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# **Learner Difference and Japanese Language Education**

*A Study of Field Dependence/Independence  
Cognitive Styles and Japanese Language Learning*

**JUNKO MAJIMA**

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*A Study of Field Dependence/Independence  
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1998

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## 学習者の個人差と日本語教育

—「場依存・場独立」認知スタイルと日本語学習の一研究—

真 嶋 潤 子 著

## まえがき

この度、大阪外国語大学学術研究双書の一部として拙稿を取り上げていただけたことになった。筆者は本学に赴任する前年の1994年夏に、米国ジョージア大学大学院言語教育学科外国語教育専攻で教育学博士号(Doctor of Education)を取得することができた。その際の博士論文を今回の双書にさせていただくことになったのだが、論文は英文であり、内容的にも長さからしても、日本国内での出版はかなり難しかろうと考えていた折の朗報であった。

本書は二部からなり、PART 1で和文による関連論文「隠し絵テストと第二言語学習：場依存・場独立(Field-Dependence/Independence) 認知スタイルの理論と研究小史」を『中国帰国者定着促進センター紀要』第二号(1994)から転載することにした。これは、PART 2の論文の先行研究の部分の抄訳に近いものであるが、掲載していただいた紀要が必ずしも一般に入手しやすいものではないので、読者の便を図るとともに、PART 2の論文の理解を容易にすると考えたからである。PART 2は、実際に筆者が行った研究調査とその結果からなる博士論文の全文である。

この機会を与えてくださった大阪外国語大学の学術出版委員会始め、お世話になった方々、とりわけ的確なアドバイスをくださった鈴木睦先生にこの場を借りて御礼を申し上げたい。また、併せてPART 1のための論文転載を快諾して下さった中国帰国者定住促進センターの方々にも感謝したい。

さて、語学教育の分野における「第二言語習得」にかかわる研究は、日本語教育においても昨今増えてきているようである。本書PART 2は筆者が5年余りにわたって教えてきたアメリカ人大学生の日本語学習者に焦点を絞り、その習得をより効率的に行うための手助けとなることを大目標とし、学習者の持つ学習困難点を明らかにすべく量的・質的に分析を試みたものである。

学習者が同じ教師・教材・指導の下に目標言語の学習に励んでも、到達度に差がでてくるのは、多くの教師が日常的に観察していることであろう。こ

の学習者の個人差というのは、どういうものなのか、認知スタイルによる到達度ならびに困難点の違いについて調査した。

認知スタイルには、複数の下位分類が考えられているが、本稿では特に「場依存・場独立」と呼ばれるスタイルを切り口として、その個人差と日本語学習との関連について調べようとした。

調査は当時ジョージア大学で日本語の初級コースを受講していた学生56名（但し筆者が教えたことのない者）を対象に行った。調査全体は、大きく二段階に分けられる。まず、被験者の「場独立・場依存」度を調べるため、GEFTという埋没図形テストを行った。その結果と、学習者の日本語到達度テストの結果に統計処理を施し、場独立・場依存の度合いと、日本語到達度の相関関係を調べた。

次に、場独立・場依存度と、日本語到達度の二つの要因について極めて高い者と低い者の組み合わせで4人の学習者に焦点を絞って、彼等の学習困難点を調査した。即ちその4人とは、場独立型高到達、場独立型低到達、場依存型高到達、場依存型低到達である。学習過程の実像に迫るために、長期にわたる授業の非参与観察と面接調査を行った。授業観察によって、授業の特質と学習者に要求される能力、学習者の授業参加態度等を考察した。面接調査は、焦点の4人だけでなく、指導に当たった教師、級友らにも行い、4人の特性や学習困難点を複眼的にあぶり出すことを試みた。

このように、調査の段階は、量的研究ならびに質的研究であり、その二つを融合することにより、より一層事実に迫ることができると考えたのである。特に質的研究の段階では、教室における授業の展開、および被験者の生の声をエスノグラフィーの手法を使って描写した。

調査の結果は、まず第一段階に関しては、今回入手したデータからは予想に反して二つの変数（場独立・場依存度と到達度）は統計的に強い相関を示すには至らなかった。しかし、質的研究の第二段階で詳しく学習者の学習状況について調べた結果、4人の特徴ある個人差が明らかになった。また、先行研究において場独立スタイルと言語能力について統計的に相関を示さなかつ

た研究を分析し、本研究での結果に関連する点を指摘し、説明を試みた。

第二段階の質的調査結果で殊に興味深いのは、学習者が教授形態や望まれている内容に自分の到達度を合わせるべく、様々なストラテジーを試みていることであり、そのストラテジーは認知スタイルによって異なっていることである。高い到達度を示した二人の学習者については、殊に「場独立スタイル」「場依存スタイル」の特徴とされている点、即ちそれぞれ「理論的・理性的・非社交的」「社交的」という点を強みとして、強い点を延ばし、弱い点を補うという傾向がはっきり示された。広い意味で学習者の環境適応のダイナミズムといったものが、垣間見られるところで興味深い。

「教師主導型」の授業における学習者への認知的影響というものは、案外教師が見過ごししてしまうことかもしれないが、本研究でその一端が観察された。学習者の学習困難点に関して、教師の理解と学習者の思いが必ずしも一致していないことも見い出されたが、教師が学習者の困難点を理解して、より効果的な学習の支援者となることを望むのであれば、認知スタイルを理解し、把握しておくことはその手助けとなると考えられる。

今回明らかになったことから、いくつかの日本語教育への具体的な示唆が可能であるし、また学習ストラテジーの研究や学習動機の問題、そして最近注目されている「自立した学習者」の研究へも繋がりが見い出せると考えている。

本書がどなたかの目に止まり、御批判、御教示をいただければ幸いである。

1997年 秋

真 嶋 潤 子

## 目次

まえがき .....	1
<b>PART 1 隠し絵テストと第二言語学習</b>	
——場依存・場独立認知スタイルの理論と研究小史—— .....	7
1 はじめに .....	8
2 認知スタイルにおける FDI .....	8
3 FDI 理論とその発展 .....	9
4 第二言語教育に関わる FDI 研究 .....	12
4-1 FDI スタイルと第二言語学習能力 .....	12
4-2 FDI スタイルの違いの意味 .....	15
4-3 学習者と教師の FDI との関係 .....	16
5 今後の研究課題とその方向 .....	17
5-1 FDI の理論的整備の必要性 .....	17
5-2 FDI を第二言語教育に生かすために .....	18
6 終わりに .....	18
 <b>PART 2 A Study of Field Independence and Achievement among American College Students Learning Japanese</b> .....	23
[米国大学の日本語学習者における場独立と到達度についての一研究]	
Acknowledgements .....	24
Chapter I : Introduction .....	25
Purpose of the Study .....	26
Research Questions .....	28
Significance of the Study .....	29
Definition of Terms .....	30
Limitations of the Study .....	33
Chapter II : Review of Literature .....	35



Cognitive Styles .....	35
Field Independence/Dependence and Language Learning ...	39
Chapter III : Method.....	54
Research Design .....	54
Subjects .....	57
Research Site .....	58
Instruments .....	61
Data Collection Procedures.....	64
Analysis of Data.....	71
Ethical Considerations.....	73
Chapter IV : Results.....	74
Quantitative Results .....	74
Qualitative Results .....	78
Solutions to the Problems .....	111
Summary.....	112
Chapter V : Conclusions.....	114
Discussion : Quantitative Phase .....	116
Discussion : Qualitative Phase .....	119
Discussion : Reconsideration of the Quantitative Results	124
Implications .....	127
Limitations .....	129
Validity.....	130
Suggestions for Future Research .....	131
Summary.....	132
References .....	134
Appendices .....	142

## **PART 1**

# **隠し絵テストと第二言語学習**

——場依存・場独立認知スタイルの理論と研究小史——

## 1 はじめに

多数の学習者に同時に日本語を教える時、たとえ学習者の既習度が同じでも、授業内容や学習時間が同じでも、ある期間がたてば学習者の中に歴然とした差が出てくる。これはもちろん日本語教育に限ったことではなく、この学習者の差異に着目し、様々な研究がなされている。認知スタイル、中でも場依存・場独立 (Field-Dependence/Independence 以下略して FDI) という観点からは、学習者の学習到達度ならびに問題点が、予測可能であるという仮説の検証が重要な研究テーマのひとつである。寡聞にして、日本語教育の分野ではほとんどのこのFDIに関する研究が見られないので、今回その概観をまとめてみることにした。認知心理学の面から、日本語学習者の個人差を理解し、その差に応じて、より適切な指導法に結び付ける可能性を探るための一助になれば幸いである。

## 2 認知スタイル (cognitive styles) におけるFDI (場依存・場独立)

認知スタイルというのは、認知型または認知様式とも呼ばれ、広い意味での情報の体制化と処理に関して、個人が一貫して示す様式をさす。<sup>(1)</sup>つまり、人がある事柄を学習するために、情報を知覚し、概念化し、記憶する場合や、ある問題解決に至ろうとする場合にとる様々なやり方のことである。

例えば、同じ情報を与えた場合、聴覚的刺激に敏感な学習者もいれば、視覚の鋭い学習者もいて、情報の受け取り方や記憶の仕方にも差異がでる (aurally/visually oriented)。また、第二言語学習の視点から言えば、分析的な情報を好み、文法的な説明を非常に役立つと感じる学習者もいれば、さして必要ではないと感じる者もいる (analytic/Gestalt)。また不確かなことが多少あっても平気で先に進める者と、不確かなことが許容できない者もいる(あいまいさへの耐性 : tolerance of ambiguity)。

認知スタイルにどういった属性が含まれるかについては、研究者間でまだ合意がなされていない。Ausubel (1968) は18種類以上のスタイルがあるとしたし、Hill (1972) は29のスタイルをあげている。ただし、その中の

いくつかは重なり合っている部分もある。

数ある認知スタイルの中で、言語教育の分野で着目されてきたものは限られており、最近ではLarsen-FreemanとLong (1991) が、五つの認知スタイルを、第二言語学習に大切なものとしてまとめている。即ち、①場依存／場独立 (field dependence/independence)、②カテゴリーの幅 (category width)、③認知的熟慮性／衝動性 (cognitive reflectivity/impulsivity)、④聴覚／視覚優先性 (aurally/visually oriented)、⑤分析的／包括的スタイル (analytic/Gestalt) である。

さて、そのうちで、認知スタイルと言った場合に必ずと言っていい程取り上げられる場依存／場独立 (FDI) については、特に心理学者 H. A. Witkin らが研究を重ねてきたが、場独立性とは、ある要素が埋め込まれている場から、その要素を取り出すことができるということで、現在その性向は次に述べる埋没図形検査 (EFT) と呼ばれる隠し絵テストで測られるのが普通である。

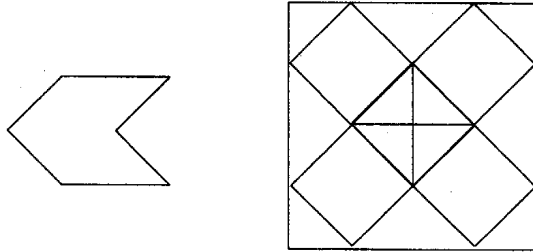
### 3 FDI理論とその発展

FDI (場独立／場依存) というのは、1960 年代から 1970 年代にかけて心理学者 H. A. Witkin らが確立していったが、その研究は人間がまわりに手がかりがない場合に、垂直というのをどう認識するかを調べる実験から始まった。暗がりの中で、四角い枠と一本の棒を色々な角度に置いて照らしだし、被験者がその棒を垂直だと認識する点を調べた (棒-枠組み検査: Rod-and-Frame Test)。被験者の位置も角度を変えられる椅子を使って色々に変えて、垂直の認識を調べることもなされた (身体調節検査: Body Adjustment Test)。そして個人により結果に大きい差が、しかも一貫して出ることが発見された (Witkin et al., 1971 他)。つまり、視覚の手がかりに頼る度合、重力に頼る度合などによって、人により違いがでるということである。

Witkin らはそれまでのその種の研究結果に加えて、Gottschaldt (1926) の隠し絵テストを利用して 埋没図形検査 (Embedded-Figures Test 略して

EFT と呼ばれる。)を開発した。これは複雑な図形(図1の右の図形参照)の中に単純な図形(図1の左の図形参照)が埋め込まれているもので、被験者には、指示された単純な図形を限られた時間内で見つけ出すという課題が与えられる。<sup>②</sup> 一種の図形認識テストである。

図1：EFTで使われる絵の例



このEFTを多数の被験者に一度に行えるように、後にGEFT (Group Embedded Figures Test) が開発された。

これらの検査で判断される認知スタイルについて、Witkinら(1977)は次のように説明している。まず、場独立的な個人(field independent 以下略してFI)と場依存的な個人(field dependent 以下略してFD)の学習者としての特質については、FIの強味は認知的再構築スキルに起因し、FDの長所は社会的感受性が高く、対人スキルつまり社交術に長けていることであるとしている。

具体的には、FIの特徴は①分析ならびに再構築という認知の中間過程をうまく使う、②積極的な学習態度で、仮説検証を行う、③目立つ手がかりにとらわれにくい、④内的な目標に従って行動し、課題(タスク)遂行の動機を高く持つなどである。

これに比べて、FDの特徴は①中間過程をあまりうまく使わない、②受け身で傍観者的な学習態度をとりがち、③目立つ手がかりにとらわれやすい、④外的な動機づけに影響されやすい、⑤社会的な人間関係や意味合いのある情報を覚えたり、学んだりするのが得意であることなどである。ここで、⑤以外はいわゆる「学習」のためにFIには有利で、FDには不利なことばかりであることは、注目に値する。

FIとFDの一般的人格に関して、FIは「冷たい、他人と距離を保とうとする、個人主義的」などという印象を与えることが多いのに対して、FDは「暖かい、思いやりがある、他人と積極的に交わる」と思われることが多い。

さらにWitkinらは、FIとFDの差は職業選択にも現われるとしている。FIは典型的には科学、数学、医療関係に従事することが多いが、FDはより対人接触の多いソーシャルワーカー、宗教家、社会学系の教師、営業・広報担当者などを選択することが多いという (Witkin et al., 1977, p. 44)。

また男女差が、小さいながらもはっきりとあると報告している (Witkin et al., 1971)。その差は青年期に始まり、平均して女性はFDの傾向が強く、男性はFIの傾向があるという。

その他に、どういう暮らし方をしている文化圏の人であるかによって、文化差もあると指摘する研究もいくつかある (Witkin & Berry, 1975; Hansen, 1984; Berry, 1991 他)。

言語教育、特に第二言語教育においてEFTを使った研究は、数が限られているが、他の様々な分野で応用されたものは、今までに非常に多数に上っている。<sup>③</sup> このFDIの理論を第二言語教育にあてはめてみると、どのようなことが言えるのであろうか。

Witkinらの主張によると、上記のようにFIの人は分析的で認知的な再構築力に優れている。一方、FDの人は全体的包括的で人間関係に長けている。この違いの意味するところは、FIは文法的な説明や語彙リストを覚えるなど、組織だった体系的な学習方法を好み、FDはそのような学習よりも、実際に目標言語の話者と会話をしていく中で、経験から言語を習得していくのを得意とする傾向にある。即ち、FIは系統立った語学クラスで学ぶのを好み、FDはむしろ、実際に自然な場面でコミュニケーションすることによって学ぶのを好むということになる。後に見るように、例えばHansen & Stansfield (1981, 1982) は、FIは言語学的能力に優れ、FDはコミュニケーション能力に優れているという仮説を立てて、その検証を試みている。FIが言語学的能力に優れているというのは、彼等以外の研究者らも報告しているのであ

るが、FD がコミュニケーション能力に優れているということを証明する証拠は十分出されていないのが現状である。

また、子供は大人よりも概してFDである傾向が強いと言われているのであるが、このことはKrashen (1981) のいう言語の「学習 (learning)」と「獲得 (acquisition)」の区別と重ね合わせると興味深い。彼は、意識的に法則を教わって訓練することによって成り立つ「学習 (learning)」と比較して、無意識的な過程を経て習得される「獲得 (acquisition)」は子供の言語習得に特徴的であると主張している。ここでFIは「学習 (learning)」に長け、FDは「獲得 (acquisition)」に長けているとすると、子供がFDであるのはKrashenの主張とつじつまが合うことになる。

以上のような理論を検証するため、以下に紹介するような様々な実験を含む研究がなされてきた。

#### 4 第二言語教育に関わるFDI研究

第二言語教育に関するFDI研究のテーマは、広くFDIが第二言語学習にどう関係しているのかということが、重要な位置を占めている。FDIが学習者の第二言語学習到達度と関係があるのか、第二言語習得の成否を予測することができるのか、FDIスタイルの違いの意味は何か、また学習者と教師の認知スタイルは相互に関係があるかという点などが、論点である。これらの問題について、主要な研究を紹介する。

##### 4-1 FDIスタイルと第二言語学習能力

もともとWitkinらは、FDIと第二言語学習の関係について、FIスタイルの学習者は分析的で文法学習や語彙リストの学習などを得意とし、FDの学習者は、直接人と接することによって学ぶ方を得意とするという仮説をたてていた。この理論的仮説を検証するため、様々な研究がなされてきた。以下に八つの重要な研究を掲げておく。

(1) Naiman, Fröhlich & Stern (1978) の研究では、カナダでフランス

語を学んでいる英語母語話者のFDIスタイルを調べたところ、FIであることと、フランス語能力とが正の相関を示した。この研究では、フランス語能力は文を聞いてそれを繰り返すイミテーション・テストと、聞き取って理解する力を調べるテストで測定された。結果は上級の学習者において、より顕著に現われ、FIであるほど高いフランス語能力の獲得を示した。

(2) Bialystok & Fröhlich (1978) は同じくカナダでフランス語のクラスを対象に研究したが、FIスタイルは語学学習の適性ということに深く関係しており、そして、その適性はストラテジーの使用に関係していると言っている。しかし、学習到達度に直接関係しているのは、適性とストラテジーの使用であって、FIスタイルではないと主張している。

(3) 前章で少し触れた Hansen & Stansfield (1981) は、アメリカの大学のスペイン語の一学期目に登録していたアングロ系の学生約三百人を対象に調べた。スペイン語の能力は言語学的能力、コミュニケーション力、そして総合力の三つに分けられた。その中の言語学的能力はスペイン語の知識を測る筆記試験で、コミュニケーション力は独自の口頭スキル評価法で測られ、そして総合力はその学期の最終成績が使われた。その結果、FIスタイルが第二言語学習に有利であるということが報告されている。特に、言語学的能力と総合力において、顕著であったが、コミュニケーション力ではFDとFIの差はほとんど見られなかったという。

(4) Hansen & Stansfield (1982) はまた、FIスタイルの学習者の学習到達度はより高く、中でも女性でFIスタイルの学習者は常に上位に立ち、男性でFDスタイルの学習者は常に最下位になる傾向があったと指摘した。彼等は後述するように、学習者と教師の認知スタイルの関係についても調べている。

(5) 同じく Stansfield & Hansen (1983) の報告によれば、FIスタイルとスペイン語のテスト結果は正の相関を示し、特にクローズ・テスト (cloze test: 何語毎かに虫食いになった文章を、前後の文脈から判断して完成させるテスト) と高い相関を示した。Witkin ら (1977) が言うように、FDIスタイルが問題解決のタスクにおいて、仮説検証力、推測能力、再構成能力に



関係があるとすれば、クローズ・テストと高い相関があるのは尤もなことであると考えられる。

Stansfield らは、しかしながら、彼等の研究結果からこのクローズ・テストを一般の語学力を測定する試験として使用するのには、特定の文化圏の被験者に不利かもしれないと忠告している。というのも、クローズ・テストの結果は FI スタイルに左右されるのであり、その FI スタイルは文化によってかなり決定されるからで、クローズ・テストが純粹に語学力を測定しているとは言えないからであると言っている。この問題に関しては、実験的なデータも少なく、文化と認知スタイルの研究データも豊富にない現状では、はっきりしたことは言えないが、議論の余地がありそうである。

(6) Roberts (1984) は、FI スタイルの学習者は様々な語学テストで高得点を記録し、ACTFL の発話能力試験 (Oral Proficiency Interview) を除く二種類の標準テストでの高得点を予測した。

(7) Chapelle & Roberts (1986) が、第二言語としての英語を学んでいる日本人、スペイン人、アラブ人からなる 61 名の学習者について調べたところ、全ての語学テストで、FI スタイルの者が FD スタイルの者を凌いだという。この研究では、あいまいさへの耐性 (tolerance of ambiguity) と FI スタイルが、良い語学学習者の条件の中で有力なものであると言われている。

(8) Cathcart, Strong & Fillmore (1979) は幼稚園児を被験者とした研究で、FI の子供は FD の子供に比べて、語彙力が高いという報告をしており、年齢が低くても、FI スタイルが言語学習に有利であることを示している。<sup>(4)</sup>

以上の研究報告から言えるのは、FI スタイルが第二言語学習に有利なようだということである。ここではっきりと断言できないのは、たとえば Day (1984) のように FI と FD で有効差が出なかったという報告もあるからである。また、学習到達度と FDI スタイルの関係を調べる研究の場合、学習到達度の指標は様々であり、一般化しにくいことも指摘できる。

FDIスタイルと学習到達度に加えて、他の変数を加えた研究も多数行われている。たとえば、授業のやり方という変数に着目してその認知スタイルとの関係についての研究があるが、それによると、FIスタイルの学習者は「正式な語学指導」に有利であるようだ (d'Anglejan & Renaud, 1985)。別の言い方をすれば、FIスタイルは演繹的な指導を好み、FDスタイルは帰納的な指導を好むということである (Abraham, 1985)。この点について、Chapelle (1988) も研究しているが、彼によれば、FIスタイルの学習者は、特に個別のタスクからなる語学テストの受験技術に長けているのではないかとということである。

また、Carter (1988) は、学習者の FDI 認知スタイルと語学学習到達度テストと授業のやり方との関係を調べた。彼女は明確な FD スタイルと FI スタイルの間の中間スタイルを、独自に FC (field central) と呼んだが、学習到達度修了テストでは FI と FC が FD を上回り、ACTFL の発話能力試験では FD と FC が FI を凌いだと報告している。また授業のやり方を文法中心のものと、コミュニケーション中心のものにして比較したが、いずれのクラスでも FI の学習者が FD よりも優れた能力を獲得するに至り、授業のやり方自体は、学習結果にさほど大きい役割を果たさなかったようである。

