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LEFT-HANDED TEACHING TECHNIQUES FOR THE RIGHT-HANDED

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

In Partial Fulfillment
of the Requirements for the Degree
Master of Arts
in
Education:
Vocational Education Option

by
Martha Jane Longo-Bartel

June 2000

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June 2000

Approved by:



Joseph A. Scarcella, Ph.D., First Reader

8/15/00
Date



Ronald K. Pendleton, Ph.D., Second Reader

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ABSTRACT

Left-handedness is an invisible handicap in today's classrooms. The education system in the United States makes special considerations and accommodations for the special needs of students, yet left-handed individuals do not receive much consideration in a mainstream classroom. Experts say that up to twenty percent of children in Canada and the United States are left-handed. This project discusses how these left-handed children have to work in a right-handed world. The focus of this study was to provide right-handed teachers with teaching techniques, positive suggestions, and common sense approaches to accommodate the left-handed pupil.

ACKNOWLEDGMENTS

I want to acknowledge the helpful staff and faculty at CSUSB for taking the extra time to work with me in development of this project. In addition, to Professor Joseph Scarcella, Ph.D. of the Vocational Education Program, who showed me the way to do better in education. In addition, to the staff of the CSUSB library, who helped every step of the way.

DEDICATION

Dedicated to my mother, Marilyn Jane Longo, deceased, who encouraged me in my scholastic interests. She adapted her physical world to accommodate her two left-handed daughters. Marilyn was always looking for ways to demonstrate life skills and used a common sense approach to explore the problems of the left-handed.

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CHAPTER ONE:

BACKGROUND

Introduction

The purpose of this project was to develop an awareness of the problems facing the left-handed child. This project was developed for the left-handed child forming writing, academic, and life skills.

The right-handed bias in the everyday life of the left-handed children causes individuals to work slower than their right-handed counterparts. Unlike the right-handed child, the left-handed child must learn to think twice about how to adapt every action. For example, picking up a pencil correctly can become a complex problem, not a simple task (Bloodsworth, 1993).

Three elementary writing teachers from the San Bernardino County Schools formed a panel to work with the author during the research phase of the project to locate and develop acceptable methods of teaching writing skills to left-handed students. These teachers identified the six sections represented in this project as helpful for instructing left-handed students. The handbook sections include needed topics from, a fictitious character, Auntie M's Tips, vocabulary and practice for every day tasks to work on and bias awareness. The handbook sections discuss

simple ideas and techniques adaptable for the left-hander in the right-handed biased world. To accomplish this, the project presents techniques and ideas for the learner. In the first section, the problem addressed by the panel of teachers demonstrated the importance of penmanship and offered some practical applications. The next section related to the most frequently asked questions about being left-handed including items dealing with the prevalence of left-handedness and what it means to be left-handed. History of left-handed curriculum development further addresses changes to accommodate special needs of the left-handed children in the classroom. Finally, lists of successful left-handed people represent positive role models for building the self-esteem of the left-handed child. Students like to feel that they are a part of a larger group and not in isolation.

Context of the Problem

The need for concise, neat, and legible handwriting skills has not decreased with the computer age. A need to design teaching guides to develop left-handed writing skills continues to exist. In recent years, awareness and tolerance for including special needs children in mainstream classrooms increases. Left-handedness is an

ignored invisible handicap in many classrooms

(Goldsmith, 1995).

Left-handers require special equipment (such as desks, pens and practice sheets) to develop and use gross motor-factor skills involved with being left-handed in a predominantly right-handed world. Proper penmanship requires more practice time by a left-handed student than by a right-handed student.

Throughout history, a stigma has been associated with being left-handed. Traditionally, the public considered left-handers awkward, clumsy, sinister, and gauche. These terms have negative connotations contributing to low self-esteem in young left-handed children. The left-handed student population in American schools is as high as 30 percent in some classrooms. Clearly, a need for teaching the left-handed child some adaptive skills is imminent (Goldsmith, 1995).

Purpose of the Project

The purpose of the project was to develop a handbook to provide a basic guide for left-handed pupils and their teachers. The project and handbook addressed the needs that left-handed individuals endure in today's classrooms because left-handed pupils appear physically awkward and clumsy in comparison to their right-handed classmates.

Left-handed pupils frequently harbor low self-esteem. Academically, adapting a right-handed environment to left-handed motor skills causes left-handed pupils to be slower writers and readers. Vocationally, left-handers need to adapt to the right-handed environment that demands concessions to being left-handed (Kelly, 1996). This handbook targets the right-handed classroom teacher and parent by providing the adjustments needed to increase productivity of the left-handed child. The project promotes understanding of the difficulties that go unrecognized by most right-handed teachers (Goldsmith, 1995). Furthermore, the project suggests specific ways to lower anxiety levels for the left-handed child. Using these techniques left-handed children may realize that they are not alone because there are many famous people who were also left-handed (Benowitz, 1999). Most importantly, the handbook assists classroom teachers acquire awareness of the developmental problems that affects left-handed learning, self-esteem, and skill development.

Significance of the Project

It is essential to enhance awareness of the difficulties left-handed pupils' face in modern classrooms. Schools must address the special needs of

left-handed students. The right-handed teacher needs to be made aware of what skills and tools are available to further assist student learning (Cohen, 1993).

Research suggest a significant resource for the left-handed person is necessary. While no particular school or district are involved in such developments, most elementary teachers can benefit from this handbook.

This handbook design offers an aid to provide left-handed students basic skills and ideas to gain meaningful achievements through the development of neat and concise handwriting. Anticipated is an increased comprehension; speed in physical and academic activities through the increase of dexterity and grace in physical movement of the left-handed child. Benefits are less embarrassment or uneasiness with writing also increased reading and study skills.

The handbook can assist the right-handed teacher, parents and others to ensure productive learning of the left-hander occurs. This project can build a more sound understanding of the difficulties that go unrecognized by most right-handed teachers. Further, it may open lines of communication between the teacher, parent, and student so that the left-handed child realizes that they are not

alone. There are many successful people who have achieved greatness that are also left-handed.

Assumptions

The following assumptions pertain to this project:

1. Teachers want to help all students, but do not possess methodologies for teaching left-handed students.
2. Left-handed pupils have poorer handwriting skills than right-handers because there is not enough drill and practice time.
3. Experts estimate that there are three to five left-handed students in every classroom.
4. Teachers want all of their students to succeed.
5. Teachers want a handbook about left-handed developmental needs.

Limitations and Delimitations

A number of limitations and delimitations surfaced during the development of this project. These limitations and delimitations are presented in the next section.

Limitations

The following limitations apply to this project:

1. The scope of this project was limited to left-handed instruction in San Bernardino County elementary schools.

2. The resource materials available to elementary school teachers and parents working with left-handed pupils further limited the scope of the project.

Delimitations

The following delimitations apply to this project:

1. The project is appropriate to elementary schools nationally.
2. Continued research could expand resources available for assisting left-handed students.

Definition of Terms

The following definitions apply to this project.

Ambidextrous - Using both hands with equal ease also means unusually skilled (Holder, 1999).

Handedness - Is a tendency to use one hand rather than the other (Holder, 1999).

Handicapped - Refers to an advantage given or disadvantage imposed that makes achievement unusually difficult (Webster's Collegiate, 1998).

Laterality - To be related to a side of the body (Herron, 1980).

Left - Of the left hand; also means a radical person (Webster's, 1998).

Left-handed - Using the left-handed habitually or more easily than the right. Related to, designed for, or done with the left-hand; also means Morganatic; Clumsy Awkward, insincere, malicious (Webster's, 1998).

LH - Is the correct abbreviation for left-handed or left-hander (Benowitz, 1999).

Southpaw - A left-handed pitcher originally but adapted to include all left-handers (De Kay, 1974).

Organization of the Project

This thesis project consisted of four chapters. Chapter One introduced the context of the problem, purpose of the project, and significance of the project, limitations and delimitations and definition of terms.

Chapter Two consisted of a review of relevant literature with information on the invisible problem, environment needs for the left-handed and wrongs done by prejudice. There are also awareness and help concerns to building self-esteem resources for teachers.

Chapter Three was researching methods used. A panel of San Bernardino County teachers worked together to develop the solutions to the problems for the students in their classrooms. A Handbook of information gathered from over twenty resources with the panel of teachers. Positive tools to be used by students and dexterity skills that are

needed by students to succeed at good penmanship. These are in Chapter Three. Chapter Four contains the introduction, conclusions, recommendations and summary. Finally, there is the project itself.

CHAPTER TWO:

REVIEW OF THE LITERATURE

Introduction

Chapter Two consists of a discussion of the relevant literature. While researching the subject of the left-handed, the need for a guide to help adults cope with the problems of the left-handed child in the classroom is discussed. Research determined that left-handers need a quick reference guide to help answer their questions about being left-handed.

The theory in the educational journals until the early twentieth century stated that left-handedness was intolerable in the classroom. Periodicals, books, and Journal on left-handedness are available in the Pfau Library and over the Internet.

Practical observations of classrooms with left-handed students were used. Specifically, an introduction about a panel of teachers has experience with teaching handwriting to left-handed students. Left-handedness is an invisible problem in the classroom that is addressed. Left-handed students have to take more time transposing most directions and activities to the left side. The population of left-handed students in the classroom must have their environmental needs met. There has been discrimination,

diversity not inclusive to the left-handed pupil accompanied by stereotyping of left-handers throughout history.

Invisible Problems

Yarrington (1992) said, "The best teacher is one who cares. One who may be said to wear an invisible band on their sleeve that says, I give a damn." (p. 16) Many teachers are unaware of the left-handed student's needs in their own classroom. There was a need for new literature on the impact of being left-handed.

