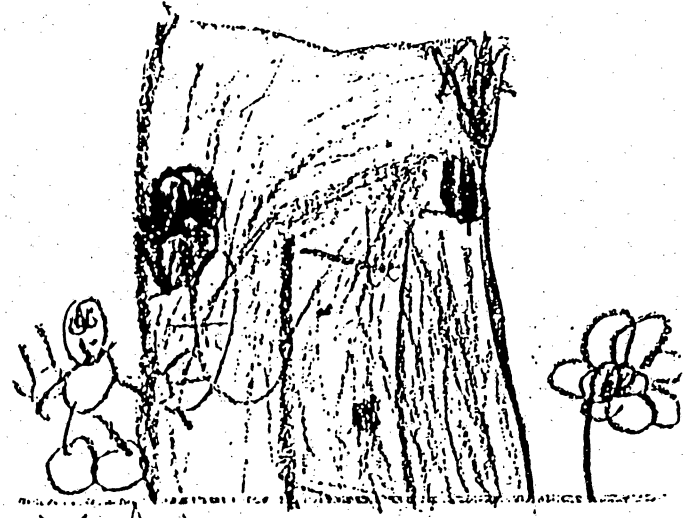
3-27-95

147



★ Dia Domingo
★ El oso se va a quitar

el botón.



★ A a e e e e e e e e
★ E e e e e e e e

A mi me gusta la
playa.

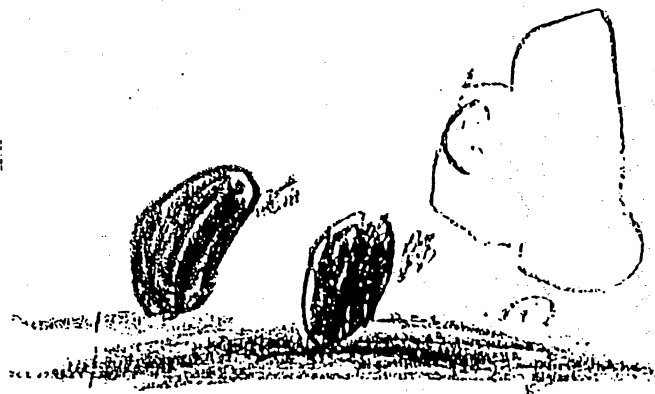
Journal Entries of David Cabrera

April 05, 1995 & May 22, 1995

APR 05 1995

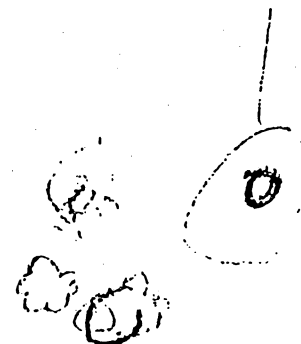
MAY 22 1995

148



BIRO AVBPBIA

Yo tengo miedo de
los tiburones.



LITFEFOSA

ARIR

¿Qué color es la luna?

ARNIC

References

- ✓ Auerback, Elsa Roberts. (1989). Toward a social-contextual approach to family literacy. Harvard Educational Review, 59(2), 165-181.
- ✓ Batzle, Janine. (1992). Portfolio Assessment and Evaluation. Cypress California: Creative Teaching Press. Chall, J. S. & Snow, C. (1982). Families and Literacy: The contributions of out of School Experiences to Children's Acquisition of Literacy. A final report to the National Institute of Education.
- ✓ Cortes, Carlos E. (1986). The education of language minority students: A contextual interaction model. In State Department of Education (Ed.), Beyond Language: Social & Cultural Factors in Schooling Language Minority Students. Evaluation, dissemination and assessment center, Cal State University, Los Angeles: Los Angeles, CA (pp. 3-33).
- ✓ Delgado-Gaitan, C. (1987). Mexican Adult Literacy: New Directions for Immigrants. In S. R. Goldman & K. Trueba (Eds.), Becoming Literate in English as a Second Language (pp. 9-32). Norwood, NJ: Ablex.
- ✓ Delgado-Gaitan, Concha. (1992). School matters in the Mexican-American home: Socializing children to education. American Educational Research Journal, 29(3), 495-513.
- Dyson, Anne Haas. (1989). Multiple Worlds of Child Writers: Friends Learning to Write. New York: Teachers College Press.
- Farris, Pamela J, & Denner, Mary. (1991). Guiding illiterate parents in assisting their children in emergent literacy. Reading Horizons, 32(1), 63-72.
- ✓ Ferreiro, E. (1986). Literacy Development: Psychogenesis. In Y.M. Goodman (Ed.), How Children Construct Literacy (pp. 12-25). International Reading Association: Newark, Delaware.