#### 4-2 FDIスタイルの違いの意味

ではここで、FD と FI スタイルの学習到達度が異なる、即ち FI の方が FD より一般的に学習に有利であるという多くの研究結果をふまえて、その差が何に因っているのかという点を考えてみる。考え方としては、FD と FI が異なる認知過程を作用させているとする (Goodenough, 1976) か、それとも同じ過程であるが、その効率が異なると見るべきか (Davis & Frank, 1979; Hennessey & Nahinsky, 1980 他) の二通りある。今までのところ、FD と FI が異なる認知過程を使ったという証拠は十分なく、むしろ後者のように、FD と FI はプロセスが異なるのではなく、FD の学習者のプロセスの仕方が FI ほど効率的ではないというように理解する方が合理的であるようだ。例え

ば、FDの人には、一見不要に見える情報をうまく利用することが難しい。また、まぎらわしい情報があると、関係のある情報をうまく選んで注意を向けることが難しい。視覚的に探索をする場合、機転がききにくく、情報をゆっくり与えてもらいたがるという特徴があった (Avolio, et al., 1981 他)。このことについては、今後人間の情報処理過程の研究が進めば、もっと得るところがあるかもしれない。

### 4-3 学習者と教師のFDIとの関係

さてここまでは、学習者の認知スタイルのみを見てきたが、教室での語学学習を考えた場合、教師の認知スタイルと関係はないのだろうか。これについては、学習者と教師のFDI認知スタイルが一致すれば、相互に引き合う力が働き、教師はその学習者の学習到達度をより高く評価するという報告と、影響は見られないという報告がある (Witkin et al., 1977)。Witkinらは認知スタイルの一致による対人関係へのプラスの効果があるのは妥当だとしたが、それを教育の分野に応用するのは、認知スタイルの一致と学業成績の上昇がはっきり認められるまで注意を要するとしている。

前述の Hansen & Stansfield (1982) の研究では、学習者の認知スタイルと、教師のとを調べて関係を見たが、教師のスタイルが学習に及ぼす影響は、学習者自身のスタイルに比べて非常に小さいと報告している。Roberts (1984) の研究では教師と学習者の認知スタイルの一致は重要性を示さなかった。これは、Hansen & Stansfield (1982) の結果とも合致している。これらの研究も含めて、Garlinger & Frank (1986) が検討した (メタ・アナリシスの) 結果、概して認知スタイルの一致は不一致の場合よりは良いということであった。しかし、その統計学的重要度は小さく、過大評価を戒めなくてはならない。実際のところ、効果があつたりなかったり、実験データが少ない現時点でははっきりしたことを結論づけることはできない。

ただ、教師が学習者と自分自身の認知スタイルを知らされて意識したことによって、学習者の個人差に敏感になり、指導の仕方がきめ細かくなった結

果、指導性の高い雰囲気を作り出す結果になったという研究はあり、興味深い (Doebler & Eicke, 1979)。しかし残念ながら、学習効率が上がったかどうかを調べることはこの Doebler らの研究には含まれていなかったもので、これは将来の研究に待たれるところである。

## 5 今後の研究課題とその方向

### 5-1 FDIの理論的整備の必要性

認知スタイルの研究でよく問題になることは、それが知力 (intelligence) や能力 (ability) とは異なるのかということである。知力や能力はその有無、または高低のものさしで測られるが、スタイルは人の最も典型的または特徴的な行動様式であるという性格を持っている。従って、知力や能力はあったほうがよいという価値判断に結び付くが、スタイルは過程の違いであるので、理論的には到達点に差はないことを前提とし、価値判断には結び付かない。しかし、認知スタイルがどちらなのか、スタイルであるから、知力や能力では全くないのか、議論の余地があるのが、現状である。

Witkin ら (1977) が言うように、認知スタイルは優れたものから劣ったものへという一方向のものさしではなく、ある特徴的な行動から、それとは相対する特徴的行動への両方向へのものさしを使用するという性格を持っているとする考え方がある。その場合、従って、何をする状況か、遂行すべき課題によってスタイルの適不適の差はあっても、個人の認知スタイルだけをもって、絶対的にどのスタイルが良い悪いといった価値判断はできないとされている。従って、FDI のスタイルも価値判断は受けないと主張されている。

しかし一方で、認知スタイルの FDI はやはり能力であると主張する研究者が大勢いることも事実である (例えば、Cronbach & Furby, 1970; Kogan, 1983; McKenna, 1984; Missler, 1986; Demick, 1991)。<sup>⑤</sup>

最近、FDI は能力とスタイルのどちらにも関わっている (Davis, 1991) という見方もでてきたが、それが能力かスタイルかという問題は未だ決め手がないまま釈然としない状態が続いている。

もう一つの大きい理論的問題点は、RFT (棒-枠組み検査: Rod-and-Frame Test) と EFT (埋没図形検査: Embedded-Figures Test) の関係が説明されつくしていないことであろう。FDI の概念の本質的性格は何なのか。FDI が複合概念なのか。RFT と EFT が高い相関を示すとは言え、これらの根本理論は異なるのかどうか疑問である。

## 5-2 FDIを第二言語教育に生かすために

Witkin ら (1977) は、学習者の FI/FD の差に応じて教育的に適切な指導ができると言っている。しかしそれには、FI と FD それぞれのための補完的で効果的な指導法を編み出さねばならないが、そのための本格的な研究はまだほとんどなされていない。Abraham (1985) の実験では、第二言語学習者に演繹的、または例示的帰納的に、ある文法項目を学ばせ、認知スタイルの違いとの関係を見た。その結果、FI の学習者は演繹法でよりよく学べ、FD の学習者は帰納的に学んだ場合に FI の学習者と同様の効果をあげたと報告されている。もしこのような結果の一般化が可能であるならば、日本語教育の現場でも応用できると考えられるが、そのためにはさらに具体的な検証が必要であろう。

また、前述のように教師が認知スタイルを理解、認識しておくことの教育的波及効果が認められるようなので、これは実用に供する道を示しているのではないかと思われる。

## 6 終わりに

我々語学教師は、学習者ができるだけ効率よく語学を習得できるようにと願っている。そのために、学習者間の差を的確に把握し、一人一人の要求や問題点に応じて、適切に指導していくために様々な工夫をしているのである。認知スタイルを理解することも、そのための手段となることができのかもしれない。心理学の分野を中心に、FDI に関連して非常に多くの研究や応用の試みがなされてきたが、第二言語教育でも本稿でとりあげたように FDI スタ

イルと学習到達度との関係を中心に研究がなされてきた。それらの結果が目標言語によらず同じなのか、日本語教育においても同様であるのか、また学習者の母語による違いはないのかという点についての検証がまずなされるべきであろう。それとともに、日本語の独自性をも視野に入れて、例えば文字教育と認知スタイルの関係など、今後さらに実証的な研究が待たれるところである。

#### 注

- (1) 「新版心理学辞典」参照。
- (2) 被験者は単純な図形を数秒見た後で、それが埋め込まれた複雑な図形を見せられる。二つの図形を並べて見比べることは、許されない。試験官は被験者が単純な図形から複雑なものに移ってから何秒で見つけられるかを、計測する。被験者が、単純な図形を見直すことは許されるが、その場合も二つの図形を並べて見比べることのないようにし、何回見直したかも記録しておくことになっている。詳しくは、Witkin et al. (1971) *A manual for the Embedded Figures Tests* を参照のこと。
- (3) FDIに関連した博士論文の数だけでも1977年から1987年に限ってすら、390を超えている。(Dissertation Abstracts International より)
- (4) ただし、これは「学習 (learning)」と「獲得 (acquisition)」の区別を視野に入れた研究ではないことに注意する必要がある。
- (5) 「場独立 (field independence)」という用語そのものに肯定的なニュアンスがあり(特に英語で)、「場依存 (field dependence)」はその逆でよくない響きがあると受け取られるので、この用語を避けて、「場独立度の高い/低い (high/ low field independence)」と表現することを提案する研究者もいる (Omaggio, 1993)。

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**PART 2**

**A STUDY OF  
FIELD INDEPENDENCE AND  
ACHIEVEMENT  
AMONG AMERICAN COLLEGE STUDENTS  
LEARNING JAPANESE**

[米国大学の日本語学習者における場独立と到達度についての一研究]

## ACKNOWLEDGEMENTS

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## CHAPTER I

### INTRODUCTION

In recent years, studying Japanese has become quite popular in the United States (Jorden & Lambert, 1991, p. 1). This is mostly because the political and economic ties between the two countries have become stronger ; consequently, the general interest of Americans toward Japan has increased considerably. Students at the University of Georgia are no exception, and enrollments in the Japanese program have been rising steadily. Many of those who take Japanese are students of business or international relations. The edge that one can gain in the job market by knowing Japanese is a very strong motivating factor.

Despite such strong motivation, it is not a simple task for an American student to learn Japanese, a "totally foreign language" (TFL) (Jorden & Lambert, 1991, p. 1). It is well known that attrition rates of 50% or higher have been recorded in Japanese language courses after the first quarter or semester at the college level in the United States (Jorden & Lambert, 1991). Learning the language involves two major difficulties : the different operating system of Japanese grammar and the ideographic writing system. From the Japanese language teacher's point of view, there is another major challenge : how to develop the four language skills—speaking, listening, reading, and writing— in a balanced way.<sup>1</sup>

During five years of recent teaching experience at the University of Georgia, the author has taught a wide range of students, from quite successful learners of Japanese to some less successful ones. Questions arise repeatedly concerning the differences between high and low achievers, and

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<sup>1</sup> The goal of the Japanese program at the University of Georgia is stated as "to develop simultaneously all four basic language skills : listening, speaking, reading and writing" (1992).

the ways in which teachers of Japanese can assist weaker learners in overcoming or coping with learning challenges.

Researchers in the field of second language acquisition have been accumulating data towards establishing the similarity of learners and the universality of learning processes in the past twenty years or so, but researchers started paying special attention to individual difference only recently (Littlewood, 1984, p. 51; Skehan, 1989, p. 1). Individual difference is, however, becoming one of the most important issues ; it is "one of the major conundrums in the second-language acquisition field" (Larsen-Freeman & Long, 1991, p. 153). Approaches for individual difference research have been classified in different ways (e. g., Brown, 1994, p. 103 ; Littlewood, 1984, p. 51; Skehan, 1989, p. 1). Cognitive style, sometimes called learning style, is one of these factors, and it is always included in the classification of individual differences. Among several cognitive styles, field independence/dependence has received the most attention from researchers of second language learning.

The present study is the first of its kind to investigate the relationship between the degree of field independence/dependence and achievement in Japanese among American college students. Since Japanese instruction has been in great demand only recently, studies on the process of learning the language are scarce, especially those which focus on American college students.

### Purpose of the Study

The purpose of the present study was to investigate the relationship between the degree of field independence/dependence and level of achievement of American college students learning Japanese and to identify problems and difficulties with which the students were faced. The field in-

dependence/dependence inquiry derives from a quest for an efficient teaching method of the language which accommodates learner differences. Empirical evidence was collected in the two phases described in detail below.

Literature on second language acquisition suggests that students' cognitive styles play an important part in successful language learning. In the first phase of the present study, the relationship between a particular cognitive style, namely field independence/dependence, and achievement in Japanese was examined. Students' achievement was assessed on the basis of four aspects of performance: 1) oral achievement, as reflected in the results of oral examinations; 2) grammar knowledge from scores on written examinations; 3) achievement in mastering Japanese orthography as shown in scores on written examinations over Chinese characters (Kanji hereafter), and 4) overall achievement in terms of course grades. All four aspects of achievement were presented in numerical figures. The numerical scores of all students were matched with their degrees of field independence/dependence as measured by the Group Embedded Figures Test (GEFT). These data were expected to indicate whether field independence and field dependence were correlated to achievement.

Such data were not expected to provide information about specific difficulties each individual student with a given cognitive style had in learning Japanese. The purpose of the second phase of the data collection was to identify the specific difficulties of individual learners.

Classroom observation and individual interviews were the methods chosen in the second phase of this study to investigate the problems or difficulties of learners with different cognitive styles and levels of achievement. The students' problems and difficulties were observed through their interaction with their instructors and their peers in the formal class-

room situation. Individual interviews with the students were critical in understanding how they perceived their own problems and difficulties. Individual interviews with the instructors and peers also provided valuable data for understanding the students' learning challenges from different perspectives.

### Research Questions

This study attempted to answer the following questions :

1) What is the relationship between the degree of field independence/dependence and achievement in learning Japanese? This question encompasses four sub-questions :

1-a) What is the relationship between the degree of field independence/dependence and oral performance?

1-b) What is the relationship between the degree of field independence/dependence and grammar knowledge?

1-c) What is the relationship between the degree of field independence/dependence and mastery of Kanji?

1-d) What is the relationship between the degree of field independence/dependence and overall achievement as shown in the course grades?

2) If there is a positive correlation between field independence/dependence and achievement, can the degree of field independence/dependence be a predictor of achievement in learning Japanese in terms of oral performance, grammar knowledge, Kanji mastery, and overall achievement?

3) Do high achievers in oral performance also show high achievement in grammar knowledge and in mastery of the orthography? In other words, are the students' language skills well-balanced in terms of oral performance, grammar knowledge, and mastery of the orthography?

4) What are the problems low achievers face in the process of learning Japanese, and how do they address those problems? Do high achievers experience difficulties in learning Japanese, too?

5) What do students perceive as most helpful in solving their problems: drills in class, explanations by the teacher, written quizzes, oral checks, self-study, homework, help from peers, assistance from native informants present in the class, language lab work, or computer-assisted practice? <sup>2</sup>

### Significance of the Study

A concern with accounting for individual differences in the field of second language acquisition has been shared by numerous teachers and researchers, including this author. Research interest has been growing surrounding cognitive style as an important construct of individual differences. Among all the cognitive styles identified, field independence/dependence has particularly attracted numerous researchers and educators in various content areas, including second language acquisition, and continues to be "one of the most researched learning style [cognitive style] areas" (Reiff, 1992, p. 13).

In second language acquisition research, it was hypothesized that a non-verbal factor such as field independence/dependence could explain learner differences, and previous research generally supported the hypothesis (d'Anglejan & Renaud, 1985; Carter, 1988; Chapelle & Abraham, 1990; Chapelle & Roberts, 1986; Hansen, 1984; Hansen & Stansfield, 1981, 1982; Naiman et al., 1978; Roberts, 1984; Stansfield & Hansen, 1983). The author considered it significant to investigate whether the cog-

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<sup>2</sup> Native informants were Japanese students who helped in the classes every day, with their main role to aid the instructors. There were nine such native speakers in total for Japanese 103.



nitive style of field independence/dependence could explain achievement in the case of learning Japanese as a foreign language, and to investigate what difficulties are related to field independence/dependence. It was predicted that results from this investigation could be applied to the classroom as well as filling a void in the field of research.

Since Japanese language study has only recently been included in the curriculum of most of the colleges in the United States, there are hardly any studies on how American students learn the language. This study aims at contributing to the body of knowledge already existing in both the area of foreign language education (especially learning Japanese as a foreign language) and the area of field independence/dependence research. Secondly, this study will help us understand the problems students face in studying Japanese. Thirdly, it will help us to understand what aids the learners most. An understanding of cognitive styles would enable both teachers and students to be able to reduce frustration and increase variability and flexibility, among other advantages (Reiff, 1992, pp. 5-7). The findings of this study may help show us how to teach and learn Japanese more efficiently.

### Definition of Terms

In the present study, two terms need to be specifically defined: *achievement* and *field independence/dependence*. The concept of achievement in learning Japanese, in this study, includes the following constructs: 1) oral performance, 2) grammar knowledge, 3) mastery of the orthography, and 4) overall achievement, within the scope of what has been taught in Japanese 101 through 103 at the University of Georgia.

The word *writing* in this study refers to Japanese orthography and not to composition or creative writing. Orthography was given priority in

the syllabus, due to the complexity of the Japanese writing system. Therefore, composition, although practiced a few times, was not even considered in the grading in Japanese 103.

Japanese orthography consists of three sets of characters : two sets of syllabaries, Hiragana and Katakana ; and Kanji (Chinese characters). Hiragana and Katakana have 46 basic characters (and forms of combinations) respectively, and they possess only phonetic value. Kanji are ideographic ; they carry meaning as well as indicating pronunciation. One thousand nine hundred forty-five Kanji were selected and designated by the Ministry of Education of Japan as "Jouyou Kanji [Everyday Use Kanji] " to be taught in Japanese schools. The students in Japanese 103 had learned both Hiragana and Katakana, and about 200 Kanji by the end of the 103 quarter. List of Kanji taught in the Japanese courses is included in Appendix A.

In the present study, the four constructs of achievement were assessed by the following instruments : 1) results from oral examinations in Japanese 103 ; 2) scores on the grammatical portion of the written mid-term and the final examinations in Japanese 103 ; 3) scores on the questions on Kanji in the written portion of the mid-term and the final examinations of Japanese 103 ; and 4) overall course grades in Japanese 103.

Another important term, *field independence/dependence*, needs to be defined. If a person can easily find simple geometric figures within complex designs, the person is termed field-independent. If he or she has difficulty in isolating an element from its background field, he or she is called field-dependent. Witkin and his colleagues initially defined field independence/ dependence as follows :

[T]he extent to which a person perceives part of a field as discrete from the surrounding field as a whole, rather than embedded; or the

extent to which the organization of the prevailing field determines perception of its components; or, to put it in everyday terminology, the extent to which a person perceives analytically. (Witkin et al., 1977, p. 7)

There has been a question as to whether field independence/dependence is a style, as claimed by Witkin, or is in fact an ability. The question has become controversial because a number of researchers have reported highly positive correlations between field independence/dependence and measures of intelligence (e. g., McKenna, 1984; Missler, 1986). The researchers have argued that the measures of field independence/dependence share variance with measures of intelligence, and that field independence/dependence, therefore, should be viewed as cognitive capacity or ability (Wapner & Demick, 1991, p. 406). The commonly used instruments to measure one's degree of field independence/dependence, such as the Embedded Figures Test and the Group Embedded Figures Test, actually measure a cognitive ability to perform a task, according to the GEFT booklet. Testees do not choose a particular "style"; they simply either do or do not have the ability to carry out the task of disembedding figures.

This issue was further handled in the work of Chapelle (1988), Guilford (1980), McKenna (1984), and Missler (1986). For example, Guilford's study (1980) presented evidence for positive correlations between scores for field independence/dependence and scores for the Wechsler tests of Block Design, Picture Completion, and Object Assembly (Vernon, 1973; Wachtel, 1972). This study suggested that field independence/dependence is actually an ability. Guilford's assertion is contradictory to Witkin's argument that field independence/dependence is not an ability, and that there is no predictable difference between field independence and field dependence in Wechsler's verbal-comprehension test

(Witkin et al., 1971, p. 13). Witkin, however, modified his definition of field independence/dependence from solely a cognitive style, to a construct encompassing abilities as well (Witkin et al., 1981). Their revised definition includes "three major constructs: reliance on internal versus external referents; cognitive restructuring skills; and interpersonal competencies" (Witkin & Goodenough, 1981, p. 54). In the present study, this revised definition is used.

This "style" versus "ability" controversy has not been completely resolved. According to a recent study (Davis, 1991), information processing research coupled with field independence/dependence research may serve to clarify the issue. Davis believes that the currently available research results support the view that both ability and style are involved.

The term "field-dependent," for some people, conveys a negative impression, and a few researchers have suggested using "high or low" in the scale of "field independence" (Rieken, 1991, p. 7) or using "field sensitive" (Ramírez and Castañeda, 1974, p. 75) instead of "field dependence". In this study, however, I will use the conventional terms of "field independence (FI)" and "field dependence (FD)" in order to be consistent with the majority of previous studies.

### Limitations of the Study

A number of students had withdrawn from the courses before data were collected for this study, and the reasons why they withdrew are not known. There might have been a certain unknown commonality among those who withdrew. Therefore, the body of the subjects selected for the study did not necessarily constitute a representative sample of American students taking Japanese. Hence, caution should be used in the generalization of the findings.

The number of subjects in the second phase of the study is four, one from each of the following four categories, as measured by the four criteria mentioned earlier :

- Field-independent and high achievement (FI+)
- Field-independent and low achievement (FI-)
- Field-dependent and high achievement (FD+)
- Field-dependent and low achievement (FD-)

Since there is a chance that these four students were not totally representative of each category, generalization of the findings needs to be done with care.

## CHAPTER II

### REVIEW OF LITERATURE

Previous literature implies that there is a correlation between field independence/dependence and achievement in Japanese, an idea which was investigated further in this study. The first section of this chapter will discuss studies of cognitive styles in the field of language learning. This will lead to the second section, which deals with the major studies on field independence/dependence.

#### Cognitive Styles

Cognitive style is the particular way or manner in which an individual chooses to solve a problem or to learn something. It involves perceiving, conceptualizing, and recalling information. When learning a second language, some learners may be more analytical and find grammatical explanations helpful, yet others may not need explanations. Some are more visually oriented than others, and some learners are more tolerant of ambiguity than others.

Cognitive styles are distinguished from "intelligence" and "ability" by many theorists. Messick (Omaggio, 1981) points out that abilities measure maximal performance, but cognitive style characterizes typical performance. Abilities are unipolar, in that they vary from none to a lot. Cognitive styles, on the other hand, are bipolar, ranging from the extreme of one quality to the extreme of a contrasting quality. Witkin et al. (1977), for example, explain :

Because scores from any test of field dependence/independence form a continuous distribution, these labels reflect a tendency, in varying degrees of strength, toward one mode of perception or the other. (p.7)

Also, abilities are value-laden, in that having more ability is better than having less, whereas cognitive styles are "value-differentiated," since sometimes one style is more effective in performing a given task, but less useful in doing something else (Omaggio, 1981, p. 3). For example, reflectivity/impulsivity is one of the important cognitive style distinctions. Impulsive people tend to make quick decisions, even though they may often be wrong. Reflective people, on the other hand, tend to respond more deliberately and slowly (Omaggio, 1981, p. 5). Impulsive learners may appear more spontaneous and fluent in communication, but they may score lower in written tests. In contrast, reflective learners may score higher on written tests when they can take enough time to answer, but they may appear less fluent in communication because they are slower than the impulsive learners. Thus, impulsivity/reflectivity is essentially value-free.