According to the book, The Left-hander Syndrome, Americans recognize that the system needs changing. Left-handers are required to use their clumsy, weaker right-hand in many situations. Coren (1992) went on to state "Every day left-handed students have to give into pressures of the right-handed world, and begin to use their right-hand for other tasks. This causes them to perform even less effectively. People who are left-handed are subject to more fatigue and more are accident prone." (p. 259)

Coren (1992), one of the most quoted of experts on handedness and laterality stated, "The major problem for the left-handed students was invisibility. The invisibility of the left-hander also damages his or her

ability to get a decent education. In the average class of thirty students, about five are left-handed. Yet, most teaching schools don't have a way to deal with these special needs students." (p. 261)

Transpose to the Left Side

According to Dayhaw (1960), the left-handed students have to transpose everything they do into what works for them. This has been an obstacle in the mental, emotional, and social development that frustrates these students. Simplifying and breaking down instructions and tasks into many smaller parts helped more students to finish. More practice and repetition time made the classroom environment friendlier to the left-handed student.

Left-handed Population

Carrothers' (1964) study of 225,000 Michigan students in grades one through twelve indicated 12.1 percent of the first graders and 6.6 percent of the twelfth graders were left-handed. The research concluded that as high as 20 percent of the total population in some classrooms have certain left-handed tendencies. However, according to Williams (1962), one of the lowest counts estimating between four and eight percent of students are left-handed. Williams' also noted that more than thirty percent of the students would have written with their left

hands if they were able. In Williams' findings, a distinct possibility that many people write with their right hand because the use of their left hand was prohibited.

Considering this, left-handed students are becoming members of a very large minority in our schools. The book, The Left-handed Syndrome stated that about thirteen percent of the population was left-handed. That translates in the United States and Canada to thirty-three million left-handed people. In the United States, educators struggle to make the lives of these minorities more comfortable and even have nondiscrimination laws dealing with education (Coren, 1992).

Environmental Needs

Often, when right-handed teachers realize what to do, they seat left-handed students too closely to the other handed students. This environmental problem is a simple example of what could benefit these pupils. Redesigning classroom environments eliminates the left-handed student from writing in his own shadow because light comes from the wrong side. When the number of left-handed desks per classroom increased the right-handed teacher became more aware of the environmental changes that were needed in the classroom (Bloodsworth, 1989).

Martin (1952) stated, "Democracy is committed to providing an education for every child to the limit of their capacity. Educators are not doing their duty when desks with only right arms are prevalent especially in our high schools and colleges. Lighting creates another problem for a left-handed students. To write in their own hands' shadow when working; working on benches in manual art classes which cater only to the dextral, are equally distracting. Successful left-handed work involves left-handed work arrangements and setups of work benches and cupboards, tool holders, irons, scissors, and other items that are remedial measures." (p. 531)

An article in the Chicago Tribune concurred, left-handed students are seeking more rights in the selection of classroom furniture designs at the University of California Berkeley. This is a beginning toward finding mechanisms for teaching the left-handed (Berkeley, 1993).

Wrongs Done by Prejudice

This project addresses concerns of the left-handed adult population because over the years being different has permanently damaged these persons emotionally, physically, and socially. They have not received necessary training to succeed in a right-handed environment in which they are required to adapt (Goldsmith, 1995).

John F. Kennedy (1963) said, "If we cannot now end our differences at least we can help make the world safe for diversity." (p. 3) Left-handedness diversity is growing every year. In the thirty-five years since Kennedy's speech, the United States has embraced the concepts of diversity in many ways except being left-handed in the right-hand environment.

Stereotypes of Left-handers

According to Burt (1937), a negative stigma surrounds left-handedness. It was evident in his book, The Backwards Child, that left-handed youth showed widespread difficulties in most forms of finer muscular coordination. "They shuffle and shamble, they flounder about like seals out of water, are awkward in the house and clumsy in their games and they are fumlbers and bunglers at whatever they do." (p. 287) Modern education sometimes allows these unflattering views. Society often observes these negative views of the left-handed. People know them as clumsy and messy and this stereotype continued into the Twentieth Century. Left-handers, like other minorities are at the end of humiliating jokes and denied employment due to workplaces designed specifically for right-handedness.

For example, the media presented President Gerald Ford as a clumsy, bumbling man. When in reality, he was

only suffering from being left-handed. Even a president of the United States, a former Eagle Boy Scout and a successful politician could not escape the prejudices of the right-handed world (Bell,1974).

Ideas to Help Awareness and Physical Environment

The panel of teachers from San Bernardino County agreed with Temple's and Gillet's (1989) observation that the "Left-handed children will obscure and smear what has just been written because their hand moves across the paper." (p. 39) Tricks such as a cover sheet to rest the heel of the hand and protect the other portions of the written page were only one suggestion.

Recently, toleration of left-handedness improved their skills, but not enough. Scholars such as Tompkins and Hoskisson (1991) theorized that left-handed students had inferior writing skills, but offered no suggestions of how to correct the gaps in the left-handed slant that concerns teachers. Norton (1993) stated, "The increase of left-handedness in recent years, there is an indication of a more tolerant environment in the educational realm." (p. 332) Classroom teachers are beginning to adopt the attitude that it makes no difference how children wrote as long as he or she writes well. Norton (1993) stated, "Most

teachers no longer attempt to change the handedness of left-handed student." (p 330)

Tools to Help Left-handed Students

Left-handed students function in a classroom environment designed for a majority where nine out of ten students are right-handed (Coren, 1992). Members of the teacher's panel agree educators must address left-handed students in reference to right-handed classroom elements. Teachers could effect some of these changes in the classroom. Understanding and recognition to practice and adapt the environment is a beginning. A basic example deals with the standard keyboard design of typewriters and computer to favor the left-handed student. "The keyboard has 57 [percent] of the work done by the left-hand by design, so now it is not unusual that many champions of speed typing contests are lefties" (Coren, 1992, p. 235).

Wasyulyk (1989) demonstrated various methods that he used to teach penmanship to left-handed pupils. Effective teachers noticed many students held pencils too tightly, causing muscle fatigue. Placing a piece of tape beside the large knuckle of the first finger gave students a target on which to rest the shaft of the pencil. Left-handed pupils needed to lessen their finger pressure. If students clenched their fingers into the palm when they were

writing, a ball of wadded paper held in the palm helped to relax the hand and improve the result. Left-handed pupils need to write with the paper placed on the right diagonal, on the left side of the desktop with the baseline of the paper at right angles to the left arm. They write less awkwardly with much less fatigue. Eventually, with practice the students became more rapid and concise in their writing skills.

Classroom Changes Come Slowly

Coren (1992) suggested, teachers must teach the left-handed students the proper way to write. Effective teachers realize practice is needed for the left-handed student. He further suggested some helpful ideas when teaching left-handed students. Examples include, several incorrect ways such as hooking or opposite slanting the page. Enstrom (1962) declared, one correct way to write is, slanting the page and relaxing hand positions are effective, efficient, and practical for quality, speedy, and smear-free with comfortable posture.

Computers are becoming more left-handed friendly. As suggested, early printers and peripheral equipment had a right-handed bias. Switches are on the right side. The printer paper pulled best from the right side, and diskettes are located on the right side. In the political

correctness of the 1990s, printers had larger buttons and used regular paper. Now, computers have towers that can be located on the right or the left side and the mouse mobility and buttons changed to the students who are left-handed. The effective teacher may consider obtaining larger equipment with adapted handles, grips, and levers that are less inconvenient to the left-handed students.

Education Classes

The teacher's panel from San Bernardino County schools found that left-handed training for new teachers was non-existent. There are weeks of special needs classes for Bi-Lingual, learning disabled, moderate and severely handicapped and even lectures about the gifted children in the classroom. When confronted, master teachers state there is no significant works of research on training the left-handed students. This project addressed this issue as well as the history of left-handedness.

Handwriting is Essential

According to Bloodsworth (1989), "It appears that the teaching schools need to attempt to stress the importance of handwriting and the methodology involved for both right and left-handers even in this day and age of computer."

(p. 9) The individual student becomes proficient in any

writing or manipulation exercise required in a classroom given enough time. Learning is not a time-based paradigm.

Elementary teacher resources are very effective in teaching concise, neat handwriting skills. An older student or parent who was left-handed acting as an aide could show ways to correctly practice writing and other skills with the left hand. Special tools, such as three-sided larger-than-average pens and pencils are available to help the grasp of even the shakiest child. There are rubberized grips for the child who was left-handed, which also helped right-handed students (Bloodsworth, 1989).

Building Self-esteem for the Left-handed Child

The teachers' panel from San Bernardino County schools wanted more teachers trained in the whole language learning processes. Whole language learning states development of a strong self-concept is a highly valued commodity for any student. Pupils that are left-handed need a strong sense of self. Pupils with good self-esteem skills would work to acquire more writing skills and therefore, succeed.

Positive role models are also very important to children and the left-handed are no exception. Articles and books on left-handedness have lists of famous

left-handers. In the handbook, the teachers' panel requested a comprehensive list of famous left-handers.

New Resources for the Teacher

In the information age, the World Wide Web offers teacher's assistance in working with the left-handed pupil. Benowitz, (1999) who's article, Frequently Asked Questions for The Left-handed Population and Friends and Supporters was a great way to get the pupils to do their own research on line. There are questions by scholars and doctors in the field of psychology, laterality, and handedness. One in particular was Dr. Holder, at Indiana State University has some great web sites also listed shops in Europe and shopping possibilities on the Internet for left-handers.

Summary

Hundreds of articles and books on the subject of left-handedness exist with many theories about left-handedness. Suggestions, ideas and common sense approaches for improving the environment for children with left-handedness are also relevant and applicable in and out of the classroom environment.

The panel of teachers from San Bernardino County Schools referred to left-handedness as an invisible handicap in most classrooms. If a teacher becomes aware

that classroom environments need to be changed, effective teachers could make change and adapt. The left-handed pupil with more practice, more adapting and more writing aides would succeed in this right-handed world.