- ✓ Flores, Barbara M. (1990). Proceedings of the first research symposium on limited English proficient students' issues. Office of Bilingual Education & Minority Language Affairs.
- ✓ Flores, Barbara. (1990). The sociopsychogenesis of literacy and biliteracy. Paper presented at the International Reading Association Conference, Atlanta, GA.
- Fox, Jim. (1993). The wrong whipping boy. Phi Delta Kappan, 75(2), 118-19.
- France, Mary Carolyn G., & Hager, Jane Meeds. (1993). Recruit, respect, respond: A model for working with low income families and their preschoolers. Reading Teacher, 46(7), 568-72.
- ✓ Fuentes, Luis. (1986). The parent-school partnership and Bilingual Education. Interracial Book for Children Bulletin, 17(3), 20-21.
- Garton, Alison F. (1992). Social Interaction and the Development of Language and Cognition. Hove: UK, Hillsdale: USA.
- ✓ Goodman, Yetta M. (1986). How Children Construct Literacy: Piagetian Perspective. Newark, Delaware: International Reading Association.
- ✓ Goodman, Y.M. (1994). Children Coming to Know Literacy. In W.H. Teale & Sulzby, E. (Ed.), Emergent Literacy: Writing and Reading (pp. 1-14). Norwood, New Jersey: Ablex Publishing Corporation.
- ✓ Mooney, Margaret. (1990). Reading to, with, and by Children. Katonah, New York: Richard C. Owen Publishers, Inc.
- Palincsar, A.S., & Klenk, L. (1992). Fostering literacy learning in supportive contexts. Journal of Learning Disabilities, 25(4), 211-225,229.

- ✓ Pontecorvo C., & Zucchermaglio C. (1986). A Passage to Literacy: Learning in a Social Context. In Y.M. Goodman (Ed.), How Children Construct Literacy (pp. 59-98). Newark, Delaware: International Reading Association.
- ✓ Ramirez, David. (1990). Efforts to help parents of LEP students take many forms. Bilingual Education Office Outreach, 1(3), 8-14.
- Rasinski, Timothy., & Fredericks, Anthony D., (1990). The best reading advice for parents. Reading Teacher, 43(4), 344-45.
- ✓ Rosenbusch, Marcia H. (1987). Foreign Language Learning and Children: The parental role. Eric Clearing House on Languages and Linguistics. Washington D.C.
- Salend, S.J., & Schliff, J. (1988). The many dimensions of homework. Academic Therapy, 23(4), 397-404.
- ✓ Storm, Robert. (1984). The home-school partnership: Learning to share accountability. Clearing House, 57(7), 313-17.
- Teale, William H. and Sulzby, Elizabeth. (1994). Emergent Literacy: Writing and Reading. Norwood, New Jersey: Ablex Publishing Corporation.
- Teberosky, A. (1986). The Language Young Children Write: Reflections on a Learning Situation. In Y.M. Goodman (Ed.), How Children Construct Literacy (pp. 45-58). Newark, Delaware: International Reading Association.
- Warren, Janet S., Prater, Norma Jean., & Griswold, Diana L. (1990). Parental practices of reading aloud to preschool children. Reading Improvement, 27(1), 41-45.
- Wertsch, James V. (1991). Voices of the Mind. Cambridge, Massachusetts: Harvard University Press.

Relation, by describing to the students that some of their paragraphs contain irrelevant information, that ideas are unrelated to the topic ideas, and that the subject of their writing is not consistent with the focus and purpose of the paper. The last maxim, Manner, can be taught by showing students that some of their sentences in the paragraph do not make any sense. Teachers can ask students to organize ideas in a clear, orderly, and logical manner so that readers can understand what message they are trying to convey without difficulty. All these teaching activities can be done with the help of overhead projectors or by distributing copies of samples of incoherent writing to students and explaining why and how the texts are incoherent. Teachers can also have students sit in groups and assign them to analyze aspects of incoherence in their peers' writing or other writing exercises given by teachers using the guidelines of the *Cooperative Principle's* maxims. This kind of exercise may well be fun as well as challenging for students.

Finally, through the application of the knowledge of the *Cooperative Principle*, students will also be able to write "effective essays" rather than just "grammatically correct essays." Effective essays are ones that guide readers along coherent lines of thought and build, step by step, on shared knowledge to enlarge their readers' understanding.