Various dimensions of cognitive styles have been identified and investigated, but it seems that there is no consensus among researchers on what cognitive styles comprise. Ausubel (1968) identified at least 18 different cognitive styles. Hartnett (1985, p. 18) showed dual-cognitive-style models in relation to the information-processing functions of the hemispheres of the brain. The five styles Hartnett identified are: field independence/ field dependence, verbal/imaginable, analytic/relational, serialist/holist, and sequential-successive/simultaneous synthesis.

In the field of language learning, only a few of these various cognitive styles have received attention and have been investigated. Brown (1973) reviewed cognitive styles in relation to second language learning, such as reflective-impulsive thinking, broad-narrow categorizing, skeletonizing-embroidering, and belief congruence-contradiction. Similarly, Omaggio (1981) distinguished the following nine cognitive styles: field independence/ dependence; breadth of categorization; leveling/sharpening;

preception (tendency to assimilate new information into previously held concepts or "precepts") /reception (tendency to take in details as they are); impulsiveness/reflectiveness (conceptual tempo); risk taking/caution; systematicness ; tolerance of ambiguity ; and flexibility/inflexibility. More recently, Larsen-Freeman and Long (1991) summarized the five important cognitive styles in second language acquisition research as follows : field independence/dependence; category width; reflectivity/impulsivity; aural/visual ; and analytic/Gestalt. The following discussion summarizes four of these significant cognitive styles that researchers have identified as being important in foreign language learning. Then, issues in field independence/dependence will be discussed.

### Category Width

The cognitive style of the category width refers to how many items can be included in a category. Some people tend to include many items in one category and thus become overgeneralizers(broad categorizers).Others tend to exclude items, thus becoming narrow categorizers. Category width is often measured by Pettigrew's Width Scale (1958). Naiman et al. (1978) hypothesized that the best language learners would neither generalize too much nor too little, though they could not present empirical support for this idea.

### Reflectivity/Impulsivity

The Matching Familiar Figures Test (MFFT) (Kagan et al., 1964) is often used to measure reflectivity/impulsivity. Subjects who take longer time but make fewer errors are considered reflective ; those with the opposite pattern are considered impulsive. Kagan (1965) found that children who were conceptually reflective tended to make fewer errors in reading



than conceptually impulsive children. Doron (1973) reported that reflective students were slower and more accurate than impulsive students. Kagan et al. (1966) found that inductive reasoning was more efficient in reflective children. However, reliability of such variables is somewhat questionable because these styles are reported to be inconsistent within individuals from time to time (Brown, 1973, p. 242).

### Aural/Visual

Edmond's Learning Style Identification Exercise (ELSIE) (Reinert, 1976, 1977) is often used to diagnose whether a person prefers an aural or a visual mode of presentation. According to Lepke (1977), when students were taught through their preferred modality in German classes, they performed better. Levin et al. (1974) observed that many learners could be considered bimodal; that is, learning via one mode or the other does not make much difference in outcome. But, for approximately 25 % of all learners, the mode of instruction clearly influences their success as learners.

### Analytic/Gestalt

Peters (1977) demonstrated that some children approached language word by word, analyzing it into components; others took language in a more holistic or gestalt-like manner. Ventriglia (1982) presented a three-way distinction among "beaders," "braiders," and "orchestrators." Beaders learn the meaning of each word analytically and then string them together to make meaning. Braiders are more holistic in their approach and more daring about using language in chunks in social contexts. Orchestrators attend to the sound patterns of the target language like building blocks. It is noticeable that this distinction between analytic/Gestalt cognitive styles seems to parallel that between an analytical or synthetic perspective indi-

cated by research on brain hemisphere specialization (Munsell et al., 1988).

### Field Independence/Dependence

As mentioned above, only a few of the possible cognitive styles have received attention from second language researchers. Among them, field independence/dependence has received the greatest attention. The reasons that field independence/dependence has received greater research investment than the other cognitive styles are numerous and diverse. Witkin et al. (1981) explain them as follows :

Among these reasons are the demonstrated breadth of the dimension and its evident representation in everyday life, so that its manifestations are salient, "real," and often directly visible; the existence of effective procedures for its assessment, derived from the early extensive laboratory research on the perceptual functions in which individual differences in field dependence-independence express themselves; and the availability of a theoretical framework that makes it possible to bring together a wide variety of psychological phenomena and functions often considered apart from one another. (p.3)

### Field Independence/Dependence and Language Learning

The construct of field independence/dependence was studied closely for the first time by Witkin and his colleagues in the late 60s and early 70s. Their research had "a somewhat unusual beginning," as explained by Ramírez et al. (1974) :

During World War II it was observed that when pilots lost sight of the ground they would frequently lose their sense of the upright, and

fly upside down or sideways. Witkin's early work focused on the characteristic ways in which people perceive both the world and themselves.(p.65)

Thus, their research had its origin in an experiment to investigate how people recognize an upright position in space (Witkin, 1949, 1950, 1952, in Witkin et al., 1977).

Witkin and his colleagues invented the Rod-and-Frame Test (RFT) and Body-Adjustment Test (BAT). They used the RFT to answer the question : To what extent is the perception of an item determined by the surrounding framework? Witkin et al. discovered that there were three types of people, according to the ways they responded to the test. Some people apprehended the rod as properly upright only when it was fully aligned with the surrounding frame, whatever position the frame had. Other people adjusted the rod more or less close to the upright in making it straight, regardless of the position of the surrounding frame. The latter type of people apprehended the rod as an entity which was discrete from the prevailing visual frame of reference ; they determined the uprightness of the rod according to the felt position of the body, rather than according to the visual frame immediately surrounding it. A majority of people were reported as falling between the two extremes. With the Body-Adjustment Test, they also found similar differences in individual body orientation. Some people perceived their own bodies as upright when they were fully aligned with the surrounding walls of the tilted room. Other people brought the body more or less to the upright regardless of the position of the surrounding room.

On the basis of their early work, Witkin and his colleagues invented the Embedded Figures Test (EFT) to determine the extent to which the surrounding visual framework dominated perception of the item within it.

(See Figure 1.) The figures in the EFT are modifications of figures used by Gottschldt (1926). The subject is shown the simple geometric figure on the left. That figure is then removed, and the subject is shown the complex figure on the right, with the directive to locate the simple figure within it.

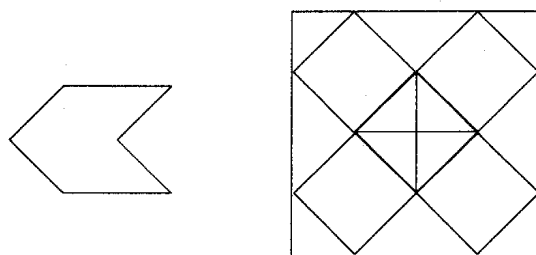


Figure 1. Sample of Simple and Complex Figures Used in the Embedded Figures Test.

Field independence/dependence is measured with the Embedded Figures Test (EFT), the Group Embedded Figures Test (GEFT), or the Children's Embedded Figures Test (CEFT). The EFT should be administered individually ; therefore, it is impractical to give this test to a large group of subjects. The GEFT, an adaptation of the EFT, is designed to facilitate the testing of a large group of subjects together.

A number of studies explored general characteristics of field-dependent and field-independent people (Biggs et al., 1971 ; Holley, 1972 ; Oltman et al., 1975). The researchers of these studies have shown us that, first of all, relatively field-dependent persons approach problems in a more holistic manner, whereas relatively field-independent persons do so in a more analytical manner. The former exhibit the tendency, so to speak, to not see the trees for the forest, and the latter tend to see the trees within the forest.

Relatively field-dependent persons selectively show interest in social aspects of their surroundings, and take greater account of external so-

cial referents in defining their attitudes and feelings. Their "with people" stance was demonstrated when they literally preferred to be physically close to others (Holley, 1972). They are perceived by others as warm, tactful, considerate, socially outgoing, and affectionate (Oltman et al., 1975). In contrast to them, field-independent persons tend to have a more impersonal orientation. They are described as "cold and distant with others," "unaware of their social stimulus value," and "individualistic," and they are likely to be interested in the abstract and theoretical (Biggs et al., 1971).

Further implications of the differences between field-independent and field-dependent cognitive styles are seen in terms of career choice. Field-dependent students favor educational-vocational areas whose central feature is involvement with others, whereas the tendency of field-independent students is to favor areas that are more solitary in their work requirements and more abstract in their substantive content (Witkin et al., 1977, p. 13). People in the areas of mathematics and science and in the health professions (e. g., physicians, dentists, psychiatrists) are likely to be field-independent. Field-dependent persons are more likely to show interest in working in the welfare-humanitarian domain, as social workers, ministers, rehabilitation counselors, probation officers, and teachers of social sciences and business administration. People in the "persuasive-activities" domains, such as selling, advertising, and administration are often found to be field-dependent (Witkin et al., 1977, p. 41).

The cognitive style of a person as it relates to field dependence and field independence is likely to be stable over many years (Witkin et al., 1977, p. 15). It is interesting to note that there are small but persistent sex differences in field independence/dependence. These begin in adolescence. Women, on the average, tend to be more field-dependent than men (Witkin et al., 1971, p. 5). Sex differences in field independence/dependence

may be uncommon in mobile, hunting societies and prevalent in sedentary, agricultural societies, and the role of socialization is important in the development of sex differences in field independence/dependence (Witkin & Berry, 1975, cited in Witkin & Goodenough, 1981, p. 52).

Another more recent cross-cultural study from six Pacific Island cultures reported that students in Hawaii were more field-independent than Samoans, Tongans, Fijians, Indian-Fijians, and Tahitians. In all of the South Pacific groups, except for the Hawaiian, males were significantly more field-independent than females. These findings, in fact, support the previous assertion made by Witkin and his colleagues (1977).

Ramírez and Castañeda (1974) studied field-independent/dependent differences between Mexican-American and Anglo-Saxon Protestant students in the Southwest and reported that the Mexican-American students tended to be more field-dependent compared to their Anglo-American counterparts. The researchers stressed the importance of fostering bi-cognitive development in education, so that children would be able to "exhibit 'cognitive switching' - the ability to draw upon both field-sensitive [field-dependent] and field-independent styles at any given time" (p. 130). They proposed more flexible approaches in teaching, according to the students' degrees of field independence/dependence.

As pointed out in the above section, the concept of field-independent/dependent cognitive style is value-free. Although the term "independent" may imply a positive value judgment about the person to whom it is applied, this is not always the case. Since value judgments assume certain criteria, such as "good" or "bad," we need to be cautious not to use "field independence" as a value-laden term. A stylistic tendency such as field dependence or field independence may be "good" or "bad" depending on the precise situational factors involved. Superior performance in the task of

disembedding, which is central to the field-independent style, does not necessarily imply a competence in other classes of cognitive tasks. For example, it was found that there was no predictable difference in tasks calling for particular verbal skills tapped by such tests as the verbal-comprehension triad of the Wechsler (Witkin et al., 1971, p. 13). This argument, however, has been challenged by other researchers and will be discussed later (for example, Missler, 1986 ; McKenna, 1984).

Among the studies conducted on field dependence/independence, an important research question is how this construct relates to language learning. More specifically, the pressing question is whether or not field independence/dependence can be a predictor of successful language learning. There are about a dozen studies that focus on this issue, and the major ones are discussed below.

### Studies on Field Independence/Dependence and Language Tests

A study of English-speaking Canadian students learning French found that field independence was a significant predictor of second language proficiency. The students' second language proficiency was measured by an imitation test, which required them to repeat a sentence in French, and by listening comprehension tasks, especially at the more advanced stages of French study (Naiman, Fröhlich, & Stern, 1978).

Another study was conducted on some 300 Anglo students enrolled in a first-semester college Spanish class (Hansen & Stansfield, 1981). Hansen and Stansfield divided "competence" into three subcategories: linguistic, communicative, and integrative competence. Linguistic competence in their study was measured by the students' performance on written, dis-

crete-point examinations of Spanish knowledge. Their communicative competence was assessed by "Oral Grade Average" and "Oral Skill Evaluation." To measure integrative competence, final course grades were used, which consisted of linguistic proficiency (55% of the total grade) and communicative skill (45% of the grade).

The results of this study indicated that field independence played a role in second language learning. The role of field-independent cognitive style was particularly noticeable in the acquisition of linguistic competence and integrative competence. It was only barely noticeable in the acquisition of communicative competence. Thus, this study supports the hypothesis that field independence can be a predictor of successful language learning.

Hansen and Stansfield (1982) also found that field-independent learners displayed a higher level of achievement in linguistic, communicative, and integrative types of Spanish proficiency. They also pointed out that field-independent female students scored consistently at the highest level, regardless of the instructor's cognitive style, while male students in the field-dependent group performed at the lowest level of attainment. Hansen and Stansfield concluded that the learners' cognitive styles or field dependence/field independence played a greater role in their achievement than the teacher's cognitive style.

#### Field Independence/Dependence and Cloze Tests

A similar study was undertaken with 250 college students enrolled in first-semester Spanish courses. The results of this study indicated that there was a consistently positive correlation between field independence and second language test performance. Most notable was the positive correlation between field-independent students and cloze test performance (Stansfield & Hansen, 1983).



Since cognitive styles of field independence/dependence are known to affect hypotheses-testing, inferencing, and restructuring behavior on various problem-solving tasks (Witkin et al., 1977), it seems that a strong, positive correlation between field independence and performance on a cloze test can be expected. A cloze test requires a person to employ many interrelated skills of lexical, grammatical, and contextual systems of a language in order to fill in each empty space with the most appropriate word. For this reason, some researchers call for caution in using the cloze test as a way to examine general second language proficiency. According to them, the ability to perform well on a cloze test is influenced by a person's degree of field-independent/dependent cognitive style. Some researchers claim that this ability or quality is a culturally conditioned, non-linguistic factor. Hence, they argue that there may be a bias against field-dependent students in cloze tests (Stansfield & Hansen, 1983). This issue, however, needs further investigation. Hansen's cross-cultural study on the Pacific Islands (1984) did not show a significant relationship between field independence/dependence and cloze test scores across all cultural groups and ability levels, and thus, cast doubt on cognitive style bias in cloze testing.

#### Field Independence/Dependence in Non-English Speakers and Tolerance of Ambiguity

According to an investigation of 61 adult international students consisting of Japanese, Spanish, and Arabic learners of English as a second language, those who were highly field-independent performed better on all of the language measures (Chapelle & Roberts, 1986). The researchers also pointed out that ambiguity tolerance was related to successful L2 study in an L2 environment. Ambiguity tolerance is defined as a person's ability to function rationally and calmly in a situation in which interpretation

of all stimuli is not clear (Chapelle & Roberts, 1986, p. 30). According to the study, a good language learner is, among other things, field-independent and tolerant of ambiguity (Chapelle & Roberts, 1986, p. 43). Chapelle and Roberts' study, using non-English speakers in an L2 environment, supports Hansen and Stansfield's studies on native English speakers in a foreign language environment. It is, however, necessary to conduct more thorough research using more subjects from different language groups. Such research will provide us with more insights into how different cultural backgrounds affect language learning in relation to field independence/dependence cognitive styles.

#### Field Independence/Centered/Dependence and Language Proficiency

Carter (1988) reported that field independence was advantageous in language learning. Carter uniquely named those who were between field-dependent and field-independent as "field-central" (Carter, 1988, p. 23). According to the report, field-independent and field-central subjects scored higher than field-dependent subjects on achievement-oriented final examinations; field-central and field-dependent subjects performed better than field-independent subjects on the ACTFL Oral Proficiency Interview. She conducted the research in courses with different orientations: a course whose orientation was primarily toward grammar-achievement, and a course whose focus was on communicative-proficiency. Students who were field-independent achieved a higher level of proficiency than those who were field-dependent, and course orientation did not seem to play a significant role in test results.

Bialystok and Fröhlich (1978) conducted another study in three French classes in Canada. The researchers claimed that field independence

was closely related to aptitude in language learning, and that aptitude was related to strategy use. However, they found that only aptitude and strategy uses affected achievement, but that field independence did not.

### Field Independence/Dependence, Language Tests, and Teacher-Student Types

Roberts (1984) found that field independence/dependence contributed to higher combined scores of all the language measures used, and that field independence predicted success on two standardized tests, but not on the ACTFL Oral Proficiency Interview. These findings are consistent with the explanation by Witkin et al. However, no significant correlations were found between teachers and students in terms of mutual positive or negative opinions. These findings are consistent with Hansen and Stansfield's claim (1982) that the cognitive styles of learners with regard to their field independence/dependence orientation played a greater role in achievement than the teacher's cognitive style.

### Field Independence/Dependence and Mode of Instruction

According to more recent studies, field-independent learners seem to have the advantage in "a formal language instruction" environment (d'Anglejan & Renaud, 1985, p. 1). This may be explained by the fact that field-independent learners prefer a more deductive mode of instruction, whereas field-dependent learners prefer a more inductive mode of instruction (Abraham, 1985, p. 699). Chapelle (1988) conducted a study, focusing on the same issue. He argued that the reason that field-independent students performed better in language tests may be that they were simply better at taking particular kinds of language tests, especially those which have more discrete tasks (Chapelle, 1988, pp. 67,76).

### Claims of Witkin et al. on Language Learning

At this point, it may be useful to go back to the studies conducted by Witkin et al. and examine their claims about field independence/ dependence in terms of language learning. They maintained that field-independent learners were more analytical and possess enhanced cognitive restructuring abilities, whereas field-dependent learners were more holistic and more likely to possess well-developed interpersonal skills.

This means that field-independent learners prefer systematically-structured learning, such as memorizing vocabulary lists and grammatical explanations, while field-dependent learners prefer dealing with real people in communication. In other words, field-independent learners tend to favor structured classroom settings for language learning, but field-dependent students are more disposed to learning the language from actual conversation in more natural situations with native speakers. Thus, it was hypothesized by Hansen and Stansfield (1981,1982) that field independence would be positively related to the acquisition of linguistic competence, and that field dependence would be related to the acquisition of communicative competence. Although they found that field independence was positively related to linguistic competence, they did not find that field dependence was related to communicative competence.

Accordingly, field-independent learners are said to have better chances to succeed in a foreign language class when language classes follow a structured, systematic, and deductive approach. However, there has not been enough empirical evidence to indicate that field-dependent learners have an advantage when communicative competence is primarily stressed.

### Field Independence/Dependence and Children's Language Acquisition

The field independence/dependence construct may also provide an explanation for differences between child and adult language acquisition. Krashen (1981) distinguishes between "acquisition" and "learning" of a second language. According to Krashen, "learning" is a conscious usage of rules of a language, whereas "acquisition" is a subconscious processing of a language that is not relevant to error correction and explicit teaching of rules. He also claims that "language acquisition is very similar to the process children use in acquiring first and second languages" (Krashen, 1981, p. 1). Children, more predominantly field-dependent (Witkin et al. 1971, p.5), may have a cognitive style advantageous for "acquiring the language," while adults, relatively field-independent, may use more "monitoring" or "learning" strategies.

Cathcart, Strong, and Fillmore (1979) found that there was a significant association between field independence and vocabulary breadth in their study of immigrant children. They found that field-independent children would "use more novel vocabulary" (p. 269). They explained that "the disembedding skills associated with field independence may relate to the ability to isolate and identify single words" (p. 269).

From all of the above studies, field independence appears to be related to second language learning. There is, however, only one study (Day, 1984) that found no relationship between the result of the Group Embedded Figures Test and language learning. In his study, Day investigated the relationship between student participation in the ESL classroom and proficiency in English, between classroom participation and use of the target language away from the classroom, and between classroom participation and field sensitivity (degree of field independence). The results showed

no significant relationship in any of the combinations of the variables. The reasons for the results seem unclear, although he compared his study with the work of other researchers in order to account for his findings.

Except for Day's study, field independence/dependence, by and large, is reported to play a role in second language learning. Field independence seems advantageous in language learning in a formal classroom where the teacher uses a deductive style of presentation. Then, the next question is whether the field-dependent learners experience disadvantages in language learning. If so, what kind of disadvantages do they have? Omaggio (1981) summarizes the problems that field-dependent learners are likely to have :

Students who exhibit field dependence in doing certain tasks may lack analytical skills and have difficulty seeing patterns within linguistic stimuli. They may also lack focusing skills and are too easily distracted by irrelevant details. Because they cannot distinguish relevant from irrelevant information, they tend to be random and inaccurate guessers... Often their confusion in attending to inappropriate cues in a listening or reading passage impairs their ability to derive meaning from that passage. They may become easily frustrated by extraneous information or unknown elements and are likely to make the task more complex than necessary. (p.8)

Field independence/dependence research in relation to second language learning research in general has as its pedagogical purpose the understanding of differences among individual learners which will enable teachers to provide more individualized instruction for more efficient learning.

Before closing this chapter, it is necessary to mention a recent theoretical debate concerning the validity of field independence/dependence

research. Griffiths and Sheen (1992) attempted to discredit the whole field independence construct, saying that "FI/D has not, and never has had, any relevance to second-language learning" (p. 133). Chapelle (1992) immediately responded to their arguments and refuted them in a "more balanced and optimistic viewpoint on the relevance of field independence" (Brown, 1994, p. 108).

One of the arguments that Griffiths and Sheen posed was that "the Embedded Figures Test is primarily a measure of ability rather than style" (p. 143). But, as Chapelle claimed, "the crucial element is whether a non-verbal trait [field independence/dependence] explains variance on a language test; the value of the research does not rest on the style-ability issue" (p. 380). Therefore, what is significant is that the second-language studies, by and large, have shown moderate correlation between field independence/dependence and ability in learning a second language.

The present study was designed to investigate whether such a correlation would be found in the case of American college students learning Japanese, and to explore individual differences more in detail, in terms of difficulties each learner experienced. As the number of learners of Japanese increases, it is very important that researchers pay attention to individual differences.

It may be useful to add, that despite Griffiths and Sheen's claim that the field independence/dependence construct is no longer popular in mainstream psychology (1992, p. 140), 28 researchers reported their studies on this cognitive style from various perspectives in a landmark book titled *Field dependence-independence: Cognitive style across the life span* (Wapner et al., 1991). It is also noticeable that there are numerous "Ph. D. dissertations and books that have been stimulated by the work he [Witkin] initiated; a computerized literature search revealed more than 800

papers published on field dependence-independence within the last 15 years" (pp. xiii-xiv), which simply proves a recognized significance of the study of field independence/dependence.