CHAPTER THREE:

METHODOLOGY

Introduction

Chapter Three detailed the steps used in developing the project. Specifically, research methods used in this project. The library used was the California State University, at San Bernardino and a private collection of books on left-handedness. The population served was elementary and writing teachers who have left-hand students in their classrooms. The handbook developed available positive tools and basic dexterity skills for teacher use.

Handbook Development

The purpose of this handbook was to develop a guide for right-handed teachers to assist the left-handed child. A left-handed writer's guide and Internet information extracted from existing materials for the project are included.

Section One was an introduction directed towards the teacher of a left-handed child. This handbook uses a clear basic language in its development. Handbook Section Two presented simple ideas and tools adapted to accommodate left-handed children in the right-handed world. Section Two presents helpful tips from a fictitious character,

Auntie M. It is believed that simple environmental changes are necessary for the left-handed pupil in the modern classroom.

Section Three discussed several examples of penmanship for the left-handed student. There were several efforts to explain good penmanship. Section Four was developed from Benowitz' to help answer the most frequently asked questions about being left-handed. Other answers were from miscellaneous reference materials.

Section Five used a narrative format about being left-handed throughout history and old wives tales about the left-hander. This section included the negative aspects thought to prevail about being left-handed. Section Six involved a list of some famous left-handed people that can be positive role models to the self-conscience left-handed child. Students like to feel as though they are a part of a group and not the only person going through problems.

Research Methods

Research in the Pfau Library at California State University at San Bernardino focused on several authors, using Internet resources and the electronic journals available. It was discovered, research ranged from laterality as a cause of left-handedness to brain

domination theories. It was difficult to focus on a single research problem, but several books developed the practical daily needs of left-handed pupils.

Panel of Teachers

The panel of teachers, Pam Jewart, Kathy Graeber and Linda Bartlett, from several schools and districts and are part of the population served by San Bernardino County schools. Elementary school teachers have been searching for a guide to assist with opposite hand students. These teachers were also asked to assist in the search about the left-handed. These teachers also believed in a basic resource guide to be a mechanism for enhancing teacher awareness and developmental skills for their left-hand students. They further agreed there were no available resources on teaching the left-handed child.

According to this panel of teachers, the history of the left-handed student has been long and unfortunate. Some educators in the past may have ignored the rights of the left-handed pupils in their charge from kindergarten through graduate school. The literature explored the possibilities of using aspects of previous history.

The panel of teachers consulted are members of elementary school writing committees at their schools and are involved with this project because their questions

about serving left-handers are not getting answered. There were several meetings and discussions about what literature was available and how to get the suggestions into the hands of the classroom teachers. The project provides direction for such developments.

Population Served

The design of this project was for left-handed learners along with their teachers who are in need of ways to help the left-handed learners. The project utilized the most frequently used ideas and tips that benefit the left-handers learning and teaching approaches. Also, there were ideas to increase productivity of the left-handed child and the helping adult relationship.

Positive Tools

The handbook was intended to be a positive and creative tool to aid in the teaching of the left-handed student, or any left-handed person needing remedial writing skills. The history gives a child who was left-handed an overview of why they are different and how they are similar to other students. A question and answer section is a teaching tool used to explain all aspects of being left-handed in a refreshing structure. Quick tips for helping the left-handed person to write more neatly

are presented. In addition, the famous left-hander's section shows left-handers that they were not alone.

Basic Dexterity Skills

This section was developed as an aid for providing left-handed students with basic necessary skills and ideas for gaining meaningful academic achievement through the development of neat and concise handwriting. In addition, increased reading comprehension, speeds in physical and academic activities through the increase of dexterity and grace in physical movement of the left-handed child was anticipated. Less embarrassment or uneasiness about writing also increased reading and study skills.

Handbook Resources and Content Validation

Validation for this handbook was through referral resources. Several experts in the field of handwriting developed materials. A panel of teachers validated the materials as a good resource book for basic teachers. Materials used more than 20 resources from the early 1920s to the modern day. This included the Internet.

Summary

Chapter Three discusses research methods used by the researcher. Further, the left-handed teacher resource was discussed. A panel of teachers noted prejudices against left-handed pupils. They also believed teachers would

benefit from a handbook that explains history, role models, blended with useful tips, practical skills, positive tools and dexterity skills to strengthen the left-handed students confidence and ability to write concise.

CHAPTER FOUR:

CONCLUSIONS AND RECOMMENDATIONS

Introduction

Included in Chapter Four was a presentation of the conclusions gleaned as a result of completing this project. Further presented are recommendations and conclusions used in completion of this project. Lastly, the Chapter concludes with a summary.

Conclusions

The conclusion extracted from this project follow.

1. There are about 50 books currently published on Left-handedness, but not used by the right-handed society at large at the Pfau Library.
2. Students should have good penmanship, but left-handers get very little extra practice time to learn.
3. Penalizing the left-handers are for not being as coordinated with their right-hand as dextral people in school and in the workplace.
4. Awareness by the right-handed teachers showed ways to help the left-handed child be successful in their environment.
5. There are many role models for left-handed children to emulate.

6. Most students were right-handers until the 1930s. Teachers had no information on left-handedness but biases and prejudices prevailed during that generation.
7. Left-handers have poor penmanship skills because they learned bad habits in their elementary grades.
8. Less help given is to Left-handers in school or the workplace.
9. Left-handedness is an invisible handicap because teachers are not even aware of their special needs in their work place. Right-handed school faculties are not aware of the number of students who are left-handed. There are no surveys or special needs lists for left-hand students.
10. .No left-handed role models used currently in classrooms or their accomplishments.

Recommendations

The recommendations resulting from this project follow.

1. Left-handed penmanship skills and awareness need to be a part of all curriculums.
2. Left-handed instruction in good penmanship should provide extra practice time.

3. There are many items made for the left-handers. They should be accessed, used, and purchased.
4. Teacher education should address the problems and issues faced by the left-handers.
5. Make reading materials available for the right-handed teachers and develop curriculum for left-handed awareness.
6. Provide left-handed students with positive role models to increase self-esteem and a sense of community.
7. Generate awareness of the left-handed students in a classroom by surveys and questionnaires.
8. Merits and awards based on penmanship for left-handers could be used as a teaching assignment.

Summary

Chapter Four summarizes the conclusions derived from this project. Recommendations extracted from this project were presented. While being left-handed is allowed in today's society, it is not easy. Left-handedness is an invisible handicap; most teachers are unaware of the numbers of left-handed student they really have.

This project opened awareness of the problems facing the left-handed child. The right-handed bias in the

everyday life of a child caused left-handers to work slower than his counterpart. The left-handed child had to think twice to adapt every action. That was not the case with a right-handed child (Goldsmith, 1995).

Left-handed students need good penmanship just as all other students do. Achievement of good penmanship requires more practice than allowed in classrooms.

There is a need for awareness of the numbers, and helping skills for the left-handed people by the right-handers. Awareness and knowledge reduce fears and shame. Increasing awareness is important for all teachers and educators of the need for adaptive measures. As questioned by the teachers' panel with up to 25 percent of the population being left-handed, why are there still only one or two left-handed desks in any given classroom in the nation, today? The answer is awareness is not in place. Awareness of the teachers and peers must be the physical needs of all children and that it takes practice.

APPENDIX:

LEFT-HANDED TEACHING

LEFT-HANDED TEACHING

TECHNIQUES FOR

THE RIGHT-HANDED

By

Martha Jane Bartel

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INTRODUCTION

A LEFT-HANDER'S POINT OF VIEW IS REQUIRED

About this book, this is a manual designed particularly for the right-handed adults in our world who have to work with left-handed children. In a classroom or at home, your left-handed child has to adapt a right-handed environment daily. This manual is a consensus of opinions, articles, and books that took a lifetime of research to sort through and find the most usable ideas. Many right-handed adults believe that there should be no difference in teaching the left-handed child. They just tell the left-handed child to do the same thing as the others but in reverse. This lack of thinking has caused some serious problems for many left-handers which this handbook will hopefully change. The lack of awareness is the primary problem with teachers. There is a lack of understanding of the problems by other students and the general right-handed public. It is the lack of proper

instructions for left-handers that have made a current need for writing this manual (White, 1986).

HANDWRITING IS CRUCIAL

There are two requirements for writing (Goldsmith, 1995). One is legibility and the other is writing comfortably enough to do it for a long period. Both of these require practice. Tests have found that the child who is left-handed must practice more to accomplish both.

It is more difficult for people to get a good education without the ability to write. Note taking, tests, homework assignments and writing essays are all tools that the left-handed child must be able to do with ease and neatness.

Left-handed children are often unable to impress their teachers because penmanship, speed, and accuracy are lacking. Good penmanship is required in getting and keeping a job as adults and children who are left-handed must be able to write legibility or they will have a difficult time functioning in our society (Kelly, 1996).

There are several tips that can help with penmanship and writing that will help the child who is left-handed to strengthen writing skills. The left-handed child needs to develop coordination skills and practice to improve

writing style and speed to meet the needs for penmanship in our world.

Improvement in Penmanship requires children writing with the sunlight in front of and to the right of the left-handed child. This follows the natural line of focus from the writing instrument and index finger of the left-hand to the right position in front of the left-handed person. There is a plane of focus for the left-hander to the front and to the right. Therefore, if you want your left-hander to notice or fully concentrate on something it must be in that position. For teachers who use overheads, it is important to have the plane of focus in the correct place.

Left-handers should not be writing in their own shadow. Any light on the tabletop should be from above and to the right. Natural sunlight in a classroom should be from this direction or the left-handed child is at a disadvantage.

There are more right-handed students and more desks are right-handed. Left-handers need a large flat work area. Small desktops are not for them. Left-handers have to have notebooks anchored down not sliding down hill with every movement. When writing, remember elbows must be on the table.