## CHAPTER III

### METHOD

#### Research Design

The purpose of the study is to understand problems encountered by American college students when learning Japanese, specifically problems related to their cognitive style as designated by their degree of field independence/dependence. The study consists of a quantitative phase and a qualitative one in order to answer five research questions.

The quantitative phase was designed to answer the first three research questions : 1) What is the relationship between the degree of field independence/dependence and achievement in Japanese? 2) Could the degree of field independence/dependence be a predictor of achievement in learning Japanese? 3) Are the students' language skills well-balanced? The last two research questions were dealt with in the qualitative phase of the study : 4) What are the problems and difficulties that low achievers and high achievers experience in the process of learning Japanese? 5) What do the students perceive as most helpful in solving their problems?

The first phase is hypothesis-testing in nature. Here, the independent variable was the degree of field independence/dependence. To determine where the students were situated on the field independence/dependence scale, this study used the Group Embedded Figures Test (GEFT).

The dependent variables in the first phase were four constructs of achievement : 1) scores on oral performance in the oral examinations ; 2) scores on the grammar sections of the written examinations ; 3) scores on the Kanji sections of the written examinations; and 4) overall course grades in Japanese 103. These four sets of scores were considered indicative of the students' achievement in Japanese because first of all, 2) and 3) re-

presented their mastery in grammar and Kanji, which are commonly considered by Japanese teachers the most difficult aspects of learning Japanese for American students. Secondly, the first three sets of scores reflected the students' degree of balance between speaking and writing; and thirdly, the overall course grade was the most comprehensive indication of their achievement.

The four null hypotheses tested in this phase of the study follow. These refer to the first research question.

Hypothesis 1 : There is no correlation between degree of field independence and oral performance in Japanese.

Hypothesis 2 : There is no correlation between degree of field independence and grammar knowledge of Japanese.

Hypothesis 3 : There is no correlation between degree of field independence and mastery of Kanji.

Hypothesis 4 : There is no correlation between degree of field independence and overall achievement in Japanese, as measured by the course grades.

The Pearson correlation coefficient was used to test the null hypotheses. The significance level was set at the .05 level of confidence.

The second phase of the present study used qualitative methodology. This step attempted to understand students' problems and their difficulties with learning Japanese in relation to their cognitive styles. As Patton (1990) explains, qualitative methodology works best with a process-oriented inquiry :

Qualitative inquiry is highly appropriate in studying process because depicting process requires detailed description; the experience of process typically varies for different people; process is fluid and dynamic; and participants' perceptions are a key process con-

sideration.(p.95)

Cases of four students with extreme degrees of field independence/dependence and achievement were selected and studied. The four students are : a field-independent high achiever (FI+), a field-independent low achiever (FI-), a field-dependent high achiever (FD+), and a field-dependent low achiever (FD-). These four students were the focus of the qualitative analysis.

To investigate the problems and difficulties encountered in learning Japanese, two methods were chosen : non-participant classroom observation and individual interviews. The classroom was selected as an observation site because it was where the students' formal learning was taking place ; the students' learning processes were observed through their interaction with their instructors and peers. Non-participant observation was chosen to decrease students' reactivity, so that the investigator was able to observe a situation that was as natural as possible. The observation took place three or four days a week for a month during the regular class hours of Japanese 103. On each day, Teacher A's class and one of Teacher B's classes (in which the focused students were present) were usually observed, and all three classes, including the other class of Teacher B's, were observed three times in total.

The data from the first phase of the study and the classroom observation did not provide the investigator with information about the specific problems of individual students. Interviews were a way to discover the students' concerns, especially their perception of critical issues in learning Japanese. The four selected students were interviewed individually about their experience in learning Japanese.

There were two more groups of interviewees. One group consisted of the two teachers of the classes which the four students attended ; the

other group contained classmates of the four students. The interviews with the teachers focused on their assessments of the selected students. The peer group interviews were intended to gather information on how the four students were perceived by their classmates, not only during class time, but also outside of the classroom.

These interview data provided various and significant perspectives which could not have been obtained through the investigator's observation only. These multiple-perspectives added rich insights to the investigator's own observation and understanding, and helped "make the familiar strange" (Erickson, 1973, p. 16). They also help establish credibility of the study.

### Subjects

The subjects consisted of 56 students who were enrolled in three sections of Japanese 103 in the spring of 1993 at the University of Georgia. The students were both male and female. Most of them were of college-age, although a few were older students, as shown in Table 1.

Table 1 Gender and Age of the Subjects

	Age of Students			Total
	17-23	24-30	30-	
Male	20	8	2	30
Female	24	1	1	26
Total	44	9	3	56

Students in Japanese 103 had already taken 100 class hours of formal instruction in Japanese during Japanese 101 and 102, before starting the 1993 spring quarter.

The subjects were chosen for this study because they were accessible : the investigator was teaching the intermediate course at the same site where the elementary courses were taught. With five years of teaching experience in the program, the investigator knew all of the teaching staff but did not know the students in Japanese 103 until beginning this study.

Among 56 participating students, four students were selected, based on their degrees of field independence/dependence and levels of achievement as shown by the mid-term exam of Japanese 103. None of them had had previous experience with formal Japanese study before taking Japanese 101, and all of them happened to be under 23 years old.

#### Research Site

Japanese 101,102, and 103 are the first-year Japanese courses at the University of Georgia offered in fall, winter, and spring quarters, respectively. There are 10 weeks of classes in each quarter, and the Japanese classes meet Monday through Friday, for 50 minutes each day. The courses are taught by native Japanese teachers and teachers whose command of Japanese is near-native.

The main textbooks used in the courses were "First Step in Japanese" for Japanese 101, "Second Step in Japanese" for Japanese 102, and "Third Step in Japanese" for Japanese 103. These books were unpublished materials developed at the University of Georgia, and they have been used in the program since 1989. The grammatical syllabus and list of Kanji for each course are presented in Appendix A.

Minimum requirements for Japanese 101,102, and 103 in 1993 were the following :

- 1) Class attendance. Students were required to attend classes every day, five days a week. If they missed three classes, their letter grade was

lowered one grade. If they missed more than five classes, they automatically received an "F. "

2) Language lab attendance. Two 30-minute sessions per week were required.

3) Computer lab attendance. Two 30-minute sessions per week were required.

4) Homework. Written homework was assigned every day.

5) Written quizzes. In Japanese 101 and 102, three written quizzes were given on Monday, Wednesday, and Friday of every week. In Japanese 103, the number of the written quizzes was decreased to one or two per week. The written quizzes consisted of three parts: vocabulary and spelling, full or partial translation from English to Japanese, and dictation. The quizzes normally took about 10 minutes at the beginning of the class.

6) Oral checks. Oral checks were given on Tuesdays and Thursdays in Japanese 101 and 102. Oral checks in Japanese 103 were not given on fixed days but were conducted whenever a chapter was finished, approximately once or twice a week. The students were required either to memorize and recite a dialog in pairs from the textbook or to create and perform their own dialog based on a particular grammatical pattern in the textbook. The students' performances were graded in terms of accuracy and fluency by the teacher or native informants in the class. The oral checks normally took about 10 minutes at the beginning of the class.

7) Mid-term and final examinations. In Japanese 101, the mid-term was a written examination, and the final examination consisted of both a written and an oral sections. In Japanese 102 and 103, both mid-term and final examinations included oral and written tests.

The oral examinations consisted of teacher/student individual interviews conducted in Japanese for 10 to 15 minutes per student. The test

consisted of three main parts, which covered three main topics or dialog situations learned in class. The situation was given in English on an index card, and the teacher asked questions in Japanese about the information on the card. The students' responses were graded according to linguistic accuracy. Whenever they made a mistake, they lost a certain number of points. For example, if they made a mistake in choosing an appropriate particle, they lost one point. There was no penalty for slow response. In other words, fluency was not graded. The written examinations were similar to the regular written quizzes in their format, but they were more comprehensive and longer, taking 50 minutes.

Course grades for Japanese 101 were given according to the following formula :

Written quizzes	25%
Mid-term written examination	20%
Final written examination	15%
Final oral examination	15%
Daily oral performance	25%
Total	100%

The course grades for Japanese 102 were given according to the following calculation :

Written quizzes	25%
Mid-term written examination	20%
Final written examination	15%
Final oral examination	15%
Daily oral performance	25%
Winter homework packet	(bonus point 2%)
Total	100 (+ 2) %

The course grades for Japanese 103 were calculated in the following way :

Mid-term examination	25%
Final examination	30%
Quizzes	15%
Homework	15%
Oral check, class performance	15%
Total	100%

### Instruments

#### Phase 1

Two important variables were measured in the first phase : degree of field independence/dependence and levels of achievement. To measure the field independence/dependence of the subjects, the Group Embedded Figures Test (GEFT) was used. The validity of the GEFT and the correlation between the GEFT and the Embedded Figures Test (the original test of the field independence/dependence developed by Witkin et al.) are reasonably high (Witkin et al., 1971, p. 29). The reliability coefficient of the GEFT was computed by the Spearman-Brown prophecy formula to be .82.

The testees of GEFT were called field independent if they scored high with a maximum of 18 points, whereas those with lower scores were considered more field dependent. The test results of the GEFT are the independent variable in this study.

The four constructs of achievement, the dependent variables, were designated as follows :

- 1) Results from oral examinations. Scores on the oral mid-term and the final examinations in Japanese 103 were obtained. Audio tapes which have oral performances of all students during the oral examinations were blindly graded by the author and then compared with the previously assigned scores in order to obtain higher validity. The students' oral perfor-



mances were graded in terms of linguistic accuracy. Whenever they made a linguistic mistake in their oral response to the interviewer, they lost a point.

2) Scores on written examinations. Results on the written mid-term and the written final examinations of Japanese 103 were obtained, and scores on the grammar questions were calculated separately from those of the other sections of these examinations. (A copy of each examination is included in Appendix B.)

3) Scores of Kanji tests. Results of production tasks were calculated separately from those of other sections in the mid-term and the final written examination of Japanese 103.

4) Overall course grades. Final course grades from Japanese 103 were obtained in numerical figures.

## Phase 2

In order to select four students with extreme degrees of field independence/dependence and levels of achievement, the following instruments were used: the results of the Group Embedded Figures Test and the scores of the mid-term exam of Japanese 103.

With the four selected students in focus, non-participant classroom observation was conducted. Observation was carried out three or more times a week during the regular class hours. The investigator sat in the back of the classroom so that the students would be minimally affected by the presence of the investigator.

Subjects were interviewed individually outside the classroom about the learning strategies and problems they encountered. The interviews were conducted in a vacant classroom for about half an hour on the average. The interviews were structured around the following list of questions:

- Why are you taking Japanese?

- What do you want to do with Japanese in the future?
- How do you like Japanese?
- What do you like best about learning the language?
- Is there an aspect of the course that you do not like?
- What do you find most difficult about Japanese: grammar, reading, writing, speaking, or listening?
- What difficulties do you have in learning Japanese?
- Do you think that other students have the same difficulties?
- Do you remember what problems you had in Japanese 101 and 102?
- How did you cope with them?
- How do you study outside the classroom?
- Do you find the language lab useful? Why or why not?
- Do you find the computer lab useful? Why or why not?
- How helpful is your teacher? Are your classmates helpful?
- Do you have a Japanese tutor? How does he or she help you?
- What do you think are the most important activities in the classroom?
- What do you think of written quizzes and oral checks?
- Do you think you are a good learner? Why?
- Do you know anyone who dropped the course? What do you think the problems were?
- What do you think are the most important factors in learning Japanese successfully?

The instructors were also interviewed. These interviews were guided by the following list of questions :

- Who are the strongest students in your class?
- Are they strong in every aspect of Japanese learning?

- Why do you think they are strong?
- How would you describe their performance in the class?
- Who are the weakest students in your class? What do you think their problems are?
- How would you describe their performance in the class?
- Do you know how they cope with their problems?
- Have you done anything special to help some students solve their problems?
- Do you remember anyone who improved dramatically compared to performance in previous quarters? Can you explain this improvement?
- Do you remember anyone whose grade has dropped recently? Do you know why?
- Do you think the language lab is useful? Do you know how the students are using it?
- Do you think the computer lab is useful? Do you know how the students are using it?

### Data Collection Procedures

#### Phase 1

The GEFT was given to the three classes of Japanese 103 in the spring quarter. Four steps in administering the GEFT were followed :

1) Directions. A brief explanation of this study and the GEFT was given, and students' consent in participating in the study was requested. The students were asked to read the directions in the GEFT booklet.

2) Administration of the first section of the test. When the investigator gave the signal, the students started the first section, which involved solving seven problems in two minutes. This section contained only prac-

tice items.

3) Administration of the second section. The students had five minutes for the nine problems in the second section.

4) Administration of the third section. The students also had five minutes for the nine problems in the third section. When time was up, the students were told to close the booklets, which were then collected.

It took about 20 minutes to administer this test, and the investigator graded the results immediately to determine the students' degrees of field independence/dependence. After the GEFT had been given to all the subjects, the correlation between field independence/dependence and achievement was tested, using the Pearson correlation coefficient.

Afterwards, the interrelationships among the four achievement constructs were investigated in order to see if the students' achievements in the four areas were well-balanced. This was done to answer the third research question: Do the high achievers in oral performance also show high achievement in grammar knowledge and in mastery of Japanese orthography? In other words, are the students' language skills well-balanced in terms of oral performance, grammar knowledge, and mastery of orthography?

## Phase 2

Four students were selected in order to investigate the most extreme cases ; they showed maximum differences in terms of degree of field independence/dependence and achievement. The selection procedure consisted of two steps : 1) the degrees of field independence/dependence of all the students were first looked at, in order to choose two group of students with the highest field independence and lowest field independence, and 2) among those two groups, the highest and the lowest achievers in the mid-

term exam of Japanese 103 were selected. The scores of the mid-term exam were used so that the investigator could start collecting qualitative data immediately after the mid-term exam. When it was hard to select students with extreme scores because there were more than one student with a similar qualification (which was the case in selecting the FI+ student), their Japanese learning experience prior to Japanese 101 was taken into consideration ; i. e., the student who had no previous Japanese learning was selected. It was then corroborated that all four students had started learning Japanese in the fall quarter of 1992. Each of the four selected students represents the most extreme case of the four categories shown in Figure 2. Figure 3 is a scatter graph which shows where the four students actually locate among all the students at the time of selection.

	FD	FI
High	FD+	FI+
Low	FD-	FI-

Figure 2. Four Categories according to the Degree of Field Independence and Achievement.

The four selected students were the focus of class observation and individual interviews. The FI+ and the FI- students were in one of the classes taught by Teacher B, and the FD+ and the FD- were in Teacher A's class. The other class taught by Teacher B, without any of the selected students, was also observed for comparison, but less frequently. Some classes were videotaped, other classes were audiotaped. Then, the data were transcribed verbatim, with the exception of some parts which were not audible

due to mechanical reasons.

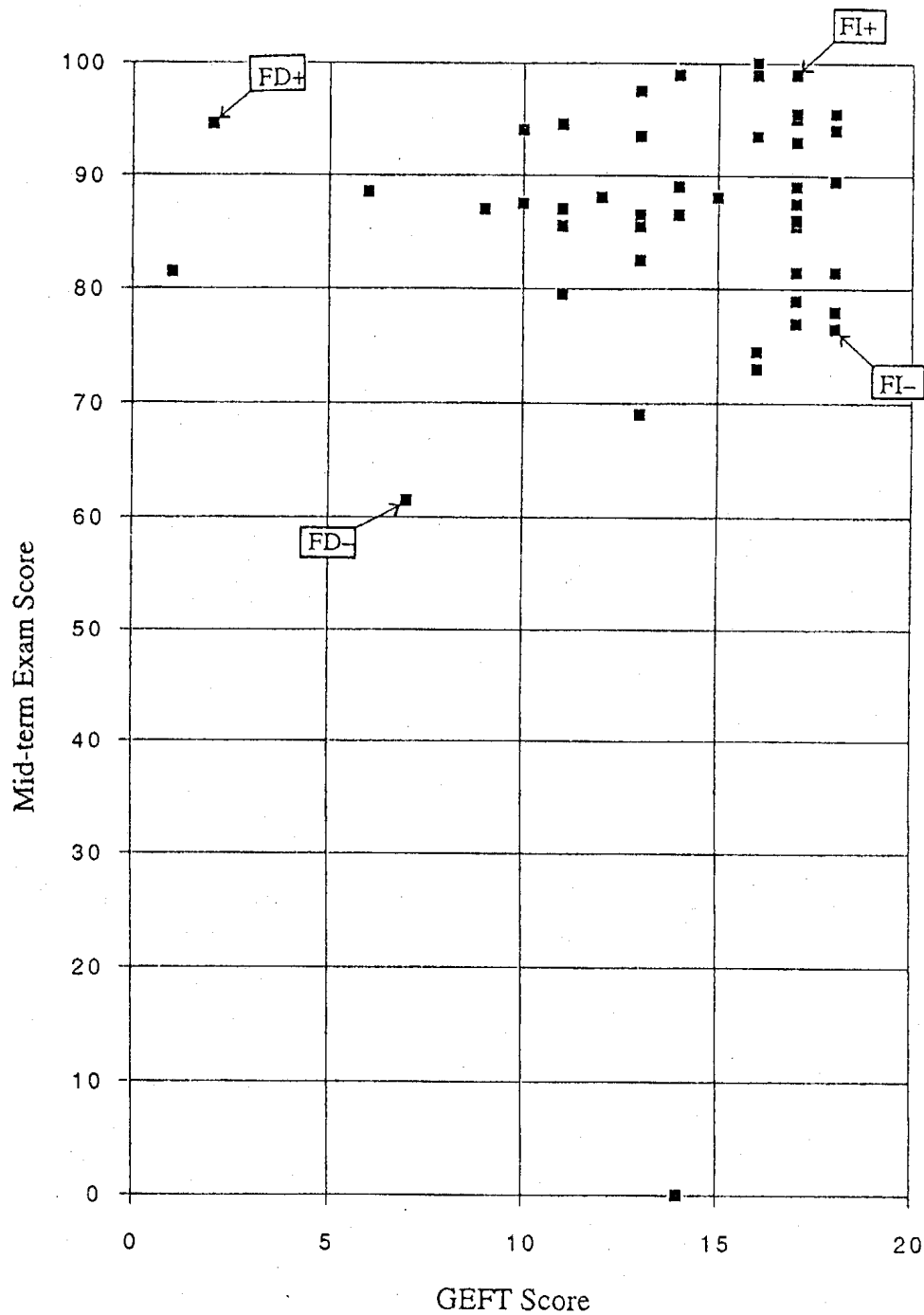


Figure 3. The Degree of Field Independence and Achievement in Japanese 103 Mid-term exam.

Note. FI+, FI-, FD+, and FD- represent field-independent high achiever, field-independent low achiever, field-dependent high achiever, and field-dependent low achiever, respectively.

The four students were interviewed outside of class individually. The teachers were also interviewed to provide information about the selected students' performances from a teacher's point of view. Nine other students from the class were interviewed individually as well to collect information on the selected students' performances and problems from their peers' point of view. The list of questions presented above (p. 40) was used as a guideline for the interviews. Efforts were made so that the students would feel free from intimidation and would hopefully enjoy talking about their learning experience, in order to elicit genuine opinions. The date of the interviews is shown in Table 2. The table also indicates the relationship of the interviewees with the four selected students. All the nine student interviewees were chosen based on information gathered during class observation, from the interviews with the teachers, and from information from other students.

Figure 4 illustrates relationships among the interviewees. It shows who were the interviewed students in Teacher A's class and in Teacher B's class respectively. It also shows the informants for each of the four selected students.

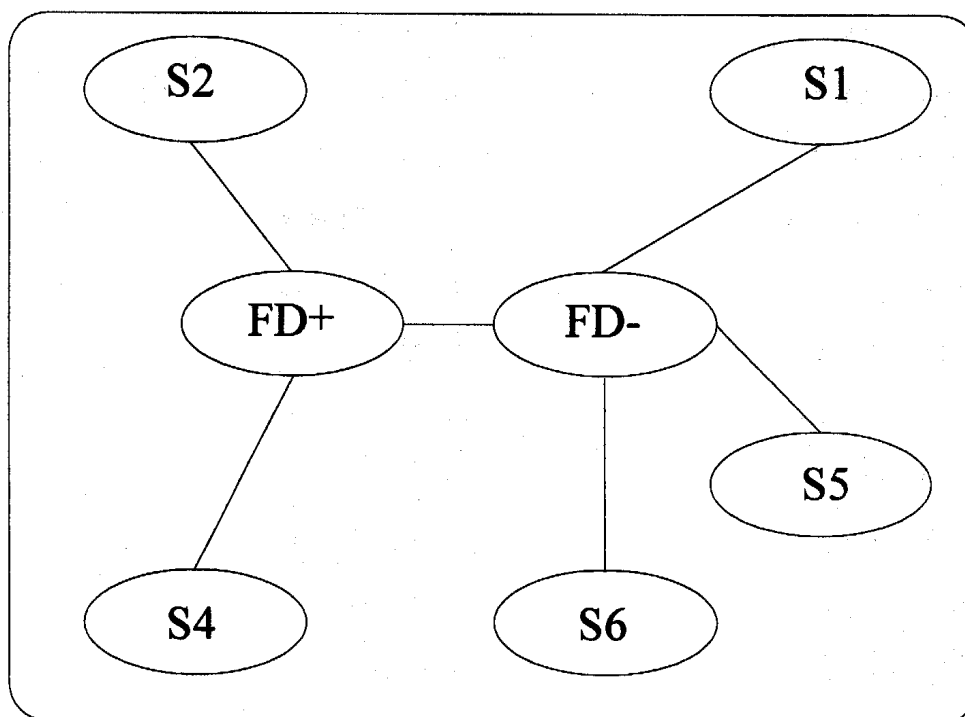
The interview data provided an "emic" perspective of the learners and of the teachers on learning Japanese as a foreign language. All the interviews were audiotaped and transcribed.

Table 2 Interview Dates and Reasons

Date	Interviewee	Interviewed about :
4/29	Teacher B	teaching the FI+ and FI- students
5/25	Student 1	the FD- student
5/26	FD- student	herself and the FD+ student
5/26	Teacher A	teaching the FD+ and FD- students
6/1	Student 2	the FD+ student
6/1	FI- student	himself and the FI+ student
6/2	Student 3	the FI- student
6/4	FD+ student	herself and the FD- student
6/4	Student 4	the FD+ student
6/7	Student 5	the FD- student
6/7	Student 6	the FD- student
6/7	Student 7	the FI- student
6/8	Student 8	the FI+ student
6/8	Student 9	the FI+ student
6/8	FI+ student	himself and the FI- student



Teacher A's class



Teacher B's class

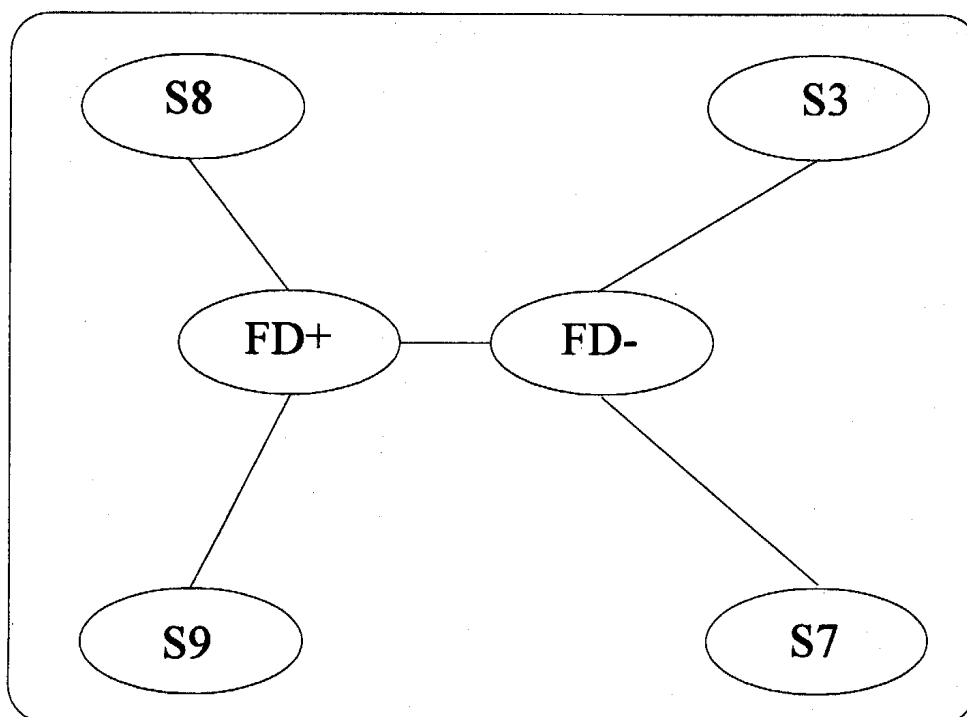


Figure 4. Relationship among the Interviewees.

### Analysis of Data

The way the data were analyzed in the first phase was fairly straightforward. The Pearson correlation coefficient was used in order to determine whether there was a correlation between the degree of field independence/dependence and level of achievement in Japanese.

The second phase of the study involved more complicated and time-consuming procedures than the first phase. The data in this phase were analyzed using the "constant comparative method" (Glaser & Strauss, 1967, p. 105). If there had been an integrated theory to be tested, the analytic induction approach would have been suitable (p. 104). However, this was not the case. The investigator had a rather broad question in mind: What are the problems and difficulties of the learners with extreme degrees of field independence and levels of achievement? (Research question 4)

After the statistical data analysis of the first phase of the study was completed, an important question emerged that could not be addressed completely in the quantitative phase of the study: Why was there no relationship between the degree of field independent/dependent and achievement in Japanese? The investigator then examined this question in light of the qualitative data.

The investigator used aspects of the constant comparative method described by Glaser and Strauss, including: (1) comparing incidents applicable to each category and (2) integrating categories and their properties (p. 105). This method of analysis was pursued to answer the two questions mentioned above.

From the first day of the class observation, the investigator began data analysis. This was initiated primarily with the investigator's field notes since the transcribed data were not immediately available.

The field notes were a record of what was observed during the class, as well as the investigator's impressions, perceptions, and comments. Class observation notes were made during and after each class while the memory was still fresh, although this was not always easy, especially when two or three classes were observed one after another. The field notes for each section were then examined line by line, abstracted, assigned tentative codes, and examined in progression from the first class observed to the most recent. Furthermore, data from each section were compared and contrasted with data from other sections. Any ideas and speculations that came to the investigator's mind were also recorded ; these proved to be helpful at a later stage.

The transcriptions of the audio- and videotaped data became fully available after the summer of 1993. This delay was due both to the limited time available during the regular quarter and to the time-consuming nature of transcribing the taped data. 1 The analysis continued throughout the data collection period and was not completed until the final stage of the writing.

There were several strategies employed in the analytic procedure. Negative-case selection (Goetz et al., 1984, p. 175) was used on many occasions, such as in finding characteristics of the typical class procedure (use of English and Japanese, for example) ; finding problems among the four students (having a tutor or not, for example) ; and finding keys to success.

Another data analysis strategy used in this study was enumeration (Goetz et al., 1984, p. 184). When one of the characteristics of the typical class procedure was revealed to be use of English, two comparable classes (Teacher A's and Teacher B's) were chosen, and the number of utterances were counted. In this case, enumeration strategy was used to supplement

the descriptive data, in order to support the argument.

Throughout the study, efforts were made to discover and describe what it is like to be a learner of Japanese as an American college student.

### Ethical Considerations

The present study was designed to adhere to the guidelines of the Institutional Review Board (Human Subjects), and was approved by the board. Permission of the instructors was obtained for the classroom observation, and consent of each participant was obtained for the Group Embedded Figures Test and for the individual interviews.

At the time the GEFT was administered, the purpose of the study and the participants' tasks were explained, and the students were apprised of their right not to participate in the study. Each interviewee was also provided with an explanation of the study and a description of his or her role, and was told that participation was voluntarily. Appendix D is a copy of the consent form used in the data collection for this study. In reporting the research results in this study, all names were changed to disguise the informant's identity, in order to respect and protect the privacy of the informants. Throughout the study, both instructors, Teacher A and Teacher B, are referred to as "she" to protect their identity.

## CHAPTER IV

### RESULTS

This chapter presents the results of the investigation in two phases. The first section deals with the quantitative test results. The second part discusses the results of the qualitative section ; it contains three parts : characteristics of the Japanese classes, cases of the four selected students, and factors required to be successful in the Japanese course.

#### Quantitative Results

The purpose of this descriptive study is to determine if a relationship exists between degree of field independence/dependence and achievement in learning Japanese. Fifty-six students who were enrolled in Japanese 103 at the University of Georgia in 1993 participated in this study, and their degrees of field independence/dependence and levels of achievement in Japanese were obtained.

The degree of field independence/dependence was measured by the Group Embedded Figures Test (GEFT). The four constructs of achievement: oral performance, grammar knowledge, mastery of Kanji, and overall achievement were obtained from the results of the examinations and the final grade in the Japanese course. The significance level of  $p < .05$  was selected. Table 3 shows the descriptive statistics for the four constructs of achievement in Japanese and the degree of field independence/dependence.

Table 3 Descriptive Statistics for Achievement and Field Independence

Variable	N	Mean	SD
Oral achievement	56	88.57*	6.05
Grammar achievement	56	44.20**	4.47
Kanji achievement	56	25.00***	2.89
Overall achievement	56	89.45*	6.35
GEFT	55	14.15****	4.10

\* Maximum points of 100

\*\* Maximum points of 50

\*\*\* Maximum points of 30

\*\*\*\* Maximum points of 18

Table 4 shows that the results of the GEFT indicated a similar tendency in gender difference as reported in Witkin et al.(1971). Male students tended to be more field-independent than female students. In order to investigate whether the gender difference is statistically significant, the t test was conducted. As a result, a significant difference was found between male students and female students ( $t=1.74$ ,  $df=56$ ,  $p < .05$ ). Appendix C shows the results of the Group Embedded Figures Test of all the participants.

Table 4 Gender Differences in the Results of the Group Embedded Figures Test

Gender	N	Mean	Std Dev	t
Male	30	15.03	3.06	1.74*
Female	26	13.08	4.94	

\* $p < .05$

Table 5 shows correlations between the degree of field independence/dependence and the four constructs of achievement in Japanese. None of the achievement constructs shows a strong correlation with degree of field independence/dependence (GEFT).

Table 5 Pearson Correlation Coefficient Matrix of Achievement and Field Independence

	Y1	Y2	Y3	Y4	GEFT
Y1 : Oral		0.75*	0.48*	0.72*	0.06
Y2 : Grammar			0.44*	0.61*	0.06
Y3 : Kanji				0.62*	0.19
Y4 : Overall					0.06
GEFT					

\* $p < .01$

No significant correlation was found between degree of field independence/dependence (GEFT) and oral performance (Y1) in Japanese ( $r = .06$ ). Therefore, null hypothesis 1, that there is no correlation between the degree of field independence/dependence and oral performance in Japanese, cannot be rejected.

No significant correlation was found between degree of field independence/dependence (GEFT) and grammar knowledge (Y2) of Japanese ( $r = .06$ ). Thus, null hypothesis 2, that there is no correlation between the degree of field independence/dependence and grammar knowledge of Japanese, cannot be rejected.

No significant correlation was found between degree of field independence/dependence (GEFT) and mastery of Kanji (Y3) ( $r = .19$ ). Thus, null hypothesis 3, that there is no correlation between the degree of field

independence/dependence and mastery of Kanji, cannot be rejected.

No significant correlation was found between degree of field independence/dependence (GEFT) and overall achievement (Y4) in Japanese ( $r = .06$ ). Thus, null hypothesis 4, that there is no correlation between the degree of field independence/dependence and overall achievement in Japanese measured by the course grades, cannot be rejected.

The data do not allow us to reject any of the null hypotheses. As far as the instruments used in this study could measure, no significant relationship was exhibited between the degree of field independence/dependence and achievement in Japanese.

However, the investigator noticed that among the four Pearson correlation coefficients calculated between achievement and the degree of field independence/dependence, the one between mastery of Kanji and degree of field independence/dependence was the strongest ( $r = .19$ ). This finding corresponds to the fact (revealed during the interviews) that the FI students tended to find it easy to learn Kanji, while the FD students found Kanji to be the most difficult aspect of learning Japanese.

There is another finding according to the table : There were high interrelationships among the four constructs of achievement. A relatively strong correlation exists between achievement of oral performance (Y1) and that of grammar knowledge (Y2) ( $r = .75$ ). This is not surprising because of the way the oral interview examinations were graded. Linguistic accuracy, which reflects one's grammar knowledge, was focused in the oral examinations. Therefore, it is reasonable to believe that those who achieved high in grammar knowledge would also achieve high accuracy in the oral examinations.

Moderate correlations were found between grammar knowledge and Kanji ( $r = .44$ ), and between oral performance and Kanji ( $r = .48$ ).



These results suggested a discrepancy between Kanji mastery and the rest of the achievement constructs. In other words, high achievers in grammar and oral performance do not necessarily achieve high in Kanji mastery, and even low achievers in grammar and oral performance could achieve high in Kanji learning.

If significant correlations had been found between the independent and the dependent variables, and therefore, the null hypotheses had been rejected, regression analysis would have been used to find out about predictability: whether or not the independent variable could be a predictor of the dependent variables. However, the data proved that this was not the case. The answer to the second research question, whether or not the degree of field independence/dependence can be a predictor of achievement in learning Japanese, is thus self-evident. Since no significant correlation between field independence/dependence and achievement was found, the degree of field independence/dependence cannot be a predictor of achievement in learning Japanese in terms of oral performance, grammar knowledge, Kanji mastery, and overall achievement.

In order to possibly account for the overall results, it can be said that there might be, in fact, no relationship between degree of field independence/dependence and achievement in Japanese. As Witkin (1981) said, field independence/dependence might just be different styles of achieving one's goal, and achievements themselves might not differ according to the degree of field independence/dependence. The next section will show how the qualitative study data account for the results, and will incorporate answers to research questions four and five.

### Qualitative Results

This section describes the results of the qualitative phase of the stu-

dy. There were two goals in this section : The main goal was to discover the learning problems of the students resulting from specific degrees of field independence/dependence and achievement. The additional goal was to account for the quantitative results obtained in the previous phase of the study—why there was no significant relationship between degree of field independence/dependence and achievement. The data from both non-participant classroom observations and individual interviews were analyzed, using the constant comparative method, with these two foci in mind. The answer to research question four, concerning difficulties of the learners, will be included in describing high and low achievers with different degree of field independence/dependence. Later in this chapter, research question five, about learners' solutions to their difficulties, will be discussed.

The main goal was pursued by investigating four students with extreme degrees of field independence/dependence and levels of achievement. In order to understand such individual student cases fully in context, it was important to look first at their formal learning environment, which is their classroom. Characteristics of the elementary Japanese classes at the University of Georgia are pointed out to provide context for the findings concerning students with particular degrees of field independence/dependence and different levels of achievement in Japanese.

### Characteristics of the Japanese Classes

Three Japanese classes were observed during Spring quarter 1993, at least three times a week, from May until early June. The investigator was present at the back of the classroom, where the focused students could be seen and heard relatively well. At the same time caution was used so that the presence of the investigator had minimal influence on the students. Some

classes were videotaped and others audiotaped.

Transcripts from both videotaped and audiotaped classes, in addition to the investigator's field notes, constitute a major part of the data. Another important part comes from individual out-of-class interviews, which were arranged with the four observed students, nine of their peers, and the two teachers. Two other colleagues of the teachers commented about the instructors during a casual conversation with the investigator. Their comments were also incorporated into the study to verify certain points. All the formal interviews were audiotaped and transcribed.

### Instructors and Classroom Settings

Three classes of Japanese 103 were offered every weekday for 50 minutes starting at 8 : 55 AM, 10 : 00 AM, and 11 : 05 AM. The earliest class was taught by Teacher A, and the next two classes were taught by Teacher B.

Both teachers were graduate teaching assistants of the university, and were bilingual in English and Japanese. Both of them had more than three years of experience teaching Japanese.

Teacher B was a very well-organized instructor. She said that she could not work on anything that was not clearly laid out. Her colleagues all agreed that she was a diligent worker. Teacher A was not like Teacher B in terms of organization. She was generally quick, somewhat flexible, and more easy-going than Teacher B.

There were 21 students in Teacher A's class, and 17 and 18 respectively in Teacher B's classes. The sound-proof classroom was furnished with eight rows of five chairs nailed to the floor, all facing the front. Students in all classes sat in the front rows. In the back of the classroom sat three Japanese native informants.

As mentioned above, there were two teachers of Japanese 103, Teacher A and Teacher B. The two individuals had, of course, some differences from each other, such as their gender, native language, experience at the university, and their personalities. Such differences could potentially cause differences among the classes they were teaching.

Despite those differences, however, their commonalities in approach to teaching Japanese seemed fundamentally more important. Both of them were following the same instructional goals of the Japanese program, using the same teaching and evaluating materials, and following the same syllabus. They often had meetings to discuss teaching plans. They focused on grammar, sentence patterns in particular, and emphasized linguistic accuracy over communicative fluency, as illustrated in the following.

One of Teacher B's classes on May 26 was chosen to demonstrate a typical class procedure. It was a "typical" class because there were no special guests or events during the class, and the students were not taking written quizzes or oral checks, either. What they experienced was 1) review of the previous class; 2) introduction to new grammar (new sentence structure); 3) mechanical drill (verb conjugation); 4) expansion drill (longer translation); and 5) reading a dialog. Teacher A's class followed a similar procedure on that day.

### Typical Class Procedure

The main concern of the investigator here was to find out what was really going on in the classroom, in order to better understand the background of the four selected students. The results of the observation reported here show the context in which Japanese was learned, and then lead to analysis of the four students with different degrees of field independence/dependence and levels of achievement. The following section shows

the typical class procedure, mostly taken from one of Teacher B's May 26 classes.

9 : 55 AM

Students started coming into the classroom. Some of them had been studying in the hallway, waiting for the previous class to end. When students arrived in the classroom, they turned in their previous day's homework by leaving their papers on the teacher's desk or by handing them to one of the native informants sitting in the back.

Teacher B came in earlier than the class time and started writing the new sentence structure in the middle of the blackboard. She also wrote the day's homework assignment at the left end of the blackboard. Three new Kanji characters remained on the right side of the blackboard from Teacher A's previous class. Students copied the information while waiting for the class to start. Some students were carrying on casual conversations with their peers. (However, when they were to have an oral check at the beginning of the class, which happened once or twice a week, students usually practiced the dialog with their partners before class started.)

10 : 03 AM

One of the native informants came up to the teacher's desk to collect the assignments at the beginning of the class. The native informants recorded who turned in the assignments and corrected the papers.

Teacher B started by asking the students how the homework was.

B : *Shukudai wa muzukashikatta desuka?*<sup>3</sup>

[Was the homework difficult?]

*Yasashikatta? Review deshitane?*

[Was it easy? It was a 'review, ' wasn't it?]

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<sup>3</sup> In this study, Japanese is transcribed into the roman alphabet according to the Hepburn system.

She asked these questions almost without pause, as if she was not really expecting answers. The word "review" in the last sentence was said in English pronunciation. The Japanese word equivalent to "review," "fukushuu," had not been taught yet. She sometimes mixed English words into her Japanese sentences in such cases.

After the sentence "Review deshitane?" she switched to English and engaged in a few more verbal exchanges with students who responded in English.

10 : 10 AM

Teacher B started reviewing the pattern "--demo ---mashou" [Let's do XXX or something]. She was, as usual, holding a sheet of paper on which she had written the plan for the day's lesson for herself.

B : L-san [Mr. L], you are trying to decide where to go this weekend.

L : *Toshokan \*demo ikimashou.* <sup>4</sup>

[Let's go (to) somewhere like the library.]

B : You need a particle.

L : Oh, sorry. *Toshokan e demo ikimashou.* [Let's go to the library or somewhere.]

B : *Hai, iidesune.* [Yes, that is good, isn't it?]

The way Teacher B told the student L to add a particle in English was a typical negative feedback. Teacher B was reminding the student of the missed part of the sentence to reinforce his knowledge of Japanese grammar. (Such a reinforcement of grammar was always provided in English throughout my observation in both Teacher B's and Teacher A's classes.)

Students said "sorry" when they did not respond as the teacher ex-

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<sup>4</sup> An asterisk indicates an ungrammatical expression.

pected. This happened in Teacher A's class as well.

Teacher B asked a few more students to make sentences using the pattern. Then she moved on to the new material.

B: Let's change gears. What kind of sentences can you make using "tab-enai [not to eat]"? What sentence patterns can you say with "tab-enai"? — Yes? "— deshou," "— to omoimasu," yes, and so forth, right? Let's do some drills. I want to make sure we know all the "-nai" forms. (Here, she put down her teaching plan and showed flash cards with dictionary forms of verbs in Hiragana — one of the Japanese syllabaries — on them.)

B: K-san [Mr. K], give me the "-nai" form.

(Showing "neru [to sleep]," whose "-nai" form is "nenai [not to sleep].")

K: \*Waranai.

B: Wa? What is this? (Pointing to the "ne" character.)

K: Oh, there is some difference?

B: BIG difference! (Here the class laughed.)

K: Oh, then \*neranai.

B: *Neranai?*

K: Uh—neru—nenai!

B: O. K. Nenai.

She checked the "-nai" form with three more students. (She did not comment further on the fact that Student K did not distinguish two Hiragana characters, which they had supposedly mastered in the first quarter.)

She then went to the blackboard and pointed at the new sentence structure. She explained the structure and its meaning in English: "You know the '-nai' form. So you could just change it into '-nakutewa ikemasen' form. It means 'must or have to do something.'" Students were copying

what was on the board in their notebooks or in the margin of the textbook. Some were looking for that pattern in their textbook.

After her brief explanation, the class did the mechanical drill of changing verbs into the new "-nakutewa ikemasen" form. The dictionary forms written on the flash cards were used as cues. The students were expected to read the cue on the card, change it to the "-nai" form mentally, and then to say the "-nakutewa ikemasen" form. She called on students one by one, flipping the flash cards. Then she shifted from the verb conjugation drill to sentence level translation. Cues were given in English.

B: S-san [Mr. S], you have to go to the language lab today and tomorrow.

S: *Kyou to ashita eru-eru e \*ikakutewa ikemasen.*  
[Today and tomorrow I have to go to the language lab.]

B: Mou ichido. [Once again.]  
(Pointing to the blackboard where the pattern was written.)

S: Oh! *Kyou to ashita eru-eru e ikanakutewa ikemasen.*

B: Hai. *Ganbaranakutewa ikemasen.* [Yes. (You) have to work hard.]

The teacher went on with other students. This time she started expanding sentences.

B: J-san [Ms. J], I have to listen to the Japanese tape every day.

J: *Mainichi nihongo no teepu o kikanakutewa ikemasen.*  
[I have to listen to the Japanese tape every day.]

B: Let's make it long. I hate language lab, but...

J: I like it. (Here the class laughed.)

B: Just for the speaking practice.

J: O. K. *Eru-eru wa kiraidesuga, mainichi nihongo no teepu o kikanakutewa ikemasen.*



[Though I dislike language lab, I have to listen to the tape every day.]

B: *Hai, iidesune.* [Yes, it's good, isn't it?] P-san [Ms. P], I have to write Kanji.

P: *Kanji o kakanakutewa ikemasen.* [I have to write Kanji.]

B: It's tough but...

P: *Taihen desukara, Kanji o kakanakutewa ikemasen.*  
[Because it is tough, I have to write Kanji.]

B: BUT!

P: Oh, sorry. *Taihen desuga, Kanji o kakanakutewa ikemasen.*  
[It is tough but I have to write Kanji.]

The teacher was conducting an expansion drill by giving extra clauses, to make students translate longer sentences from English to Japanese. This type of drill was planned in advance, in a structured manner: from short to long, and from simple to complex. The students could not really choose what to say, and when they spoke, their answers were usually corrected. In the last example, what the student P said was grammatically correct and made sense. The student could relate that sentence to herself: because Kanji were tough, she had to practice writing a lot. But she had to change the sentence to what the teacher originally wanted.

Student K, who was one of the most field-independent and low-achieving individuals in class, asked a question on the new sentence structure. He asked about the literal meaning of the expression they were practicing. He analyzed the structure "-nakutewa ikemasen" and conjectured the use of its affirmative form.

K: Then "nakutewa ikemasu" means "I don't have to"?