Don't let your older students who are left-handed sit at the small topped right-handed tables, which cause left-handers to bend forward, elbows in the air, twist their bodies, and turn awkwardly. This is extremely uncomfortable. It causes many left-handers to stop writing and so stop learning sooner. This prevents a short attention span designation for the left-handed student who only needs seating that is more comfortable. They also can damage their backs, shoulders, elbows, and wrists with repeated expose to these right-handed desks.

WORDS CAN HURT YOU

The Latin word for left is "sinister." The connection between the English word and the Latin word is obvious, but this reasoning breaks down when three languages are examined. There is an old story about the Ancient Roman high priests or fortune tellers who used to point a square wooden frame toward the sky and thus watch birds fly by. If the birds came from the left (sinister), it meant trouble (sinister). If they came from the right (Latin Dexter) everything was OK. In French, sinistre means sinister, but someone who is considered not skillful is called "gauche" (left) in French (Benowitz, 1999).

It also has to do with shaking hands. It seems that in old stories people would shake hands on meeting to show

that they didn't have a dagger or similar weapon in the right-hand so they could not stab you right off as they met you. However, left-handers could shake someone's hand (with your right-hand) and still is able to use your left-hand to stab someone. Therefore, left-handed people were considered potentially more dangerous and sinister.

Another scholar told that in Hebrew "Yemen" is right and "Smoll" is left. A right-handed person is referred to as "Yemani," which meant right-handed and a left-hand person is referred to as Eetair yad Yemino or Eetair for a person who is not right-handed. Connotation is as a shortcoming.

In German you are called someone 'linkisch' (meaning 'leftish') also means that you are either weird, strange, or even an antisocial type. In Chinese etymology has turned up some interesting facts. The Chinese word for "left" when traced back to ancient pictograms, is a drawing of a hand with a drawing that means "work." The idea apparently was that the left-hand did work by helping the right-hand.

The symbol "gongl" means work because it looks like a carpenter's set square, which would be held in the left-hand (of a right-handed person) while the other hand draws or saws. The character for "right" was a picture of

a hand next to a mouth, indicating that the ancient Chinese probably used the right-hand to eat.

An ancient Romany Gypsy word for left is bongo, which means evil. In Dutch, Recht means right, straight, privilege (as in human rights), Link means left, stupid, awkward, but also keen, skilled. Een linke jongen mean a skilled criminal, a bad criminal, or a keen man. Other scholars reported that the Gaelic (Irish) word for left-handed was "Ciotach" which also means left-handed, awkward or difficult. In the Welsh language or Cymraeg, the word for left is 'chwith', which also means strange. In Italian, the word for clumsy is madestro, and a car crash is a "sinstro."

It was common in the Middle ages and Renaissance Periods, a period of great religious art, "good" people were portrayed as right-handed. Satanic characters on the other hand, were portrayed as left-handed. This was considered antithesis to good. It is interesting to note that Leonardo da Vinci painted "good" images like Jesus and Mary to appear left-handed, but da Vinci is a fabled Left-hander. Later, handedness was considered an important test to determine if a person was a witch or warlock theoretically because of the link to Satanism.

AUNTIE M'S TIPS

STORES THAT CATER TO LEFT-HANDERS ALL OVER THE WORLD

The Left-hand Supply Company, PO Box 20188, Oakland, CA
94620 (510) 658-LEFT.

Anything Left-handed Ltd., 57 Brewer Street, London, W1R
3FB. (0171) 437-3910.

Zurdolandia C1 Bolonia, 10 (Esq. Cte. Sta. Pau) 50008 -
Zaragoza Spain (976) 22 63 80 Fax: (976) 22 63 80 E-mail:
Zurdolan@encomix.es Contact: Jesus Capapey, Ana Lombo.

De Dreta a Esquerra L.L. Copernico 85 (Tienda 2) 08006
Barcelona, Spain Tel/Fax: *-34 (9) 3-201.93.92: E-mail:
lefty@solution4u.com (English) zurdos@solutions4u.com
(Castellano).

Left-handed Products, 29-A Playfair Street, The Rocks,
Sydney NSW 2000, Australia, Tel: 02 9247 6374.

On the Other Hand, 6907 Woodtrail Ct. Fort Wayne, Indiana
46835 (219) 486-2702

Fax: (219) 486-7428 WWW: <http://www.ontheotherhand.com>.

SPECIALTY STORES FOR LEFT-HANDED GUITARS.

Route 66 Guitars, 3579 E. Foothill Blvd., #321, Pasadena, CA 91107 (213) GUI-TARS.

Vintage, Used and New Left and Right-Handed Instrument
Vintage Amps and Accessories Lists available via US Mail,
FAX and email (Route 66@southjpaw.com)
(<http://www.southpaw.com/route66/>)

Southpaw Guitars of Texas, 5813 Bellaire Blvd. Houston, TX
77081 or (713) 667-5791.

THERE IS EVEN AN INTERNATIONAL LEFT-HANDERS DAY

According to the Left-handers International, August 13th
is designated as International Left-handers Day.

THERE IS A LEFT-HANDER ADVOCACY ORGANIZATION

Left-handers International is located in Topeka, Kansas
and can be reached at the following address: Left-handers
International, PO Box 8249, Topeka, Kansas 66608 Phone:
(785) 234-2177.

VOCABULARY LEFT-HANDERS NEED TO KNOW

Frequently used words listed here are from left-handed
literature. Many compiled from the Webster's Collegiate
Dictionary (1998), and referred to there unless otherwise
stated.

Ambidextrous - Using both hands with equal ease also means
unusually skilled (Holder, 1999).

Ciotog - Irish for Left-handed (Benonitz, 1999).

Dextral - Is the use of the right-hand (Webster's, 1998).

Gauche - French for left also means lacking social
experience or grace: Crude or tactless
(Webster's, 1998).

Handedness - Is a tendency to use one hand rather than the other (Holder, 1999).

Handicapped - Refers to an advantage given or disadvantage imposed that makes achievement unusually difficult (Webster's, 1998).

Hooked - Curving the writing hand to form a hook over the top of the paper (De Kay, 1974).

International Left-handers Day - Is on August 13 of each year (Benowitz, 1999).

Laterality - Is a relation to a side of the body (Herron, 1980).

Left - Of the left-hand: also means a radical person (Webster's, 1998).

Left-footed - Starting off on the left foot (Webster's, 1998).

Left-handed - Using the left-hand habitually or more easily than the right. Related to, designed for, or done with the left-hand; also means Morganatic, Clumsy, Awkward, Insincere, Malicious (Webster's, 1998).

Left-hander's Association - Group that advocate lefties. Address is P O Box 8299, Topeka, Kansas 66608-0249 (Benowitz, 1999).

Left on - Is an English term for a left-handed cricket player (Webster's, 1998).

LH - Is the correct abbreviation for left-handed or left-hander (Benowitz, 1999).

Linkshaender - Is German for left-handed (Goldsmith, 1995).

Lucht - Is Old English for left (Goldsmith, 1995).

Sinister side - Situated on the left side, also means unlucky and inauspicious (Goldsmith, 1995).

Sinistral - Inclined to the left, also means whorls to the right (Goldsmith, 1995).

Southpaw - A left-handed pitcher originally, but adapted to include all left-handers (De Kay, 1974).

Switched - Children forced to write with the right-hand. Common practice used by teachers until after World War II (Benowitz, 1999).

Zurdos - Is Spanish for left (Goldsmith, 1995).

ACTIONS THAT LEFT-HANDERS NEED MORE PRACTICE TO ACCOMPLISH WELL

- Striking a Match
- Strike the nail with a hammer
- Erase a small cross on paper
- Using a dropper
- Spooning out a marble from a cup
- Drawing a circle
- Throwing a small ball
- Cutting any shape
- Brushing your teeth
- Touching your nose
- Writing something
- Holding a tennis racket
- Opening Small bottle with a corkscrew
- Mixing soup with a ladle
- Sprinkling salt
- Threading a needle
- Drinking with either hand
- Jacket which arm first
- Sweep the floor with a broom
- Dealing a deck of cards
- Combing hair
- Pouring water from one glass to another
- Zipping up a jacket
- Unscrewing a lid from a jar

(Source: Herron, 1980)

A PARTIAL LIST OF ITEMS DESIGNED WITH A LEFT-HANDED BIAS

* LH = Left-handed

<u>Items needing changes</u>	<u>Usually in past LH have</u>	<u>New alternatives</u>
Wristwatch stem	adapt	LH watches
School desks	don't use	Use flat top large desk
Corkscrews	clumsily	LH ones available
Matchbooks	don't use	Lighters
Gearshifts	adapt trans only	Use automatic
Rulers	don't use	LH ones available
Gravy Boats	adapt	Style with two spicketts only
Wrenches	adapt	LH ones available
Phone Booths	adapt	Use open-air phones only
Pencil Sharpeners	don't use	Electric ones available
Baseball gloves	don't use	Electric ones available
TV and Radio Dials	adapted	Use a remote control
Moustache mugs	don't use	Use regular cup
Hand Drills	don't use	Electric ones available
Golf Clubs	don't use	LH ones available
Gum/Candy Wrappers	adapted	Learn to use
Playing Cards	adapted	LH ones available
Slot Machines	adapted	New ones have buttons
Books & cards	adapted	Learn to use
Doorknobs	adapted	Flat handles not knobs

<u>Items needing changes</u>	<u>Usually in past LH have</u>	<u>New alternatives</u>
Can Openers	don't use	Electric ones available
Cameras	adapted	Stay to a simple design
Jar Tops	don't use	Rubber grips to help
Apple corers	don't use	Electric ones available
Violins	adapted	Change strings around
Scissors	don't use	LH ones available
Power saws	adapted	Versatile changeable handles
Irons	adapted	Versatile cord changeable
Voting machines	adapted	Use new-handicapped ones
Vegetable peelers	adapted	LH ones available
Ice cream scoops	adapted	LH ones available
Power Sanders	clumsily	Versatile handles
Guitars	adapted	LH ones available
Screwdrivers	don't use	Electric ones available
Saxophones	adapted	Learned talent
Meat Grinders (hand)	don't use	Electric ones available
Soup ladles	clumsily	Two-sided spouts
Fishing reels	clumsily	LH one's available

(Source: Longoni & DeGennaro, 1992)

PENMANSHIP

QUICK CHECKLIST FOR GOOD PENMANSHIP

- Check desk height. No higher than the bottom rib is where the flat desktop should be.
- Seat the child who is left-handed on the right side of the room as he faces the chalkboard. This puts the chalkboard to the left in his field of vision.
- Use a rubber band or pencil grip to get the left-handers to hold the pencil about 1-1/2 inches from the point.
- Use an elbow dot on the desktop to train for the left elbow position.
- Use a practice triangle to show where the top of the paper goes on the desktop along the top edge.
- After practicing for a while have the left-handed child hold a wad of paper in palm while writing to keep hand cupped not clinched.
- Elbows should be held close to the body.
- Demonstrate physical movement and control processes first. Start out large first then concise. Large strokes, curves, lines and circle then get smaller; remember to practice in the air to write, then the chalkboard, then large lined paper, then smaller.
- Cover-up sheets should be used to keep from smudging and protect other parts of written work clean on a page.
- Pencil Grips that are three-sided will help get more control over writing.