This was a legitimate question, because "-masen" is a negative form

of "masu," and the teacher had not mentioned the form **"nakutewa ikemasu,"** which is actually never used in Japanese. To express "do not have to" in Japanese, one uses a different expression. In other words, Japanese expressions equivalent to "have to" and "do not have to" are not an affirmative/negative pair as in English. What Student K schematized, however, was :

**"-masu" : affirmative / "-masen" : negative**

**and**

**"-nakutewa ikemasen" : "must /have to"**

**therefore**

**\*"-nakutewa ikemasu" : "don't have to"**

Teacher B responded to Student K, "No, it doesn't work that way." Student K did not ask any further questions. The teacher then moved on to practicing the dialog.

10 : 30 AM

After the students practiced sentences using the grammar point of the lesson, Teacher B moved on to reading the dialog from the textbook. Two native informants read the dialog in front of the class as a model. Teacher B asked questions to the class about the content of the dialog, mostly in Japanese. Most of the students answered them by reading relevant parts from the dialog in the textbook. Then the students practiced reading the dialog by repeating after the teacher, sentence by sentence. Teacher B pointed out a few phrases from the dialog, gave their meanings, and added brief explanations about their usage.

She moved on to more example sentences which followed the dialog in the textbook, and had students read them one by one. After ensuring that the students knew how to translate them into English, she told the class to pull out the handout from the previous day.

10 : 40 AM

One student complained, "I did not understand what we were supposed to do." Teacher B told the student not to worry because they were going to solve the problems one by one together. The purpose of the exercise on the handout was to review one particular sentence structure, the comparative, by making sentences with the given cues. Some of the manipulations involved in this exercise were more complex than the examples they had done during the previous class. Several students seemed to have difficulties with the exercise.

As an example, Teacher B gave a model answer to one of the exercise problems :

B : *Manga o yomuno wa terebi o miru yori omoshiroi desu.*

[Reading comics is more interesting than watching TV.]

W : Can you say "no wa yori" there?

Student W's question would have been a legitimate and simple one if he had said "no yori" instead of "no wa yori." "XXX (suru) no wa YYY (suru) no yori ZZZ desu" is a canonical expression, and the second "no" could be omitted. The teacher used the expression without the second "no," and that confused the student. He had made an intelligent guess, which was close but not quite right because of the extra "wa" in his question. Teacher B, in turn, was confused with the extra "wa" he said, and missed the point of the question.

B : "No wa yori"? (Puzzled.) Where? Why?

H : Is that a "gerund" we are doing?

(Student W was trying to say something, but did not get the teacher's attention.)

B : We are not describing "watching TV" here. We are talking about "reading comics" - right? Remember the structure, "Verb + no wa + adjec-

tive + desu." (She wrote the pattern on the board.)

H: How can you compare Verb and Noun?

B: Is there anybody else who has trouble here? Is it only Mr.H who has trouble? (The class became completely silent.) I mean,I want to get through the rest of the sentences,and if it's OK to talk to Mr.H after class...

Thus, in spite of the interruption of the question she returned the class to the exercise. After that, she gave directions for the day's homework assignment, the next day's oral check, and the new Kanji that the students should study on their own. This concluded the class for the day. As soon as Teacher B said "Sayounara [Good bye]" to the class, the three native informants stood up and started calling the names of the students in order to return the corrected papers that the students had turned in before class.

Other than the activities mentioned above in the description of a typical class procedure, the class sometimes engaged in pair work or small group work for several minutes, with the native informants' involvement and help.

### Analysis of the Classes

Several important characteristics of the Japanese classes can be pointed out. They are : use of English, grammar-oriented approach, emphasis on translation, teacher-centeredness, communication in Japanese mainly for practice of grammar, preference for accuracy over fluency, and dependence on out-of-class work.

#### Use of English.

The first notable characteristic is that English, L1 of the learners,

was dominantly used in teaching. Consequently, the students were not discouraged from asking questions in English. The teacher's use of Japanese consisted of greetings, calling names, positive feedback, modeling, giving directions, asking questions to check on dialog comprehension, and language echoes to confirm correct answers. The investigator received a general impression of English being used more than Japanese, and Table 6 supports such an impression.

Table 6    Number of Utterances in English and Japanese  
during a 50-minute Class

Teacher	A	B
English	214	113
Japanese (Total)	97	38
Model/echo	19	14
Direction/ feedback	70	19
Communicative/ situational	8	5
Mixture of E & J	0	14
Total number of utterances	311	165

This table shows how many utterances each teacher made in English, in Japanese, and in a mixture of the two languages on a certain day.<sup>5</sup> The two teachers were carrying out very similar procedures in their respective classes. The table clearly demonstrates both teachers' frequent use of English in the classroom ; for example, Teacher A used 311 sentences in 50 minutes ; only 97 of these were in Japanese.

As mentioned earlier, Teacher B used English words in her Japanese sentences when the Japanese equivalents had not been taught yet. It seemed that Teacher A preferred to say everything in English in such cases.

<sup>5</sup>An utterance means a sentence, or a self-standing or isolated fraction of a sentence.

It is also noticeable in this table that Teacher A spoke much more than Teacher B. In addition, while Teacher B articulated carefully, especially in Japanese, Teacher A spoke faster, and in a natural way. She also tended to give longer explanations in English than Teacher B did. But as far as Japanese input to students was concerned, the difference between the two teachers was not as significant as the table might suggest. Out of the 97 Japanese utterances that Teacher A made, 70 were directions or feedback in fixed expressions, such as: "Itte kudasai [Please say it]," "Mou ichido [Once again]," and "Iidesune [That is good]." The last expression, especially, was repeated so often in situations where no praise was intended that it did not seem to have any purpose other than just keeping the pace of the class. Therefore, the amount of utterances by each teacher was actually not as different as it might look at first glance. It is true, nevertheless, that the teachers' utterances were predominantly in English.

#### Grammar-oriented approach.

The second characteristic is that the class was structured around the grammatical points, particularly the sentence patterns of the lesson. Both instructors conducted their classes according to the grammatical syllabus, which was based on the textbook, and sentence structures were the main focus of their teaching.

In her interview, Teacher B suggested that in oral drills she was aiming at students' production of "grammatically correct sentences." She talked about one student who had dropped the course, and explained that his writing was worse than his speaking :

...I mean,when you talk to somebody,you can give them a lot of cues and — to steer them in the right direction,but,as far as written — when he writes it,then that's it.So there's no way for me to *steer him*

*towards — right ...for grammatically correct sentences, the way I could do that in conversation.* [My emphasis added.]

In the same interview, Teacher B, when asked how often she gave quizzes, said, " [It] depends on how much grammar we've covered during that week." This response suggests two important features of the classes : one is that grammar was the main factor in planning their schedule, and the other is that she regarded grammatical items as something to be "covered." Such an attitude seems closely related to the way she handled some of the students' questions. Since she seemed to be concentrating on the grammar that she wanted to cover, it appeared that she did not want to spend too much time on one individual's questions.

#### Emphasis on translation.

Translation from English to Japanese was used in oral practice in class, as well as in the written quizzes and examinations. Translation exercises reinforced students' grammatical and lexical knowledge. The teachers also used translation to check the students' knowledge of the language in class and on the written tests.

The students seemed to receive input in English, process the information according to their grammatical and lexical knowledge, and respond in Japanese. The teacher gave feedback to improve accuracy, rather than fluency. It is questionable whether the students were actually learning how to communicate in Japanese, since they did not get much input in the target language. What seemed to happen was that the students were learning about Japanese grammar in their L1 and practicing translation.

#### Teacher-centeredness.

The classes were conducted under the teachers' control. The teach-

ers decided on the content, procedure, and pace of the class.

As pointed out earlier, students often said "sorry" when their response was different from what their teacher expected. Those unexpected responses were "corrected" and changed, even though they sometimes made sense, as shown in an earlier example.

The students sometimes asked their teacher questions like, "Do you want me to say it again?" or, "Is this what you want me to say?" Such questions are symptomatic of a somewhat submissive attitude: I am saying this Japanese sentence simply because you want me to, regardless of what I think.

Another example of teacher-centeredness was found in the way the teachers handled unexpected questions; they tried to answer as briefly as they could. If the students were not satisfied with the explanation and kept asking, the teachers tended to cut the discussion short and deal with the individual problems outside of the classroom. The incident described earlier in Teacher B's class is an explicit example: she said that she wanted to talk to the particular student later, so that she could finish a specific exercise in that hour, as she had planned.

There were times, however, when students were allowed to speak relatively freely, for example, during pair work and small group work, which occurred twice or three times per week for several minutes each time. During those exercise periods, the students were encouraged to talk in Japanese according to directions which the teacher gave. Since students were following the teacher's directions, such activities could also be called basically teacher-centered. Nevertheless, the students were given a chance to communicate with their peers in Japanese without the teacher's immediate correction. Many students commented favorably on the pair work during the interviews.



### Communication in Japanese.

There was not a lot of personalized communication in Japanese. The communication to establish rapport between the teacher and students was conducted in English. It was often observed that the teachers even told jokes in English. Students were not discouraged from asking questions in English. Thus, meaningful and purposeful communication was carried out mainly in English throughout the observation period, except in isolated incidents, such as when Teacher A told a student to close the door in Japanese, or when Teacher B asked students how the homework was.

### Preference for accuracy over fluency.

All the feedback that the teachers gave was to improve accuracy in the students' responses. As revealed in Teacher B's earlier comments, what she seemed to be most concerned about was to have students produce "grammatically correct sentences." The only time fluency seemed to matter was when they had weekly oral checks. On the individual oral check sheets, both accuracy and fluency were commented on, but they were not numerically graded. Fluency was not graded at the time of the oral part of the mid-term and the final examinations ; linguistic accuracy was considered most important.

### Dependence on out-of-class work.

The students were expected to be able to write what they practiced speaking in class. The written quizzes consisted of translation, or partial translation, and dictations. Since no class time was allocated for writing practice, students' improvement in writing totally depended on self-study.

At the end of each class, three Kanji were usually introduced with minimal explanations and demonstration of how to write them. Students

were responsible for practicing and memorizing those Kanji at home on their own. Computer-Assisted Instruction (CAI) for Kanji was available in the computer lab to help students practice recognition of the Kanji's meaning, pronunciation, and stroke order. The students were required to go to the computer lab and practice for half an hour twice a week, as mentioned in Chapter II. How they practiced with the computer was up to them. As each individual student's needs vary, the computer lab practice is set up in a way that individual learners can choose by themselves which Kanji, in what order, which drills, how long, how many times, and how fast to practice. The teachers regularly checked the students' lab attendance, but did not really check how they practiced.

The teachers gave students written homework assignments every day. The usual assignment was to compose five or six sentences using the new sentence patterns. When the class was at the end of each lesson in the textbook, the students were assigned to do the summary translation exercise.

Students were also expected to practice listening and speaking outside of the classroom. Practice with the audio tapes at the language lab was part of the course requirements, and lab attendance was reported to each teacher. The tapes contained material from the textbook, recorded by native speakers. The teachers had suggested that students purchase the tapes for their own use at home, but not all the students bought a set.

As for speaking skills, the students had to practice on their own, since there was not much time to build fluency in speaking and communicating in Japanese in the classroom. The teachers suggested to the class as a whole to seek help from a Japanese tutor. Many students did so, and this was usually done in exchange for teaching English.

To summarize this section : these seven characteristics of the Japa-

nese 103 classes are very important background for understanding the classroom climate in which the four selected students were learning the target language. In the next section, the students are described, with a focus on their strong and weak points in learning Japanese.

### Four Selected Students : Their Problems and Strategies

#### Selection of the four students

In order to investigate the most extreme cases with maximum differences in terms of degree of field independence/dependence and achievement, four students were selected. They were : field-independent high achiever (FI+), field-dependent high achiever (FD+), field-independent low achiever (FI-), and field-dependent low achiever (FD-).

Both FI students turned out to be male, and both FD students female. This gender difference is in agreement with what Witkin et al. (1971) pointed out as a typical phenomenon: males tend to be FI, whereas females tend to be FD. This phenomenon was also found to be an overall tendency of all of the subjects of this study, as mentioned in the previous section.

Students were selected to represent the four extremities (FI+, FD+, FI-, FD-) ; they had not studied Japanese formally before taking Japanese 101 at the University of Georgia. Although the FD+ knew some Japanese phrases which she had learned from her Japanese friend, her knowledge was not beyond the novice level. Thus, the variable of previous knowledge was controlled.

It happened that both FI students were in Teacher B's class, and both FD students were in Teacher A's class. According to the interview results, both FI students chose the class time, whereas the FD students chose the instructor. Students are normally not informed concerning which instructor teaches which section before the course begins, but both of the FD

students went to ask for this piece of information and then chose Teacher A's class because they had taken a class with her before. It is interesting to notice that their choices of class seem to agree with the claim of Witkin et al. that FDs are more "human-oriented" (1971).

### Student Profiles

Following are profiles of the four selected students, accompanied by their perception of difficulties in learning Japanese and their ways to cope with such difficulties.

FI+ was a male student majoring in Biology. He took Japanese because he wanted to be "different" by not taking "French or Spanish." Though he obtained good grades in Japanese, he was going to quit because he had "no time for Japanese."

FD+ was a female pre-law major. She had a Japanese friend and became interested in Japanese culture and language. That was her main motivation for taking the Japanese course. She also had what Gardner and Lambert called "an instrumental motivation," for she believed that Japanese would be useful when she studied international law in the future (1972).<sup>6</sup> She planned to take courses in Japanese all the way through until her graduation.

FI- was a male Computer Science major. He had not been planning to take Japanese, but decided to take it because there was not much choice at the time of his registration. But he was not without motivation. He had

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<sup>6</sup> Gardner and Lambert (1972) made a distinction between an "instrumental motivation" integrative motivation" and an "integrative motivation." The "instrumental motivation" is a person's desire to learn a language for "instrumental motivation" is a person's desire to learn a language for utilitarian purposes, such as furthering a career, improving social status, or meeting an educational requirement. On the other hand, a learner is called "integratively motivated" when he or she wishes to identify with the people of the target language and culture.

been interested in some aspects of Japanese culture, such as Judo [a martial art] and animation, since his childhood. He said that he would continue Japanese because he liked to learn the language.

FD- was a female student majoring in Journalism. She chose Japanese mainly because of her Japanese boyfriend. Since she had been discouraged by her poor grades and also had broken up with her boyfriend, she decided to quit after Japanese 103.

Table 7 Field Independence and Achievement of the Four Students

Student	GEFT	Oral	Grammar	Writing	Overall (%)
FI+	17	91.0	96.0	91.7	93.0
FD+	2	96.0	96.0	83.3	93.3
FI-	18	79.5	88.0	71.7	79.3
FD-	7	66.0	52.0	68.3	76.7
Class average	14	88.6	88.0	83.3	89.4

Table 7 shows the achievements of the four students and their class averages. This table provides a rough picture of how the class and the four students did in the course from a numerical point of view.

#### High achievers : FI+ and FD+

Both high achievers had been making A's in Japanese courses. But their strengths and weaknesses in learning the language were different. Consequently, they had different strategies to overcome or manage their difficulties.

FI+ student was confident with his being "picture-oriented," and he felt secure in his "strong memory." He did not find Japanese particularly difficult once he learned the syllabaries at the beginning of Japanese 101.

He found it "pretty easy" to learn Kanji, Japanese ideographs, and commented that "a lot of people have difficulties in Kanji, but I don't understand that."

His strategy was to sit down and learn them all in a short time. He had a high concentration ability. He could concentrate and study for many hours if he decided to. For example, he sat down and studied Kanji for ten hours on one Sunday and as a result did pretty well on the exam, although this way of studying Kanji was not recommended by the class instructors. If one uses this method, information tends to be retained only in short-term memory and is likely to be forgotten later. He admitted that he was not sure if his long-term memory registered the Kanji he memorized, but he was certain that he was able to cram if necessary before the Kanji test.

The FI+ student was not strong in speaking, and he realized that he was having the hardest time in speaking and listening. He had a weakness in speaking with fluency, but had developed accuracy. Since linguistic accuracy was the focus in grading the oral examinations, he did not lose many points when his speaking was graded.

He managed to get a good overall grade thanks to his high scores on the Kanji and grammar parts of the exam. He knew, however, that his speaking ability had not developed as much as he had wished. He analyzed the classroom situation and said that he did not get enough speaking practice in class. He wished for a smaller class and more speaking practice :

Maybe the class was just too big. I talked maybe three times during the day. It's no one's fault, except there are twenty-three [eighteen in fact] people in class. That would be a lot different — like ten or so. That would be easier. It seems to me like the class is more oriented towards written [work]. I know we had oral checks. Those are really easy. I mean, you just memorize. That's all memorization. That's not

impromptu. We have nothing really to prepare ourselves for something like the oral examination.

He had difficulty in listening comprehension, especially in dictations which were part of the written quizzes :

During the dictations, they'll ask questions. I just can't follow till maybe the fourth time I've heard it, and that's too late. I mean, those are the hardest parts. I wish we had done that more in class.

FI+ found dictation very hard in comparison to simple memorization. He said that he had "a pretty good memory, but it's always oral things that are very difficult to pick up on."

What did he do, then, to cope with such deficient oral skills? There was nothing he did outside of the class. He said "No, I don't do any speaking of Japanese, which is not good". This was, he said, primarily because of time:

Well, it takes so much time. I mean, I knew — literally, I really want to do. In order to do Japanese well, I'd have to spend a lot of time. And I just don't have the time to do it.

That was his justification for discontinuing Japanese even though he was making good grades until then. In summary, the FI+ student was strong in memorizing Kanji, grammar, and memorizing dialogues, but his difficulties lay in speaking and listening.

The FD+ student presents an interesting contrast to the FI+ student. The prominent characteristics of the FD+ student which played a role in leading her to success seemed to be patience and perseverance in studying Japanese. One friend of the FD+ student described her as being a person who had "to have things a certain way, and if they [were] not that way then [she was] unhappy about them." The friend indicated that once she set her mind on studying something, she would not compromise or give up in the middle. The FD+ student claimed that she owed her de-

termination to her family environment. She said that it was really important in her family to do well in school. She explained with the example of her sister :

I guess we're pretty rigid,when it comes to academics.I think so.It's very important for us to do well.My little sister is in the fourth grade now,and if she doesn't have an A plus,then it bothers her.An A is not just an A.It depends on what kind of A it is.

With such academic aspirations, she was keenly aware of her own weaknesses and made efforts to correct them. In the first quarter, she sought help from a tutor, a Japanese student studying English. With his help, she solved some of the problems she had at that time. She recognized that listening to the native Japanese speaker helped familiarize her with the language.

Mainly we [the tutor and I] were going through the book for pronunciation purposes,and if I had a problem with something,he would explain it to me the best he could.

We did not work on writing.But sometimes I would read the dictations if I had a problem with it,and if I wasn't certain with [about the] intonation.

It helped a lot.And it was good for,I guess I don't want to say colloquial,but like just the spoken Japanese.I mean,it's a little different from what we actually learned.I mean,I think he spoke more in "plain form" and so that was good to hear,you know,the different way.

Having a tutor at the early stage of her learning helped her solve her problems, build a solid foundation to learn more, and become confident in the subject matter.

She was a communicative and sociable type of person. Knowing her



own merits, she decided not to spend time on speaking practice. She said, "I like to meet Japanese people, and I practice with them. But usually, besides that, I really don't do anything for the speaking."

The investigator noticed during the class observations that she was one of the few students who were mouthing the answers when other students were called upon. She was also often helping or rather almost teaching her partner during the pair work.

The FD+ student, however, was not free from difficulty in learning Japanese. She found Kanji most difficult. She explained why :

I think it's because there are so many Kanji to learn at one time, and then, also, you just have to spend a lot of time with practicing them, and there you have nothing to compare them to, and so you're learning something totally new.

To manage such a difficult task, she had her own way to deal with Kanji, which was different from the FI students' approach. Since Kanji learning was the hardest part for her, she concentrated on it when she studied every night. She explained how she studied Japanese at home :

Usually I sit down and practice writing the Kanji over and over and over, trying to remember them. And whatever the new grammar point we've been taught for the day, I'd like to go through and read ahead.

The FD+ student's way of dealing with her difficulty in learning Kanji was simply a diligent daily writing practice. Along with practicing Kanji, she studied grammar by both reviewing and previewing class material every day. It is easy to infer that such preview helped her become confident in class. Since she knew what to expect, she did not experience uncertainty about the content and was able to have a better grasp of it during the class time.

Low achievers : FI- and FD-

FI- was Student K in Teacher B's class who asked the analytical question about conjugating "-nakutewa ikemasen" form into its affirmative. The FI- student was very much interested in Japanese pop culture, especially animation, and liked learning Kanji, but he was not making good grades in the course. His instructor, Teacher B, described him as the "weakest" in the class and a "careless" person :

He has no problem turning in the homework. His problem is more -- he's very careless. He makes a lot of careless mistakes, and he's not a very detailed person, so that the way he wrote some Hiragana was corrected. [...] He'll make the same mistake again and again. He doesn't really pay much attention to the little things like that. And little things always add up and become big things, but it starts with the problem of maybe writing Hiragana.

What she said about his carelessness with Hiragana was also observed in class, as presented earlier. This FI- student, K, revealed his confused state with Hiragana when he read Teacher B's flash card "neru" as "waru."

The FI- student claimed that Kanji was easy to learn because he had a "technique" to remember them. He revealed his "technique" : using association as a mnemonic device, which he called "connotation." He said that he acquired this skill in high school. Despite his claim, however, he was losing points in the written quizzes because he did not remember Kanji precisely and did not write them accurately. When Kanji become written test items, imperfect memory is just as bad as no memory. His mnemonic device helped him remember only rough pictures of Kanji. Therefore, even though he liked Kanji, did the homework assignments, and used his "technique" to remember them, that was not enough to score high on the written

quizzes.

He looked rather disorganized in class. He was the only student whose textbook did not have a binding, and he did not even keep the pages in the right order. Whenever the instructor told the class to pull out a hand-out given before, the FI- student had a hard time finding it in his bag. Sometimes he gave up and asked his neighbor to show it to him. It was often noticed that he had not studied the lesson before class, and whenever he came across an unknown word, he asked his neighbor, who was one of the strongest students in class.

The way he was sitting was unique. He often assumed a reclining position with his feet resting on the chair in front of him. He was also the only one who occasionally stretched himself in the middle of the class. Though nobody seemed to be bothered, it can be said that such behavior was indicative of his lax and informal character.

The FI- student found conjugation challenging and liked "trying to sound [out] those tough ones," by conjugating adjectives which have some tricky pronunciations. It may not be a mere coincidence that such mechanical and systematic learning was appealing to this field-independent person.

The FI- student had a hard time speaking, especially "in front of other people." But he "never had a problem with oral checks." In his responses in the interview, he tended to concentrate on mechanical aspects and not on a more purposeful use of the language. It was noticed that his responses were similar to those of the FI+ student. His teacher, Teacher B, said that he was doing what was required, but that he was not doing well. The FI- student himself knew that he needed to do more than simply doing his homework. As he mentioned, he did not make serious efforts to work on his weaknesses. He did not seek help from a tutor or a Japanese

friend. It was not because he did not know any Japanese students. He knew some, but he was rather careless or indifferent. He mentioned an attempt to talk to Japanese students :

Takumi — uh — I helped him — I helped him with his English. But I haven't — it seems he's real busy so I hate to ask him to help me with my Japanese. That's — I wish I had — I did have a tutor actually but there's — there is a lot of Japanese people in my dorm, though. There is a bunch of — I don't know that many Japanese students. I tried to — I talked to — just talked to them, like — tried to talk to them.

They understand me but I don't have much to say 'cause I don't know like — It's like "where are you going?" Yeah, "what are you doing?"

He had some conversations with Japanese students, though infrequently in Japanese. When he did converse with them in Japanese, he did not "have much to say." The difference between him and the FD+ student, who was strong in speaking, seemed to derive from this attitude. The FD+ student thought it was "nice" just to say "Konnichiwa [Hello]" in Japanese and found it enjoyable, even if it was a short exchange. Such an enjoyment motivated her to practice speaking more Japanese. On the other hand, the FI- student took it negatively when there was not "much to say" and stopped trying to talk to Japanese students, losing interest.

He regretted that he had no one to study with, and was blaming that lack for his not doing well in Japanese :

I think my problem is I never study with anybody. Like most of the people in our class study with each other. I [have] never done that because — a lot of reasons but like — overprotected by my girlfriend. You know, unless you get someone else's input into it, it's really hard to tell if you are doing something right.

As he said, he did not use the strategy of studying with someone, even though he thought it would have been helpful. But above all, he did not spend enough time on Japanese. He said "I don't put time into it. I should, but — and I still like it." Thus, his weakness in speaking was never overcome, and his carelessness did not seem to change through the quarter.

The FD- student started to take Japanese because of personal motivation. Because she had a Japanese boyfriend, she thought "It would be neat to discuss [things] with his parents in Japanese." She also chose Japanese because she thought French would be difficult. (She realized later that was not the case.) She was frustrated with her low achievement throughout the quarter.

She said that Kanji was the most difficult part in learning Japanese. But, later, she also said, "Writing is easier than speaking." These remarks seemed contradictory, but actually she seemed to have the most difficult time in speaking. It can be inferred that Kanji might have been giving her a hard time when she studied at home or when she took Kanji tests. However, unsuccessful Kanji learning was not likely to result in public embarrassment, as in the case of speaking. In learning Kanji, she could succeed fairly well if she studied diligently. Kanji learning mostly requires rote memorization, and one can cram them to a certain extent before an examination. Speaking, however, does not work the same way. It is highly cumulative, especially since the curriculum is designed in an order of increasing complexity, as the FD+ student illustrated :

In Japanese, if you lost something in 102 and you just didn't get it and then when you get to 103, that point is still gonna be missing, and so it's gonna keep affecting you. I mean just keep building on things that you are either not picking up or losing. So it's like a battle to bring everything with you from each quarter.

The FD- student failed to establish a solid foundation, especially in the speaking skills, during the previous Japanese courses. By the time of 103, she had so many "missed" points that she could not say a lot with confidence, which became frustrating and embarrassing at times. When she was called upon in class, she always asked several questions in English before she said anything in Japanese, trying to make sure that she could say the answer as correctly as possible. And every time she said a couple of Japanese words she had to stop and ask, "Am I right?" to the instructor. Thus, she was almost never observed saying one full, uninterrupted sentence in Japanese. The instructor described her problem and confirmed this observation :

There's a problem there. She does work very hard on the material. She comes to the class every day, she turns in the homework every day, and she goes to the lab. She never misses. And she's very diligent and does what's required. But she has — I'm not sure about it, but she has a very difficult time, understanding and absorbing the language. First of all, it might be the way she's studying, but I don't — I think she's trying different ways, and she's getting help from other students and her friends, so it might not just be the way she's studying, but she is not really good at learning foreign languages in general. I'm just saying this because she has a very difficult time in learning Japanese. [...] I think she's very shy and very unsure. It's because that she knows herself that she doesn't know the material. She's not sure about the material. She's very uncertain of herself, so when she speaks, she double-checks. She can't say a full sentence without stopping and making sure she's saying that thing right to that point. And she always goes around and says "Am I right?" "Is this what you want me to say?" [The interviewee's em-

phasis added.]]<sup>7</sup>

Though FD- was usually having a difficult time in learning Japanese, she also had a successful experience. One day during the pair work when every pair was assigned to make a short dialog, the FD- student was trying to say a sentence, but she needed help. She kept asking her partner word by word in her attempt. Her partner was very kind and patient. When she finally said the whole sentence only in Japanese, her partner clapped her hands, and she was very happy and proud, and perked up her shoulders. Besides her partner and the investigator, nobody else seemed to notice her success. That was the only occasion when she looked truly confident in speaking Japanese. I could not help thinking that, if she could have accumulated such successful experiences, she might not have to quit Japanese. She probably did not look "shy and unsure about herself" from the beginning. She got lost at some point in the course, and never caught up, which turned out to be the case from her own explanation during the interview.

She did not find Japanese 101 difficult ; she actually enjoyed it. But since she did not do the homework assigned for the winter vacation, she forgot what she had learned and was "overwhelmed" when she came back in January. From then on, she was always behind the class and never really caught up with it. She did not get much help from her Japanese boyfriend, because he was "very impatient and got upset" if she did not understand quickly. Gradually she was losing her motivation, and bad grades eventually made her think of quitting Japanese. She disclosed her bitter feelings about it :

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<sup>7</sup> The interviews with the teachers were conducted in English, regardless of their first language. The purpose was to analyze interview data without the interference of translation from Japanese to English.

Yeah, because I mean, I feel like — I feel guilty for wasting my parents' money. I feel like I'm wasting.

Because I'm not — I guess I'm not taking it that seriously. And I grew [grew] — I have like a — not a hatred towards it, but I mean as a not a burden but, you know, within myself, because I'm like "aaah —" I don't enjoy it, like I said. I don't.

I feel like I'm the stupidest one in the class.

The FD- student apparently did not have an articulated strategy of her own for learning Japanese, except for calling her friend when she needed. She tended to complain that there was too much material, especially too many Kanji to learn, and the class was going too fast. The FD- student said that she studied Japanese for an hour every day in the spring quarter, but she could not explain in precise detail how she spent that hour, repeating that she worked "very hard." According to her closest classmate, however, she was often doing her homework on the bus to school in the morning, which made the investigator suspect that her "very hard" work probably did not last for very long.

During the class, she often appeared as a person with a short attention span. She was easily distracted by things like noises from outside the classroom, the mutterings of her peers, or her mood. Once she was trying to answer the teacher's question when a fire engine passed the street near the building. She complained that her thinking was disrupted, saying, "Well, Tanaka-san wa kinou [Mr. Tanaka yesterday] — ah — I cannot think —" (pointing to the window). She eventually completed the sentence with her teacher's patience and help, but it took her awhile.

Another example is when she was observed to be quite impatient in class. When Teacher A exceeded the class time by a few minutes, which happened often, the FD- student became restless, looked at her watch fre-



quently, sighed and shut her book and notebook, even though the teacher was still talking to the class. Her behavior was conspicuous because the rest of the students were more patient and attentive than she was. A friend of the FD- provided a comment which supports my observation :

I don't know how much she's studying outside the class. At the beginning of the quarter we had decided that each day after class we would sit down and go over the grammar points ; I think that lasted for like two weeks. She's just easily distracted from Japanese. Because for her it's — I guess more of a burden to try to do it than it is enjoyment.

Learning Japanese was becoming too much of a burden for her during the quarter, and at the time of the interview, she was determined to quit. Thus she developed the feeling of not liking Japanese any more and felt burdened by it. She was quitting Japanese and was "upset about it."

The above description provides the answer to the fourth research question, which concerns the problems of low achievers and high achievers. Table 8 shows a brief summary of the findings.

**Table 8 Characteristics/Problems/Difficulties of the Four Students**

	FI+	FD+	FI-	FD-
Learning Japanese is :	not difficult	not difficult	not difficult	very difficult
Language skills : Speaking & listening	difficult	easy	difficult	difficult
Learning Kanji	easy	difficult	easy	difficult
Strategies	concentration good memory	diligence perseverance	"technique" (mnemonic devices)	no strategy (call friends when needed)
Tutor Motivation	No wanted to be "different"	Yes instrumental & integrative	No interested in pop culture	No Japanese boyfriend
Characteristics & attitude	no more time for Japanese/ did not spend time on speaking	aspiration for academic success/ spent time on Kanji	nervous about speaking/ careless/ sloppy/ did not spend enough time on Japanese	easily distracted/ not serious about studying
Next year Japanese	discontinue	continue	continue	discontinue

### Solutions to the Problems

#### Key Factors to Success

Understanding the difficulties of the students leads to the fifth research question about students' perceptions of how to solve their problems. One solution that all four students agreed with was the importance of investing time to learn Japanese. The investigator asked every interviewee what advice he or she would give to someone who wished to take Japanese. The FI+ student's advice was to take Japanese as seriously as if one were majoring in it :

If you really want to learn Japanese, you have to really go into it. Or you can't major in something else. I think really to learn Japanese, you have to major. You can't just take it as a side — but I think it's a good class. Take it all three years and make that your primary goal. Because it's not — it's not a part-time thing. [The interviewee's

emphasis added.]

The FD+ student also emphasized the importance of a time commitment for studying Japanese :

If they are seriously wanting to become fluent in Japanese, then I would say, "If you don't have the time to sit down and learn the language and to do things that you're going to have to do to keep up, then it really is a waste." I mean, because there are other grades that are going to suffer, and then you're not going to learn Japanese if you're just playing around with it.

The FI- student already had a chance to advise someone about taking Japanese, and he pointed out the importance of putting time into learning the language : "I told them maybe to put time into it. It's really —it's really good. I like it. I don't put time into it. I should, but—and I still like it."

The FD- student stressed the need to put forth a lot of effort :

Advice? — If you are not willing to put a lot of effort into it, just don't even waste your time. I think that's what I would tell them.

These comments of the four students seem to be related to one of the characteristics of the classes pointed out in the earlier section: dependence on out-of-class work. Students were expected to practice all four language skills, especially writing skills of Japanese orthography, outside of the class. Since a large portion of their grade came from their writing skill as assessed by the written quizzes and examinations, it is quite understandable that the students found it necessary to spend a lot of time and effort in order to remember how to write Kanji and to do well in the course.

### Summary

The results from both quantitative and qualitative phases of this

study were presented in this chapter. The quantitative results of this study showed no significant correlation between the degree of field independence/dependence and achievement in Japanese, despite the investigator's expectation.

In the section on qualitative results, two instructors, the classroom settings, and the typical class procedure were first described, and then seven characteristics of the classes were pointed out in order to present the context in which the learning of Japanese was taking place. Secondly, cases of four selected students with extreme degrees of field independence/dependence and levels of achievement were investigated. Their strong and weak points were uncovered, using the observation and interview data. Some of their problems seemed to be related to their degrees of field independence/dependence. There seemed to be various other factors which might have affected their problems, but it is beyond the scope of this study to investigate them. At the end, the students' opinions about the key factors to succeed in learning Japanese were summarized. They agreed on the importance of investing time and effort in order to learn Japanese successfully.

The following chapter will discuss ways to bridge the quantitative and qualitative results, and attempt to explain the unexpected quantitative results in the light of the qualitative results. Pedagogical implications and limitations of this study will be also discussed.

## CHAPTER V

### CONCLUSIONS

This study investigated the relationship between the degrees of field independence/dependence and achievement of American college students learning Japanese. It also attempted to identify problems and difficulties which the students encountered while studying Japanese. The degree of field independence/dependence is one of the cognitive styles claimed as having a role in language learning, as has been noted in a number of previous studies. Considering that claim, an application of the field independence/dependence theory to the case of Japanese language learning is called for. This study is the first of its kind to investigate the validity of field independence/dependence theory among American college students learning Japanese. The present study hypothesized that there would be a correlation between the two variables. Five research questions were posed.

The first research question was to investigate the relationship between the degree of field independence/dependence and achievement in learning Japanese. Achievement here consisted of four constructs: oral performance, grammar knowledge, mastery of Kanji, and overall achievement, as shown in the course grades.

The second research question was closely tied to the first one. The question was whether the degree of field independence/dependence could be a predictor of achievement in learning Japanese in terms of oral performance, grammar knowledge, Kanji mastery, and overall achievement. This question addressed whether there was a positive correlation between field independence/dependence and achievement.

The third research question treated the way the students' language

skills developed in the Japanese program: whether the students' language skills were well-balanced in terms of oral performance, grammar knowledge, and mastery of Japanese orthography.

The fourth and the fifth questions are closely related. The fourth question was to identify the problems that low achievers experienced in the process of learning Japanese, as well as the difficulties that high achievers faced.

The fifth question dealt with the solutions to the problems which were identified in the answer to the fourth question. What did students perceive as most helpful in solving their problems: drills in class, explanations by the teacher, written quizzes, oral checks, self-study, homework, help from peers, assistance from native informants in the class, language lab work, or computer-assisted practice?

The first three research questions were mostly dealt with in the quantitative phase of this study, and the last two questions were answered in the qualitative part of the study. The quantitative phase was hypothesis-testing in nature.

Despite the researcher's initial expectation, the degree of field independence/dependence and achievement of American college students learning Japanese did not exhibit a statistically significant relationship in this study. In the second phase of this study, a detailed description of four individual students with an extreme degree of field independence/dependence and achievement presented interesting contrasts and uncovered differences in their problems. The four students chosen were a field-independent high achiever (FI+), a field-dependent high achiever (FD+), a field-independent low achiever (FI-), and a field-dependent low achiever (FD-).

The following part of this chapter discusses the quantitative results—their meaning and their importance to the field independence/depend-

ence theory. Then, the ensuing section explores the meaning, significance, and limitations of the qualitative phase of the study, including suggestions for future research.

### Discussion : Quantitative Phase

This study attempted to investigate if there was a correlation between the degree of field independence/dependence and the level of achievement in learning Japanese among American college students. The study was conducted in the spring of 1993 with fifty-six students enrolled in the elementary Japanese language course, Japanese 103, at the University of Georgia. Their degree of field independence/dependence, which is an independent variable, was measured with the Group Embedded Figures Test. Their achievement, which is a dependent variable, was numerically assessed by the results of 1) oral interview examinations, 2) the grammar part of the written examinations, 3) the Kanji part of the written examinations, and 4) the overall course grade of Japanese 103. Four null hypotheses were constructed.

Hypothesis 1 : There is no correlation between the degree of field independence and oral performance in Japanese.

Hypothesis 2 : There is no correlation between the degree of field independence and grammar knowledge of Japanese.

Hypothesis 3 : There is no correlation between the degree of field independence and mastery of Kanji.

Hypothesis 4 : There is no correlation between the degree of field independence and overall achievement in Japanese as measured by the course grades.

As for the results of the investigation, none of the four null hypotheses were rejected. Thus, the answer to the first research question (What

is the relationship between the degree of field independence/dependence and level of achievement in learning Japanese among American college students?) is that there was no statistically significant relationship between the degree of field independence/dependence and the level of achievement in this study.

Had there been a statistically significant correlation between the two variables, the learner's degree of field independence/dependence could have been a predictor of his or her achievement in learning Japanese. The data, however, indicated no significant relation between the two variables. Therefore, the answer to the second research question (Can the degree of field independence/dependence be a predictor of achievement in learning Japanese in terms of oral performance, grammar knowledge, Kanji mastery, and overall achievement?) is negative.

Even though the null hypotheses were not rejected, the data indicated some interesting facts. One is that there was a gender difference in the GEFT results, which supported what Witkin et al. had reported (1971): Male students tended to be more field-independent than female students.

The *t* test was used to determine whether this gender difference is statistically significant. The result showed that there is, indeed, a gender difference, with a significance level of .05.

Another finding is that the relationship between degree of field independence/dependence and mastery of Kanji showed the strongest correlation, though not statistically significant, among the results of the Pearson Correlation Coefficients. The relationship of Kanji learning to field independence/dependence suggests that the more field-independent the learner is, the better he or she masters Kanji. This tendency corresponds to the findings in the qualitative study phase, which showed that the field-independent students found Kanji learning rather easy, whereas the field-



dependent students found it most difficult.

It was also noticed that the four constructs of achievement exhibited high interrelationships. This means that those who scored high in one of the four constructs of achievement were likely to score high in other areas of achievement. The highest correlation was found between oral performance and grammar knowledge. This is understandable because linguistic accuracy, which reflects mainly one's grammar knowledge, was the focus in grading the oral interview examinations. Therefore, it is reasonable to believe that those who achieved high scores in grammar knowledge would respond with a high accuracy rate in the oral examinations.

The lowest interrelationship among all the interrelationships was found between the Kanji test results and grammar knowledge. This finding could be explained in two ways: one is that those who achieved high in grammar scored low in Kanji; another is that those who were low achievers in grammar scored high in Kanji. When we look at the class average of the achievement tests, the second possibility seems to be more feasible because the means of the Kanji tests were the highest means, and their standard deviation was smallest among all the achievement test results.

These findings lead us to answer the third research question. (Are the students' language skills well-balanced in terms of oral performance, grammar knowledge, and mastery of the Japanese orthography?) On the whole, the students' language skills were balanced in terms of oral performance, grammar knowledge, and mastery of Japanese orthography. Oral performance results and grammar knowledge revealed a relatively strong correlation ( $r = .75$ ). Kanji mastery and both oral performance ( $r = .48$ ) and grammar knowledge ( $r = .44$ ) showed moderate correlations. These data suggested a discrepancy between Kanji mastery and the rest of the achievement constructs, which means that even low achievers in oral

performance and grammar knowledge could have high achievement in Kanji learning.

The results of the quantitative phase provided unexpected answers to the first and the second research questions. They were contrary to most of the previous research, which indicated a positive relationship between field independence/dependence and achievement. Even though the qualitative phase of the study was not originally designed to explain the results of the quantitative phase, the results of the latter are more explicable when examined in the light of the former. The following section presents answers to the fourth and fifth research questions, followed by some explanation to the quantitative results.

#### Discussion : Qualitative Phase

The data of the qualitative part of the study were collected through non-participant observations of Japanese classes and individual interviews with the four selected students, their peers, and their teachers. Following the classroom observations and analysis of the data is a look at a typical classroom procedure, in order to demonstrate the characteristics of the classes as the context where the formal learning of Japanese was taking place. The main characteristics of the classes were as follows : use of English, grammar-oriented approach, emphasis on translation, teacher-centeredness, situations for communication in Japanese, preference for accuracy over fluency, and dependence on out-of-class work.

The central activities of the students in class were to learn Japanese grammar and lexicon in English and to translate English into Japanese. Such activities were conducted with a focus on linguistic accuracy. The typical classroom procedure was as follows :

- 1) Review of the sentence pattern learned in the previous lesson

- 2) Introduction of the new sentence pattern in English
- 3) Mechanical drill on a lexical level (verb)
- 4) Mechanical drill on a phrase level (predicate)
- 5) Translation drill on a sentential level
- 6) Translation drill to extend the sentences
- 7) Listening to a model dialog
- 8) Reading practice of the dialog
- 9) Introduction to the new Kanji

The only opportunities for the students to communicate in Japanese were when they had pair work or small group activities with their peers. Those activities took place twice or three times a week for several minutes each time, and the students commented favorably on these occasions when they were able to speak in Japanese relatively freely.

Four students enrolled in Japanese 103 were selected, based on their extreme degrees of field independence/dependence and achievement, and were studied intensively. The data obtained revealed that there were contrasting differences in difficulties that the four students experienced in learning Japanese.

The FI+ student felt secure with his memory, concentration, and picture-orientedness. He was confident especially in Kanji learning and had virtually no problems with grammar. His difficulties resided, however, in speaking and listening skills. Although he knew what his problems were, he did not make extra efforts outside of the class to improve these weaknesses in his Japanese skills. Oral examinations were the only occasion when his speaking skills were graded. He managed to get by in the oral examinations by his grammatical accuracy, resulting in a decent grade. It was quite obvious that the FI+ student knew strategies to obtain good grades in the Japanese course.

The FD+ student was a sociable person and liked talking to Japanese people. Since she was confident with her oral communication skills in Japanese, she spent most of her study time learning Kanji and grammar. As a result, she became a fairly well-balanced high achiever in the Japanese course.

The FI- student, like the FI+ student, had a good memory and was confident about learning Kanji. Also like the FI+ student, he found speaking and listening most difficult. He was a low achiever because he did not spend time on improving his weaknesses. He also lacked precision, even in writing Kanji, which he claimed to be his favorite part of Japanese. Consequently, he received low grades on Kanji tests.

Among the four students, the FD- student had the hardest time learning Japanese. Although she started taking the course with integrative motivation, she was always easily distracted from studying and did not experience much success in learning the language, especially during Japanese 103 in the spring quarter. She had difficulty in all aspects of the language and had no confidence in using Japanese. She could manage, however, to cram Kanji if she studied intensively before the tests.

What is required in learning Kanji is memorization of discrete items. Whereas skills like speaking are largely cumulative and dependent on what was learned previously, learning Kanji does not rely as much on building on previous knowledge. Speaking was the most difficult skill for FD-, because she had not built a solid foundation from the previous courses. She was always unsure about what to say and how to say it in Japanese, and she could not speak Japanese sentences without asking her instructor questions in English to confirm her correctness. She was able to understand all the explanations that the teacher gave in English in class, but she did not internalize them systematically. Also, she did not study

very much outside of the class. When she did, she did not concentrate well. She did not receive much support from her Japanese friend, either. She was discouraged by the poor grades she had been making, and was determined to quit taking Japanese at the time of the interview.