(Source: Wasyulyk, 1984)

PRACTICE MAKES PERFECT IN PENMANSHIP

Letter Formation

- Learn the basic strokes.
- Start letters correctly.
- Build letters.

Step-by-step

- Slant (Down strokes).
- Check paper position and pen holding.
- Check your wrist and arm position.
- Slide right, then slant back.

Size

- Study size. You must know how far to slide up as you join letters.
- Good pen and paper position are important for this skill.

Spacing

- Check paper, arm and pen position. You must move sideways as you join letters.
- Use ending strokes to space worked in sentences.

Smoothness

- Relax and write softly. Do not pinch or squeeze the pen.
- Learn to move the pen with rhythmic strokes.

Joining Control

- Learn the joining control point for each letter.
- Most letters slant straight back to the control point.
- Use letter rhythms to pause for control before joining strokes.

(Source: Wasyulyk, 1984)

QUESTIONS AND ANSWERS FOR FUTURE REFERENCE

CHILDREN ASK THE HARD QUESTIONS; HERE ARE SOME ANSWERS THAT WORK.

According to Barry D. Benowitz there has always existed in this world a very special group of individuals who are left-handed. This group of people has spent their lives conforming to a world not designed for their benefit. In addition, this group has had to put up with insults and derogatory comments aimed at left-handed people.

The intent of this chapter is to be a source of information for the left-handed population, and to give credit to whom it is due. This chapter serves as a consciousness-raising tool about issues of special concern for lefthanders for the population in general. This collection of information was from many sources and while the author tried to be accurate and complete, there is no guarantee.

ARE LEFT-HANDERS NATURALLY CLUMSY?

The answer is NO. The world is for right-handed people and left-handers must adapt to it. Left-handers, in the act of accommodating to this opposite world, may appear awkward using tools that have right-hand preference designed into them. However, right-handers display even more awkwardness using left-handed tools than left-handers do using right-handed tools. This is probably because right-handers are less used to adapting.

Is there a quick test to determine eye dominance?

Try this, with both eyes open, line up the tip of your finger, at arm's length, with a distant object. Close each eye separately. The eye that results in the object and your finger remaining aligned is your dominant eye.

Is there a quick test to determine handedness?

Not always accurate but sitting comfortably, fold your hands together and notice which thumb is on top. Lefties will have the right thumb on top most of the time. Remember, that hand preference is usually not evident until children are age 4-6. Some children show a preference as early as age two.

No, there is not. In fact, the only sure way to determine brain dominance is to anesthetize one half of

the brain and then see what functions are still handled by the still functioning hemisphere. There have been interrupting results obtained, such as people able to respond to visual cues but not verbal cues.

What is brain dominance?

M. K. Holder states that neurologists historically used the term "brain dominance" describe which hemisphere of the brain played the greatest role in human speech and language. Doctors now prefer the term hemispheric "specialization" to describe how one side of the neural function of the brain is specialized for a particular function, usually language ability. See: "What does handedness have to do with brain lateralization?" by M. K. Holder; mholder@indiana.edu at <http://www.indiana.edu/~primate/brain.html>.

Why does women's clothing buttons the opposite way of men has (left vs. right)?

This goes back to the Victorian age. It seems that a proper gentleman would dress himself while a proper lady would require the services of a dresser. In order for the motion of securing a button to be the same, and to account for the fact that the clothing of a man would be fastened from behind while the clothing of a woman would be

fastened while facing the clothing, the buttons on men's clothing would have to be opposite of women's.

What makes a cup right or left-handed?

Cups that are not symmetric may have a lip to ease pouring the contents. Righting the cup so that the lip will be on the side of the cup, which is away from the body, this allowed for an easy neat motion. Picking up the cup with the left-hand allows the lip towards the body; this makes it awkward and messy to pour.

Do Lefties die younger than right-handers do?

Stanley Coren, the author of "the Left-hander syndrome" found statistical evidence of that left-handers die earlier than right-handers. He remains unable to disprove this phenomenon.

What makes scissors right or left-handed?

The differences between left and right-hander are evident. By placing scissors for example, on the tale like this: for right-hand scissors, the part of the scissors lying 'on top' at the intersection of the two parts, will be the one from top-left to bottom-right, where as for left-handed scissors, the upper most will be part of the left to top-right.

Turning the scissors around or up side down will not change this relationship. The reason for this difference

lies in the way the scissors open and close by your left or right-hand. When you close the scissors, the cutting edges close, and the cutting edges are pressed together because your fingers hold the scissors bend and your thumb stretches. If the cutting edges are pushed away from each other, the material being cut slides in between, and is definitely not cut. This is what happens when you use a right-hand scissors with your left-hand. Your scissors should be a mirrored version of your right-handed scissors. This is why the cutting edges are made on the opposite side of each part, and the parts are assembled just the opposite way, giving you perfect left-handed scissors.

SPORTS

What are left-handed playing cards?

Left-handed playing cards are cards where the numbers are printed on all four-corners of the card. That way, no matter which way you fan them out, you can see the numbers. Standard cards must be fanned in a right-handed manner for visible numbers.

In Baseball, what makes left-handed hitters so successful?

A left-handed hitter faces the home plate from a different side. This is very difficult for a pitcher who is not yet used to pitching to lefties. His standard

arsenal of pitches does not have the same affect. A normal outside fastball to a right-hander becomes an inside fastball to a lefty and the same is true for an inside fastball. In addition, a curve ball curves out for a right would curve in for a lefty. This is confusing for the pitcher and makes an advantage for the left-handed batter.

A right-handed pitcher's breaking balls (curves, sliders, and cutter) will break in toward the hitter. It is always easier to hit a ball that's breaking in on you than breaking away. Left-handed hitters are therefore perceived as being more successful than right-handed hitters are because the great majority of pitchers are right-handed.

In Baseball, what makes left-handed pitchers so successful?

There are three factors here. First, left-handed pitchers stand on the mound facing first base, making it much easier to spot base-stealing attempts, and to throw out the runner. Secondly, the throwing arm of a lefty pitcher is more hidden from view of a right-handed batter, making it difficult for the batter to gauge the pitch as its being thrown. Finally, lefties naturally tend to throw the ball towards the left side of the plate (from the

batter's perspective), placing the pitch inside for a right batter (which is more difficult to hit).

In cricket, what makes left-armed Batsmen so successful?

Left-armed Batsmen enjoy the same advantages as left-handed hitters do in baseball. Yet, to adapt to their environment many left-armed batsmen prefer to hit from the left side.

Some additional information in that the worn out spot formed by the right-arm pace bowlers (as in the game of cricket) are further away from the off side of the right-hand batsman than a left-hander. A (right-arm) bowler bowling over the wicket is closer to the stumps than one bowling round the wicket, and will therefore tend to run on to the pitch in the follow-through.

Further, bowlers generally bowl to a batsman's on the off side in order to provoke a catch in the slips. The left-hander will suffer from pitches in the rough more than would a right-hander, who would often leave wides or near-wides alone.

Are there any organizations concerning golf and left-handers?

The National association of Left-handed Golfers (NALG) is a nonprofit organization promotes and enhances

left-handed golf. Dues are \$20 per year. Telephone number is (800) 844-NALG or <http://www.dca.net/golf>

What makes a bowling ball left or right-handed?

Left-handed bowling balls are different in two respects. The placement of the holes for the fingers to the thumb is opposite. There are usually a couple of left-handed bowling balls for use at any professional lanes. These are usually in poor shape, but lots better than trying a right-handed ball. The good news is a left-handed bowling ball, drilled by a professional, costs the same as the right-handed one.

What makes bowling shoes left or right-handed?

Bowling shoes are "handed" by the type of sole that is on the sliding shoe. Since (most) left-handed bowlers slide with their right foot, right shoes have soles with some type of leather or buckskin to aid in sliding. The left shoe will usually be rubber-soled with leather or a textured rubber toe piece. Added is this toe piece for extra traction when "pushing off" on the next-to-last step.

Right-handed shoes are mirror images of the left-handed shoes. Most bowling shoes come in this configuration. However, some manufacturers produce their low-end bowling shoes in ambidextrous versions -- both

shoes have some type of sliding sole, so either left or right-handers can use them. House shoes are typically this way.

Do left-handers have an advantage in bowling?

Yes, bowling is a sport of repetition and consistency, and when the playing conditions remain stable, it is easier to maintain the muscle memory in order to repeat motions. Since there are fewer left-handed bowlers in general, the condition for them does not change as much or as dramatically as it does for the right-handed bowler. It is seen as an unfair advantage to the right-handed bowlers.

In fencing (sword fighting), what makes left-handers successful?

Fencing is a sport where the very best practitioners do not think, but react. This requires practice, practice, and practice in order to develop an instinctual approach. The scarcity of left-handers means that right-handers do not get a chance to practice (usually) and fail to develop that edge. Conversely, left-handers practice against right-handers frequently this give them more chances to develop a high skill level.

Which sports banned left-handers?

Polo is one. Trained horses are to expect the maillot swinging from the right side. To do it on the left would spook the horse and cause safety problems.

Jai alai is a sport that due to centuries old traditions of the game that all players are required to wear the cesta (a gourd that is used to throw the ball) on their right-hand. In addition, because of the sidewall on the left side of the court, it would be dangerous and almost impossible for players to throw with their left-hand.

Field Hockey does not permitted left-handed Hockey Sticks. In England, the Grand National Archery Association is the only such organization in England requiring left-handedness segregation. Individuals are to stay on one side of the field during competitions. Similarly, The National Smallbore Rifle Association, and National Rifle Association, of the UK segregates left-handers to one side during competitions as well.

Why Left-handers are sometimes called Southpaws?

This is a baseball term. It seems that on most baseball diamonds the left-hand side of the pitchers mound would face south. At one time, most ballparks construction shows that the setting sun was behind the batters as not

to be in his eyes. The throwing arm of the left-handed pitchers would then he faced the South as he faced the plate.

Why do some left-handers use Mirror script?

DaVinci and others often write right to left and in mirror script. They feel that the writing is more fluid this way.

Adult are right-handed and the child is a lefty. How do you teach him/her to tie shoelaces?

Try this, in order to have the child see the hand movements in the proper direction, sit opposite the child rather than next to him or behind him. This will probably work for tying a necktie, sewing, or knitting as well.

Why do we wear our wedding bands on the third finger of the left-hand?

The custom dates back to the early Egyptian belief that the vena amoris (vein of love) ran directly from the heart to the third finger of the left-hand.

Where can I get a left-handed joystick?

While you should note that real commercial and military, pilots fly according to where they sit in the cockpit. They must be able to fly equally well with either hand; this question is a popular one. There are several

ambidextrous ones that people use, CH Flightstick Pro; CH flightstick; Suncom 2000; TM Action Controller XL; Kraft Thunderstick; Gravis Game Pad (has a switch).

Where can I get a left-handed computer keyboard?

Inexpensive computer software, hardware, and peripheral equipment are available to help left-handers in their learning process.

Where can I get a left-handed mouse?

Left-handed computer mice are available. Keep in mind that not all left-handers use them. Many like typing or writing left-hand, using the right-hand to always hold the mouse. Look for alternatives such as the glide point or tracker balls. Also, swap the buttons to use the left index finger with the right button. Alternatively, move the mouse to the left side of the computer.

The Contour Mouse for left-handed users can be ordered directly from Computer Design, 254B North Broadway, Suite 204, Salem, NH 03079 or at <http://www.contourdes.com>.

Why are there more Left-handed Males than Females?

Recent research has looked at the amount of testosterone present in the fetus and amniotic fluid during pregnancy. Scientists have speculated that an excessive level of testosterone slows the development of

the left side of the brain, which allows the right side of the brain to achieve and maintain dominance.

Adult females normally produce a small amount of testosterone that will find its way into the amniotic fluid during pregnancy. A male fetus produces some testosterone in the uterus during development while a female fetus will produce no testosterone. Therefore, the chances of testosterone reaching excessive levels are much higher in a male fetus than in a female fetus simply because the normal levels of testosterone for a male fetus are higher in the first place.

Do lefthanders tend to have a specific blood type?

No, blood type has no affect on handedness.

What percentages of left-handers exist in different societies?

Middle-class western (white) society is more tolerant of left-handedness than some cultures. In many cultures, even today eating with the left-hand is an insult to the host. This is so strong that even these educated and living in the west does not adjust this viewpoint.

HISTORY OF BEING LEFT-HANDED AND THE PRESENT**A LEFT-HANDER'S POINT OF VIEW IS REQUIRED**

The right-handed majority in a society has always recorded history. In the development of the left-handed abilities of humans, there is until this century only the right way to do things. Right-handers have written the history of the world with a bias to the right-handers view of the world. Left-handers will agree that there are very few hero figures noted in our conventional history books but there are famous lefties in every generation that are only now being noticed.

Right-handed people are just becoming aware that the politically correct way of seeing a viewpoint of the other person also works for the left-hander who is sitting right (or left) next to them. Left-handedness is an invisible handicap. Most left-handed kids think that they are alone and dealing with the problems of rethinking and adapting most physical situations.

The thousand of elementary school writing teachers who just don't get the idea that being left-handed is more than writing the same letters the other way. Moreover, especially for the 15% of the classroom population in the US and Canada who are left-handed and who must learn on their own. They may take longer to learn a task but they can be as good at any task as any right-handed kid can.

The history of the left-handed student has been long and unfortunate. Educators in the past ignored the rights of the left-handed pupils left in their charge from kindergarten through graduate school. Some qualified injustices from the past are revealed in the readings. Then, the readings explored the possibilities of using some of the aspects of what came before. This helped the adult understand some of the myths that the left-handed child deals with. Left-handed pupils have not gotten clearly defined help in school as other learning disabled children gets today.

One of the favorites authors on left-handedness was (Yarrington (1992) who said, " the best teacher is one who cares. One who may be said to wear an invisible band on his sleeve that says, I give a damn." (p. 16) Yet, many teachers were in the past unaware of the left-handed student's needs in their own classrooms.

Coren (1992) restated that Americans needed some changes. "Every day left-handed students have to give into the pressures of the right-handed world, and begin to use their right-hand for yet another task. This causes them to perform even less effectively. People who are left-handed are subject to more fatigue, and more accident prone." (p. 259)

Stanley Coren listed as one of the most quoted of the experts on handedness and laterality. He also stated that the major problem for the left-handed students is invisibility. "The invisibility of the left-hander also damages his or her ability to get a decent Education in the average class of thirty students about five are left-handed, yet most teaching schools don't have a way to deal with these special needs students." (p. 261)

Dayhaw (1960) had the right ideas in an article for Education Magazine. He felt that the left-handed students would have to transpose everything into their own key. This would be an obstacle in the mental, emotional and social development that would frustrate them. This was why simplified instruction and tasks that were broken down to many small tasks work if the time to finish increased for the left-handers. If a student had to block out the teacher and classroom noises and stopped to change over

the right-handed instructions to a the left-handed way of doing a task then it took awhile to do it. Therefore, more practice and repetition time was a large part of making the classroom environment friendly to the left-handed students.

Left-handedness was unheard of in the educational journals until the early Twentieth Century. Through the end of the Nineteenth Century, classrooms did not allow left-handedness. Carrothers' (1964) focused on a study of 225,000 Michigan students in grades 1-12. It founded that 12 percent of the first graders and 6.6 percent of the twelfth graders were left-handed.

Some authorities have stated that as high as 25 percent of the total population have had certain left-handed tendencies; but this estimate is a little high. Williams (1962) had in his article for the Peabody Journal of Education, one of the lowest counts with the estimate being between four and eight percent were left-handed. Nevertheless, it was also Williams' opinion that if allowed more than thirty percent of the students would have been writing with their left-hands. There was a distinct possibility that many people wrote with their right-hands due to forced compliance.

Martin (1950) in the Journal of Educational Research had some views on the unfairness of schools in the 50's for their left-handed students. He suggested strategies for dealing with the child who persisted in using his left-hand. "Democracy is committed to providing an education for every child to the limit of his capacity. We are not doing our duty when we provide desks with only right arms as is so common especially in our high schools and colleges. Lighting systems that could have made it necessary for a left-handed student to write in his own hand's shadow; work benches in manual art classes which cater only to the dextral, are equally discriminating. Successful left-handed work involved left-handed work setups: work benches and cupboard arrangements, tool holders, irons, scissors, and other items that are remedial measures." (p. 531)

Yet in the United States forty-one years later, there is still discrimination of the left-handed student. An article in the Chicago Tribune of March 26, 1993 showed that left-handed students were seeking more rights in classroom furniture selection at University of California at Berkeley. This was the beginning of the invisible student's vocalizing their feelings to their teachers and

their schools even if it is only at the college levels so far.

The student who was left-handed became a member of a very large minority in our schools. Again, the book, *The Left-handed Syndrome* claims that about thirteen percent of the population was left-handed. That translated in the United States and Canada, there are thirty-three million left-handed people. "In the US, we struggle to make the lives of minorities more comfortable and even have nondiscrimination laws dealing with education and language to enforce against an individual person because of their race, age, or sex. Yet, for our largest minority, left-handedness there is no formal protection" (Coren, 1992).

John F. Kennedy (1963) said, "If we cannot now end our differences at least we can help make the world safe for diversity." (p. 3) Moreover, left-handedness was a diversity that is getting larger every year. In the thirty-five years since Kennedy's speech, the United States has embraced the concepts of diversity in many ways except being left-handed in the right-hand environment. There was still need of more improvements.

From the earlier research of Burt (1937), was seen the negative stigma surrounding left-handedness. He said,

"not infrequently, the left-handed child shows widespread difficulties in almost every form of finer muscular coordination; they shuffle and shamble, they flounder about like seals out of water. Awkward in the house, and clumsy in their games, they are fumblers and bunglers at whatever they do." (p. 287) Continuation of these unflattering views shows in education even to the present day. Leading scholars still observe the antics of the left-handed people as clumsy and messy. More than fifty years later, left-handers were still the butt of humiliating jokes and denied employment due to workplace designs that are specifically for right-handedness.

Several United States presidents have been left-handed. While stereotype allowed about left-handers being clumsy not all are. The press found that President Gerald Ford pictured as a clumsy, bumbling man but he really was only suffering from being a southpaw in the right-handedness world. So even a president of the United States who was an Eagle Boy Scout and a successful politician could not escape the prejudices of the right-handed world.

Temple and Gillet (1989) observed that the "left-handed children will obscure and smear what has just been written because their hand moves across the paper."

(p.39) Other scholars such as Tompkins and Hoskisson (1991) put forth the theory that left-handed students had inferior writing skills, so much for a more tolerant society in the US in the 1990s.

Norton (1993) that stated the increase of left-handedness in past 50 years, there is an indication of a more tolerant environment in the educational realm. Classroom teachers were beginning to use a strange concept today that it made no difference how a child writes as long as he or she writes. Norton (1993) went on to state "most teachers no longer attempt to change the handedness of left-handed student." (p. 330) So, there were some positive developments because of awareness. Yet, left-handed students could not ignore good writing skills.

Teachers have to remember that the left-handed student functioned in a classroom environment where nine out of ten students were right-handed. These classroom environments were similar in many ways to the real life environment. The work was designed for the majority and not the minority (Coren, 1992). Right-handed students had an advantage in writing skills until left-handers developed the finished product just as the dextral students; such as the important skill of good handwriting?

Next, the focus of this paper looked at things that were left-handed and right-handed in the classrooms and that dealing with by the left-handed pupil daily strengthens the left arm and hand muscles. The classroom teacher starts some of these changes but some practice and learning is then adapted to make the environment around them workable for the students who are left-handed to succeed. A basic example, of what we were dealing with, was the standard keyboard design of typewriters and computer keyboards did favor the left-handed student.

(Coren, 1992) stated "The keyboard had 57% of the work done by the left-hand by design, so now it was not unusual that many champions of speed typing contests are lefties." (p. 240) When consumers were able to purchase the first printers, they had a right-handed bias. Switches were on the right side and the paper used to pull best from the right side. Moreover, even floppy disk drives were located on the right side. However, in the politically correctness of the 1990s, printers had larger buttons and use regular paper. Now, computer have towers that are either located on the right or the left side. The mouse is also versatile and buttons are available for left-handed students.

Cameras, is another example of an item that required adaptation. They were also manufactured for right-handed

individuals. Rifles and fishing rods could be categorized in like manner. The effective teacher could get large equipment with adapted handles, grips, and levers that are less inconvenient to the left-handed students. Norman Rockwell was left-handed but he adapted with some special techniques and practiced. The biggest challenge to the left-handed student was that books are all right-handed, too (Coren, 1992).

There was a magazine called the Left-handers Magazine with right to left pages that have the first pages on the right side of the book then the left, but that was going a bit too far. An effective teacher would not let the left-handed student use metal spiral notebooks when neatness counts, because they drag their arms over these while writing and it interferes with the fluency of writing.

Enstrom (1962) stated that teachers must teach the left-handed students the proper way to write. Effective teachers will realize that more practice is required of the left-handed pupils. He went on to state several ideas that will help. Two correct ways are: effective, efficient and practical for quality, speedy, and smear-free with comfortable posture. Slanting the paper to the right

corner of the desk and forward of the wrist is the best way. Next, paper can sit straighter on the desk.

Bloodsworth (1989) stated that it appears that the teaching schools need to attempt to stress the importance of handwriting and the methodology involved for both right and left-handers. This statement was still accurate today. More individual student would become proficient in any writing or manipulation exercise that would be required in a classroom if given enough time.

If the right-handed teachers needed to remember not to sit a left-handed student too closely with the other handed student at a table, then that is a start. The redesigning of classroom environment necessary to the left-handed student was not writing in his own shadow because the light came in from the wrong side. When the number of left-handed desks per classroom improved, and then we can finally say that the right-handed teacher was aware of the environmental changes needed in their classroom.

The competent teacher made more practice time on the writing in the classroom. The effective teacher would take some of the ideas of holistic philosophy and accept that the growth begins from where a student started at. The effective teacher could bring the students who are

left-handed along to new achievements that would make them more ready for the right-hander's adult world of the future.

The elementary teacher's simple resources were very effective in teaching concise, neat handwriting skills. Teachers could have an older student or parent who is left-handed acting as an aide in the classroom. These aides could show correct ways to practice writing and other skills with the left-hand. Special tools such as three-sided larger than average pens and pencils were available to help the grasp of even the shakiest child. There were rubberized grips for the child who is left-handed, too. By the way, these also helped right-handed students.

Wasyulyk (1989) demonstrated some of the methods that he used to teach penmanship to left-handed pupils. Effective teachers would see that when a student hold the pencil too tight it causes the muscle fatigue. Placing a piece of tape beside the large knuckle of the first finger gave students a target and a place to rest the shaft of the pencil on. Left-handed pupils needed to lessen the finger pressure. If students clenched their fingers into the palm when they were writing, a ball of wadded paper held in the palm would help to relax the hand and improved

the result. Left-handed pupils needed to write with the paper placed on the diagonally on the left side of the desktop with the baseline of the paper at right angles to the left arm. They would then write less awkwardly, he wrote with much less fatigue also if limited to 20 minutes at a time for writing. Eventually, the student with practice became more rapid and concise in his writing skills.

In Chapter Two, we used A.M. Longoni's and De Gennaro's lists. A handedness performance test helps right-handed teachers see how many items in daily living really were very difficult to do for a left-hander. Trained teachers in the early 1990s were into the whole language learning process. Whole language learning said that the development of a strong self-concept is a highly valued commodity in any student. The pupils who were left-handed needed this strong sense of self also. Developing good self-esteem skills helped in acquiring writing skills at higher levels to succeed in the workforce later.

Now, in the new information age, teachers could then use the World Wide Web to get to most updated help in working with the left-handed pupils. The most fun web site was from Barry .D Benowitz, (1999) who's article,

Frequently Asked Questions for The Left-handed Population and Friends and Supporters was a great way to get the pupils to do their own research at WWW.dejanews.com/aol/getdoc.xp?AN=389307072.

There was the European Left-handers' page on line that had the quote "God created a few perfect people, the rest are right-handed" (Goldsmith, 1999, p. 81). This was great because it showed shops in Europe and shopping possibilities on the Internet for left-handers. Notice that the European Left-hander's page also started the saying that most of the left-handed people have to live by. "Being a south paw isn't always easy in our right-handed, civilized culture, but makes you special!" (Goldsmith, 1995, p. 81).

There were many article and books on the subject of left-handedness. There are just as many theories on how and why left-handedness is in existence at all. The right-handed teacher and parent had to become aware of the difficulties that the left-hander goes through just to be even with the normal or average dextral person.

The ideas and common sense approaches to improving the environment for the children with left-handedness are both inside and outside of the classroom environment. The

list of famous left-handed people in next chapter will show what others have accomplished already.

Left-handedness was an invisible handicap in most classrooms. Once a teacher became aware that the environment needed changing then the effective teacher changed and adapted. Teachers wanted as many of their students to success as possible. In the future, as more items become more adaptive to the left-handers needs more graceful and productive used would be possible.

The southpaw or left-handed pupil with more practice, more adapting and adult help did succeed in this right-handed world. That was not too such to ask. Yet, left-handers did not want to change the right-handers world just to get an even chance to survive. Left-handers just wanted to succeed, too.

FAMOUS LEFT-HANDED PEOPLE

LOOK WHO IS LIKE YOUR KIDS!

DISCLAIMER

Auntie M says that much of the information here is of common knowledge; other information has been verified by historical references. While absolute accuracy of this information cannot be guaranteed, a good faith effort has been made to ensure validity. Again, the terms "famous" and "left-hander" are both subjective judgments.

Left-handed Presidents

James A. Garfield
(1831-1881) 20th
Herbert Hoover
(1874-1964) 31st
Harry S. Truman (1884-1972)
33rd
Gerald Ford (1913-) 38th
Ronald Reagan (1911-) 40th
George Bush (1924-) 41st
Bill Clinton (1946-) 42nd

Left-handed International Politicos

Senator Bill Bradley, Rhodes
scholar, Basketball Star
Benjamin Franklin,
statesman/ publisher,
Scientist
Steve Forbes, businessman,
publisher
Ruth Bader Ginsberg, Supreme
Court Justice
Senator Daniel Inouye
Anthony Kennedy, Supreme
Court Justice
Brigadier General Lee Hsien
Loon, Deputy Prime
Minister of Singapore
Robert S. McNamara,
Secretary of Defense
Col. Oliver North, White
House aide
H. Ross Perot, businessman
William Perry, Secretary of
Defense
Nelson Rockefeller, Vice
President
Senator Hugh Scott
Robert Wagner, New York
mayor

Left-handed Musicians

Carl Philipp Emanuel Bach,
composer
David Byrne (Talking Heads)
Glen Campbell
Vicki Carr
Natalie Cole
Kurt Cobain (Nirvana)
Billy Cobham, drummer, jazz
composer
Phil Collins (Genesis)
Dick Dale (guitarist)
Don Everly (The Everly
Brothers)
Phil Everly (The Everly
Brothers)
Bela Fleck, jazz musician
Glenn Frey a(the Eagles)
Eric Gales, Guitarist
Noel Gallagher (oasis)
Errol Garner, jazz pianist
Judy Garland
Crysal Gayle
Kevin Griffin, Guitarist &
lead singer (Better than
Ezra)
Thomas Hedley, vocalist/
musician
Jimi Hendrix
Isaac Hayes
Tony Iommi, Guitarist (
Black Sabbath)
Albert King, guitarist
Melissa Manchester
Chuck Mangione, trumpet
Martina McBride, country
Music singer
Paul McCartney (the Beatles,
Wings)
Christie Marie Melonson
(Opera
George Michael (Wham!)
Peter Nero, conductor
Joe Perry (Aerosmith)
Robert Plant (Led Zepplin)
Cole Porter, song-writer

Sergei Rachmaninoff,
composer
Maurice Ravel, composer
Lou Rawls
Rich Szabo, trumpeter
Seal
Ringo Starr, (the Beatles)
Paul Simon (Simon &
Garfunkel)
Tiny Tim
Rudy Valee
Lenny White, drummer
Paul Williams, song-writer

Left-Handed Artists

Albrecht Durer
M.C. Escher
Hans Holbein
Paul Klee
Michelangelo
LeRoy Neiman
Pablo Picasso
Raphael
Leonardo da Vinci

Left-handed Actors

Don Adams
Dan Aykroyd
Eddie Albert
Tim Allen
June Allyson
Harry Anderson
Amitabh Bachchan, Indian
actor
Herschel Bernardi
Robert Blake
Matthew Broderick
Bruce Boxleitner
Carol Burnett
George Burns, comedian
Ruth Buzzi, comedienne
Sid Caesar, comedian
Keith Carradine
Khaled Chahrour, Egyptian
actor
Charlie Chaplin
George Gobel, comedian

Chuck Conners
Hans Conreid
James Cromwell
Tom Cruise
Quinn Cummings
Daniel Davis
Bruce Davidson
Matt Dillon
Marty Engles, comedian
Olivia de Havilland
Robert DeNiro
Michael Dorn
Fran Drescher, comedian
Richard Dreyfuss
W.C. Fields
Larry Fine (of the Three
Strooges)
Peter Fonda
Greta Garbo
Terri Garr
Paul Michael Glaser
Whoopie Goldberg
Betty Grable
Cary Grant
Peter Graves
Mark Hamill
Rex Harrison
Goldie Hawn
Joey Heatherton
Tippi Hedren
Jim Henson, Puppeteer
Kermit the Frog
Rock Hudson
Shirley Jones
Gabe Kaplan
Danny Kaye
Diane Keaton
George Kennedy
Nicole Kidman
Lisa Kudrow
Michael Landon
Hope Lange
Joey Lawrence
Peter Lawford
Cloris Leachman
Hal Linden
Cleavon Little

Shirley MacLaine
Andrew McCarthy
Kristy McxNichol
Steve McQueen
Howie Mnadel, comedian
Marcel Marceau, mime
Harpo Marx
Marsha Mason
Mary Stuart Masterson
Anne Meara, comedian
Sasha Mitchel
Marilyn Monroe
Robert Morse
Anthony Newley
Kim Novak
Ryan O'Neal
Sarah Jessica Parker
Estelle Parsons
Anthony Perkins
Ron Perlman
Luke Perry
Bronson Pinchot
Joe Piscopo, comedian
Robert Preston
Michael J. Pollard
Richard Pryor, comedian
Robert Redford
Keanu Reeves
Don Rickles, comedian
Julia Roberts
Mickey Rourke
Eva Marie Sanint
Telly Savalas
Jean Seberg
Jerry Seinfeld, comedian
Christian Slater
Dick Smothers, Comedian
Brent Spiner
Slyvester Stallone
Terence Stamp
Jesssica Steen
Rod Steigeer
Alan Thicke
Terry Thomas, comedian
Emma Thompson
Rip Torn
Peter Ustinov

Brenda Vaccaro
Karen Valentine
Rudy Vallee
Dick Van Dyke
Will Wheaton
James Whitmore
Treat Williams
Bruce Willis
Oprah Winfrey
Mare Winningham
Joanne Woodward
Stephanie Zimbalist

Left-handed Athletes

Francis X. Gorman (diving)
Greg Louganis (diving)
Mark Spitz (swimming)
Bruce Jenner (decathlon)
Nikita Kohloff (wrestling)
Dorothy Hamill (skating)
Giuseppe Magiarotti
(fencing)
Steve Mizerak, Jr.
(billards)

Cricket

Alan Border
Denis Compton
David Gower
Gary Sobers

Soccer

Jans van Breukelen
Dan Burbott
Johan Cruyuff
Willem Van Hanegem
Heman Medford
Pele-Edson Arantes do
Nascimento
Romario
Hugo Sanhez
Richard Witschge

Golf

Bob Bryant
Bob Charles
Russ Cochran
Connie Decker
Ben Hogan

Hockey

Tom Barrasso
Phil Esposito
Cam Neely
Terry Sawchuk
Roman Turek
Bowling
Bill Allen
Earl Anthony
Mike Aulby
Steve Cook
Patty Costello
Dave Davis
Tish Johson
Johnny Petraglia
Andy Varipapa

Boxing

Carmen Basilio
James "Gentleman Jim" Corbett
Marvin Hagler
Oscar de la Hoya
Reggie Johnson
Rafael "Bazooka" Limon
Freddie Miller
Jacker Patterson
Pernell "Sweet Pea" Whitaker

Racing

Johnny Herbert (Formula 1
driver)
Terry Labonte (NASCAR race
car driver)
Ayrton Senna (Formula 1
driver)
Karl Wendlinger (Formula 1
driver)
Valentino Rossi (motorcycle
racer)

American Football

Frankie Albert
Terry Baker
Mark Brunell
Bobby Douglass
Norman (Boomer) Ediason
Jim Del Gaizon
David Humm
Paul McDonald
Scott Mitchell
Gale Sayers
Allie Sherman
Kenny Stabler
Steve Young
Jim Zorn

Basketball

Nate Archibald
Walter Berry
Larry Bird
Adrian Branch
Calbert Cheaney
Dave Cowen
Addrian Dantley
Charles "Lefty" Driesell
Mark Eaton
Nick Van Exel
Gail Goodrich
Ron Kellogg
Toni Kukoc
Bob Lanier
Brad Lohaus
Harold Minor
Dick Motta
Chris Zmullen
Sam Perkins
Digger Phelps
Willis Reed
Guy Rodgers
Bill Russell
Wayman Tisdale
Bill Watson
Lenny Wilkins
Manuel Zuleta

Tennis

Kenneth Carlsen
Jimmy Connors
Norman Brookes
Courtney De Mone
Guy Forget
Andres "Santos" Gomez
Goran Ivanesivic
Rod Laver
Henri LeConte
John McEnroe
Thomas Muster
Martina Navratilova
Manuel Orantes
Niki Pilic
Renee Richards
Marcello Chino Rios
Monica Seles
Roscoe Tanner
Guillermo Vilas
Mark Woodforde
Dwight F. Davis, founder of
the Davis Cup in Tennis

Baseball

Steve Carlton
Whitey Ford
Paul Gibson
Lefty Grove
Ron Guidry
Al Habrosky
Steve Howe
Bruce Hurst
Carl Hubbell
Randy Johnson
Tommy John
Bob Kipper
Joe Magrane
Greg Swindell
Brady Anderson
Steve Avery
Harold Banines
Yogi Berra
Barry Bonds
Wade Boggs
George Brett
Lou Brock

Brett Butler
Will Clark
Ty Cobb
Bill Dickey
Lenny Dykstra
John Franco
Tom Glavine
Lefty Gomez
Leon "Goose" Goslin
Ken Griffey, Jr.
Tony Gwynn
Rickey Henderson
Kent Hrbek
"Shoeless" Joe Jackson
Reggie Jackson
David Justice
Wally Joyner
Sandy Koufax
John Kruk
Kenny Lofton
Fred Lynn
Kevin Maas
John McGraw
Fred Mc Griff
Heinie Manush
Dave Martinez
Don Mattingly
Jackie Mitchell
Stan Musial
Troy O'Leary
Paul O'Neil
John Olerud
Mel Ott
Rafael Palmeiro
Dan Pasqua
Babe Ruth
"Neon" Deion Sanders
Warren Spahn
Casey Stengel
Darryl Strawberry
Lou Whitaker
Ted Williams
FernandoValenzuela
Tommy Lasorda

Lawyers and Justices

Clarence Darrow

F. Lee Bailey
Melvin Belli
Marcia Clark
John F. Kennedy, Jr.
Caroline Kennedy

Journalist

Dave Barry
Edward R. Murrow
Ted Koppel
Forrest Sawyer

Miscellaneous Left-Handers

Joan of Arc, French heroine
Lloque Yapanqui, Inca
monarch
Rameses II, Egyptian pharaoh
Tiberius, Roman emperor
Alexander the Great
Charlemagne, Holy Roman
emperor
Julius Caesar, Roman General
Napoleon Bonaparte, French
emperor
Josephine de Beauharnais
King Louis XVI of France
Queen Victoria of England
King George II of England
Queen Elizabeth of Queen
Mother of England
King George VI of England
Queen Elizabeth II of
England
Prince Charles of England
Prince William of England
Fidel Castro, Cuban leader
Benjamin Netanyahu, Israeli
Prime-minister
Albert Einstein, physicist
Nicole d'Oresme,
mathematician
Henry Ford, automobile
manufacturer
David Rockefeller, Banker
Helen Keller, advocate for
the blind
Dr. Albert Schweitzer,

physician/missionary
August Piccard, inventor of
the stratosphere,
bathosphere
Edwin Buzz Aldrin, astronaut
Wally Schirra, astronaut
Dr. Mark Silver, Surgeon
Paul Prudhomme, chef
Cecil Beaton, photographer/
costume designer
Lord Baden-Powell, founder
of the Boy Scouts
Ron Reagan, son of Ronald
Reagan
Vin Scully, Sports
bradcaster
David Letterman, host
Jay Leno, host
Lenny Brue, comedian
Allen Ludden, host
Wink Martindale, game show
host
Uri Geller, psychokinetic
performer
Richard Simmons, exercise guru
Euell Gibbons, naturalist
Marie Dionne, on of the
Dionne quintuplets
General H. Normal
Schwarzkopf
Alan Funt, television
producer
Milt Caniff, cartoonist
Bill Mauldin, cartoonist
Cathy Guisevite, cartoonist
Matt Grening, cartoonist
Pat Oliphand, political
cartoonist
Ronald Searle, cartoonist
N.B. Forest, Confederate
general

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