The following is the answer to the fourth research question. (What are the problems low achievers and high achievers face in the process of learning Japanese?) In the case of the low achievers, their problems were compounded by their personalities (such as carelessness), lack of learning skills (such as weak concentration and poor learning strategies), lack of time and effort, and absence of tutorial support from one's Japanese friend.

In the case of the high achievers, they understood what their problems were and also knew what to do about them. As for the FD+ student, she made high achievements by working on her weaknesses. The FI+ student made full use of his skills and compensated for his weaknesses. Because his weaknesses were not targeted in grading, he still reached a high level of achievement.

It is important to notice that the students' achievements depended, to a certain extent, on the way they were measured. For example, the FI+ student would have been given a lower grade if the oral examination had not focused on accuracy but on fluency, which he found difficult. Likewise, the results would have been different if the students' mastery of Japanese had been measured, not by an achievement test, but by a proficiency test.

When the students took the mid-term and final examinations, which were achievement tests, they were all aware of the range of the materials included in the tests. Therefore, they could prepare for the test, and compensate for whatever weaknesses they had in their learning before the achievement tests. It can be inferred that those who prepared well scored high, and that the differences in their weaknesses and strengths which

were initially related to the degree of field independence/dependence became less perceptible.

This observation led me to a reconsideration of the unexpected results revealed in the quantitative phase of the study. Possible reasons for the quantitative results as examined in terms of the qualitative results will be discussed in more detail after the sixth research question discussion.

In the following, the fifth research question (What do students perceive as most helpful in solving their problems?) is discussed. It appeared that the degree of field independence/dependence itself did not determine one's achievement in Japanese, but it might determine achievement if combined with other factors such as motivation, effort, time, and test preparation strategies. The testees were able to prepare for the tests, since an achievement test by definition covers only a limited amount of material. A consideration of the data collected in this study has led us to conjecture that those who knew their weaknesses and prepared well could score high on the achievement tests, regardless of their cognitive style.

It is noteworthy that all of the four selected students provided similar advice on how to do well in Japanese. They all stressed the importance of a time commitment for studying Japanese. Such advice seems understandable when characteristics of the Japanese classes and the grading system are considered. Class time was devoted to understanding grammatical items and practicing translations from English to Japanese ; it excluded writing practice. Consequently, mastery of Japanese orthography totally depended on out-of-class efforts. Written practice for mastery of Kanji was stressed and encouraged in the syllabi, and the scores of the written quizzes and the written examinations were weighted considerably in the grades. It seemed only natural that all of the students emphasized

the importance of studying outside of the classroom, regardless of their degree of field independence/dependence or level of achievement. Despite their difference in degrees of field independence/dependence, students could compensate for and overcome their weaknesses by spending enough time studying and by adopting an appropriate preparation strategy for the achievement tests.

#### Discussion : Reconsideration of the Quantitative Results

In light of the qualitative result that students were compensating for any weaknesses related to their cognitive style, the investigator considered why there was no statistically significant relationship between the degree of field independence/dependence and achievement in Japanese, as hypothesized. Following are discussions concerning each of the four achievement constructs to answer this question.

#### Oral Performance

The students' oral performance was graded on the basis of grammatical accuracy. Since their fluency was not taken into consideration, those who lacked fluency were not penalized, and those who had outstanding fluency were not rewarded, either. It turned out that the FI+ student managed to produce grammatically correct sentences and to score high, although he was not fluent. On the other hand, the FD+ student was quite competent in her oral skills, and her oral responses in the examinations were fairly smooth and quick, but she did not earn any credit for her fluency. She had developed some communicative skills, such as how to use fillers in a Japanese conversation to avoid awkward silence. Such communicative skills could potentially be used to discriminate students like her from others who did not have such skills. In this way, the results might

have been different : they might have been closer to what had been hypothesized, if students had been tested on oral proficiency which reflects one's integral competence to use a language, rather than on oral achievement.

### Grammar Knowledge

Since the Japanese 103 classes were grammar-oriented, all the students knew that it was essential to study grammar in the course. In addition to their interest in grammar, what differentiated the high achievers from the low achievers appeared to be, most significantly, their diligence, effort outside of the class, and time investment. Those who studied seriously learned well and scored high in the examinations ; their effort compensated for their differences in cognitive styles.

Both the FI+ and FI- students showed analytical inclinations and a preference for the mechanical part of learning the language. The FI+ student did not have any problems in grammar and scored constantly high in that area, but the FI- student remained a low achiever in grammar because of his "carelessness," indifference, and lack of study. On the other hand, both the FD+ and FD- students did not find grammar particularly interesting. The FD+ student realized its importance, however, and spent enough time to learn it well, while the FD- student did not like it, did not study it enough, and fell behind to such an extent that satisfactory achievement was almost beyond reach at the time of this study.

We have seen that achievement in grammar knowledge is related to various factors such as diligence, amount of out-of-class study, and interest, as well as cognitive styles. The hypothesis (There is a relationship between the degree of field independence/dependence and achievement in Japanese) might have been supported if the students had not compensated for their weaknesses by preparing for the achievement tests. Or, it might have



been supported if the tests were not achievement tests but proficiency tests. The results might have then reflected more differences in students' success, depending on their cognitive styles.

### Mastery of Kanji

There was a discrepancy in the perception of Kanji learning between the FI students and the FD students: The FI students tended to find it easy, whereas the FD students found it very difficult. Such a discrepancy, however, was not reflected in the results of the Kanji tests.

Learning Kanji involves memorization of material that seems arbitrary to the students. Since the Japanese 103 course was designed in such a way that it was the students' responsibility to learn the Kanji on their own, and since they were tested on a limited amount of material, how successfully they completed the task seemed to depend on how seriously and diligently they studied for each test. It was conjectured that students would achieve good scores if they studied well, regardless of their degree of field independence/dependence. Even if one liked learning Kanji, this did not necessarily result in better scores on the Kanji tests, as shown in the example of the FI- student. He liked Kanji and was confident because he had a "technique" of using mnemonic devices to associate the Kanji with pictures or stories. Such associations seemed to help him remember rough figures of the Kanji or readings of them, but since he was not a diligent learner and did not practice writing Kanji carefully, what he wrote was generally inaccurate. This is why he scored low on the Kanji tests.

The FD- student worked hard on Kanji before the tests and scored fairly high, compared to her other skills. This meant that she could manage learning discrete and isolated items like Kanji, but did not develop comprehensive and integral skills that are required for speaking.

### Overall achievement

Overall achievement was calculated as a total combination of written quiz results, mid-term and final examinations (oral, grammar, and Kanji examinations), homework, oral checks, and class performance. According to the analysis above, three constructs of achievement—oral, grammar, and Kanji scores—did not necessarily reflect the students' weak aspects in learning the language, aspects which might have been related to their degree of field independence/dependence. The students, realizing what was expected from them in the course in order to receive a good grade, made efforts to improve. Since the relationship between the degree of field independence/dependence and achievement in the above three constructs was revealed to be so indistinct, it may have caused the relationship between the degree of field independence/dependence and overall achievement to be insignificant.

On the whole, the students were trying to compensate for their weaknesses in order to meet the requirements of the course. Some students did this successfully, and some did not. Based on the data in the present study, there is no reason to assume that successful achievement was due to the differences in their degree of field independence/dependence.

### Implications

Since previous literature of field independence/dependence research showed a relationship between the degree of field independence/dependence and language learning (d'Anglejan & Renaud, 1985; Carter, 1988; Chapelle & Abraham, 1990; Chapelle & Roberts, 1986; Hansen, 1984; Hansen & Stansfield, 1981, 1982; Naiman et al., 1978; Roberts, 1984; Stansfield & Hansen, 1983), this investigator expected that there would be a positive correlation between the degree of field independence/depend-

ence and achievement in Japanese. The results of the present study, however, contradict such an assumption. Since the assumption possibly involves a cultural and gender bias, it is important to have information based on empirical studies, like this one.

Although the quantitative data did not show a significant relationship between the degree of field independence/dependence and achievement in Japanese, the qualitative part of this study has suggested contrasting differences between field-independent learners and field-dependent learners, which support what Witkin et al. had originally claimed (1971). The FI learners tended to be more analytical and liked the rather mechanical aspects of language learning, whereas the FD learners did not seem to be strong in analytical and mechanical types of learning, but liked socially inclined aspects of language learning. Even though there were initial differences in the learners' strengths and weaknesses as related to their cognitive styles, it seemed more critical that the students understand how to compensate for their weaknesses, in order to be successful in language learning.

One of the pedagogical implications of this study is that teachers could give advice to students about their cognitive styles and the ramifications involved. It would benefit students to understand their strengths and weaknesses in language learning, and to learn how to overcome their weaknesses. This agrees with Omaggio's suggestion : "Many learners are not aware of the strategies that they use to approach a task and would profit, perhaps, from making them explicit" (1993, p. 66).

The FI students, for example, seemed to be strong in analytical ability, memory, and picture-oriented materials, such as those involved in Kanji learning. They tended not to find learning Kanji difficult. But they needed to work on speaking skills. The interview data suggested that the

best strategy for them to become competent in Japanese would be to make an effort to find someone outside of the class, preferably a native speaker, and to spend time on practicing speaking in the target language. This would help complement the practice in the class which did not provide enough speaking exercise.

Another implication of this study is to shift the emphasis in teaching according to the students' cognitive styles. If the majority of the students are field-independent and the pedagogical aim is to develop the four language skills in a balanced way, for example, the teacher could stress speaking practice, and decrease time spent on grammar exercises. As Reiff (1992) suggested, versatility is crucial in effective teaching, and information from the present study might help teachers increase versatility and flexibility in the classroom.

### Limitations

The most serious limitation of this study lies in its generalizability. There are two aspects to this: One concerns the entire body of the subjects in this study, and the other, the four selected students. The students in this study were studying at the University of Georgia in the spring of 1993. Although there were a few students who had withdrawn from the previous Japanese courses, the reasons for their withdrawal were not known to the investigator. The reasons might or might not have been related to their cognitive styles. Caution should be used in the generalization of the findings because the subjects in this study did not necessarily constitute a true random sample of American college students learning Japanese.

The four students with extreme degrees of field independence/dependence and achievement were selected for the qualitative part of the study. Since these students were not necessarily representative of each cat-

egory, caution should be used in the generalization of these findings.

In addition, the fact that the study site was chosen for its convenience might have possibly affected the findings. The investigator had worked for the Japanese program for almost five years before conducting this study, and although the students in Japanese 103 were not known until the beginning of this study, the teachers were known to the investigator. The possibility cannot be denied that the preconceptions about the course at the time of the study might have been biased, no matter how objectively the investigator tried to see the situation.

### Validity

Although there were only four students in the qualitative part of this study, they were observed often and interviewed in depth. The investigator collected the data over a month-long period of time, which provided "opportunities for continual data analysis and comparison to refine constructs" (Goetz & LeCompte, 1984, p. 221). The classroom observation was conducted "in natural settings that reflect [ed] the reality of the life experiences of participants more accurately than do more contrived or laboratory settings" (p. 221).

The first and quantitative phase of this study presented clear-cut results in statistical terms about the relationship between the degree of field independence and achievement in Japanese. This was made possible by involving all of the students then taking Japanese 103. This phase alone, however, could not account for the results. Only a qualitative approach could provide an explanation. That is probably why Day (1984) could not account for the results which showed no significant relation among several variables including cognitive style. The second and qualitative phase of the study was originally designed to find out the particular

difficulties and problems that the students faced, but the analysis of the data also provided some important explanations for the statistical results. Having two phases resulted in the strengthening of the findings of each phase.

### Suggestions for Future Research

Considering the limitations of this study, it would be interesting if a study designed exactly like the present one could be conducted at a different site and/or with a different group of subjects. Such a study would provide results to contrast and compare with the results of this study.

It would be also beneficial if a longitudinal study could be carried out. The possible study could attempt to find out the degree of field independence of the students at the beginning of the year and to investigate the following :

- 1) Whether those who withdraw from the course have any commonality, especially in their cognitive styles
- 2) Whether the student's degree of field independence changes over time
- 3) Whether the relation between the degree of field independence and achievement in the Japanese course changes over time
- 4) Whether there is a correlation between students' degrees of field independence and their proficiency(not achievement) in Japanese

In addition to these practical and empirical studies, some theoretical work probably needs to be done. The controversy concerning whether field independence is ability or style is still going on (Davis, 1991). As Davis suggested, human information processing research may serve to clarify the issue. Davis and Cochran (1989) found evidence linking field dependence and information-processing differences in attention, encoding in

short-term memory, and long-term memory processes. However, as mentioned in Chapter II, the question of whether field independence/dependence explains variance on a language test seems to be more crucial than the style-ability issue.

The testing device of field independence/dependence is not free from problems (e. g., Chapelle, 1988 ; Chapelle & Roberts, 1986). Currently available tests such as the Embedded Figures Test and the Group Embedded Figures Test are testing instruments used to measure one's cognitive skill and ability to perform the task of disembedding a geometric figure. Successful individuals are labeled field-independent. These tests are the device to measure only one's degree of field independence, but not the degree of field dependence. Those who receive low scores in the tests are called field-dependent by default. It would be beneficial if an appropriate measuring instrument could be developed to measure the degree of field dependence.

### Summary

This study attempted to discover the relationship between the degree of field independence and achievement in learning Japanese in a formal classroom setting of an American state university. The results in the quantitative part of the study suggested no statistically significant relationship between field independence/dependence and the four measures of achievement. The qualitative part of the study suggested reasons for the unexpected quantitative results. It was found that the students used a compensation strategy for their weaknesses in order to meet the requirements of the course, regardless of their degree of field independence/dependence. It was conjectured that different levels of success were closely related to different amounts of time and effort expended by the students.

The qualitative phase also provided findings concerning the difficulties that students with different degrees of field independence encounter in learning Japanese, and it suggested solutions to the difficulties. The four focused students with extreme degrees of field independence and levels of achievement exhibited differences among difficulties in learning Japanese. However, they agreed on the importance of investing time and effort in order to be successful in the given learning environment. Teachers could help students succeed in learning Japanese by making their difficulties related to cognitive style explicit and by encouraging them to compensate for and overcome such difficulties.

Every student in the study appeared to have the potential to become a good language learner, and in general, everyone has strengths and weaknesses in language learning. The students who participated in this study demonstrated that many of them could compensate for their shortcomings and meet the teachers' expectations very well, regardless of their degree of field independence. This finding seems quite logical in that learners tried to overcome their shortcomings related to individual differences in order to learn Japanese well and to do well in the course. This may be part of the characteristics of individual difference called "one of the conundrums in the second-language acquisition field" (Larsen-Freeman & Long, 1991). We can learn from the participants of this study by avoiding the seemingly obvious but perhaps erroneous assumption that FI learners are better in learning language than FD learners. As far as the results of this study are concerned, individual difference in the cognitive style of field independence/dependence did exist but did not explain the difference in achievement of Japanese. I believe it essential for educators to empower students so that they can identify and overcome their weaknesses and thus become successful language learners.



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## **APPENDICES**

## APPENDIX A

The grammatical syllabus and list of Kanji for each course are presented in Appendix A.

## Japanese 101

Textbook : First Step in Japanese. The University of Georgia. 1991.

- Lesson 1. Greetings
- Lesson 2. Self-introduction
  - A is B. Is A B ?
- Lesson 3. Numbers
  - Time
- Lesson 4. A is also B.
- Lesson 5. This/ That/ It is A.
- Lesson 6. A is B. (part 2)
- Lesson 7. Numbers
  - Price : How much is this?
- Lesson 8. Verbs : -masu/ -masen
- Lesson 9. Direct object : -o
- Lesson 10. This/ That/ That (over there) + Noun
- Lesson 11. Possessive ; genitive : -no
- Lesson 12. I-Adjectives
- Lesson 13. Verbs of movement : -e ikimasu
- Lesson 14. Location marker : -ni
- Lesson 15. Existence of animate objects : A wa B ni imasu.
- Lesson 16. Existence of inanimate objects : A wa B ni arimasu.
- Lesson 17. Particles : -ga/ -mo/ -wa
- Lesson 18. Negation
- Lesson 19. Location ; on/ under/ inside

## Japanese 102

Lesson 20. Location of action : -de

(End of First Step in Japanese. The University of Georgia. 1991)

(Beginning of Second Step in Japanese. The University of Georgia. 1991)

Lesson 21. I-Adjectives : Negation

Lesson 22. Verbs : Past (Finished) tense

Lesson 23. Time marker : -ni

Lesson 24. Location of existence : in front of/ behind

Lesson 25. Verbs : Present perfect tense

Lesson 26. Verbs : Let's/ Shall I... ?

Lesson 27. Verbs : te-Form

Lesson 28. Dates

Lesson 29. Family related nouns

Lesson 30. Na-Adjectives

Lesson 31. Something/ Someone/ Somewhere

Lesson 32. Causality : -kara

## Japanese 103

Lesson 33. Verbs : te-Form (conjoining sentences)

Lesson 34. Adjectives : te-Form (conjoining sentences)

Lesson 35. Particle : -de (Method of doing something)

Lesson 36. Particle : -ni as a receiver

Lesson 37. Counters

Lesson 38. Verbs : -shini (Purpose of doing something)

Lesson 39. Verbs : -teimasu (Continuous action)

Lesson 40. Verbs : -naidekudasai (Negative request)

(End of Second Step in Japanese. UGA. 1991)

(Beginning of Third Step in Japanese. UGA. 1991)

- Lesson 41. Verbs : -temoiidesu (Permission)
- Lesson 42. I-Adjectives : Past (Finished) tense
- Lesson 43. Verbs : -deshoo (Prediction)
- Lesson 44. Verbs : -naideshoo (Negative prediction)
- Lesson 45. Verbs : Short form + -toomoimasu
- Lesson 46. Short form of Noun/ Na-Adjectives
- Lesson 47. Short form of I-Adjectives
- Lesson 48. Short form + -toitteimasu
- Lesson 49. Verbs : Past continuous

日青似新生天住雨  
萬人黑小先院所昨  
千今達大店病台昼  
百明漢話茶飲終買  
十來弟堂喫学中末  
九曜姊父壳窓上週  
八土妹母行会下強  
七金兄時銀氣晚勉  
六木出白開元婦讀  
五水後何友朝画着  
四火午辞古館映忙  
三語書言每凶誕電  
二本赤同字閉寢英名  
一月食物聞前起見降

步 走 乘 車 自 轉 使 切 半 分 高 安 東 京  
野 菜 作 洗 郵 便 局 部 屋 切 符 良 惡 外  
寒 暑 樂 思 言 手 去 年 料 理 長 短 広 狭

嫌韓森暗 好冬早事 面秋熱仕 說夏合働 細春実室 太難苦教 低待辛目 馭違甘川 左貸族口 右借家山 問植度吉 題動節鈴 宿園季村 文公国林音

## APPENDIX B

A copy of the written mid-term and the final examinations of Japanese 103 is as follows.

JPN 103 Midterm Exam

名前 \_\_\_\_\_

I. Read carefully and fill in the blanks. (Use Kanji/Katakana where appropriate.)

1. A. 新しいデパートはどこにありますか。

B. 私の友達は \_\_\_\_\_。  
(Tokyo station, behind, said)

2. A. 昨日のパーティーは \_\_\_\_\_。  
(enjoyed, you think?)

B. いいえ、 \_\_\_\_\_。  
(since no beer, boring, I think)

3. A. すずきさんは \_\_\_\_\_ 行きましたか。  
(together, family, somewhere)

B. いいえ、明日テストがありますから \_\_\_\_\_。  
(now, studying, I think)

4. A. これは \_\_\_\_\_。  
(Yamashita's dictionary, do you think?)

B. いいえ、それは \_\_\_\_\_。  
(not Yamashita's, I think)

5. A. 田中さんは \_\_\_\_\_。  
(where, likely, is?)

B. 田中さんは \_\_\_\_\_、  
(since car is dirty)

\_\_\_\_\_よ。  
(go home to wash it, he said)

6. A. この \_\_\_\_\_ は \_\_\_\_\_ から \_\_\_\_\_。  
(room) (cold) (close window, May I?)

B. あっ、 \_\_\_\_\_。  
(please, not close) (since smoking now)

7. A. 今晚7:00に \_\_\_\_\_。  
(meet, and eat Japanese food, won't you?)

B. 忙しくて、 \_\_\_\_\_ デートしますから、 \_\_\_\_\_。  
(with other person) (next week, how about)

## II. Dictation.

1. \_\_\_\_\_

2. \_\_\_\_\_

3. \_\_\_\_\_

4. \_\_\_\_\_

日本語103期末試験

なまえ\_\_\_\_\_

1. Use the information provided in the ( ) and fill in the blanks. Write Kanji for words underlined.

1. A. \_\_\_\_\_ か。  
(is tonight free?)
- B. いいえ、とても \_\_\_\_\_ よ。 \_\_\_\_\_。  
(busy) (must study)
- \_\_\_\_\_。  
(because I have a lot of Japanese homework)
- A. そうですか。じゃ、ダウンタウン \_\_\_\_\_ ね。  
(let's go together)
- B. \_\_\_\_\_ が、ちょっと... また \_\_\_\_\_。  
(want to go) [emphatic] (please invite, next time)
2. A. \_\_\_\_\_ さん、 \_\_\_\_\_ か。  
(Nakamura) (caught a cold)
- B. ええ、たぶん \_\_\_\_\_。  
(caught, think)
- A. \_\_\_\_\_。  
( have fever?)
- B. ええ、ちょっと \_\_\_\_\_ が、 \_\_\_\_\_ から \_\_\_\_\_。  
(had) (medicine, took) (alright)
- A. そうですか。 \_\_\_\_\_、 \_\_\_\_\_、 \_\_\_\_\_。  
(today, go home, early) (eat, vegetables and fruit) (please sleep well)
3. A. \_\_\_\_\_ さんは \_\_\_\_\_ か。  
(Tanaka) (zoo, botanical garden, which, like better)



B. 私は botanical garden \_\_\_\_\_。  
(like better)

A. どうしてですか、\_\_\_\_\_は\_\_\_\_\_か。  
(animal) (don't like)

B. いいえ、\_\_\_\_\_, zoo animal を \_\_\_\_\_。  
(like, but) (at) (hate, to see)

4. A. \_\_\_\_\_ ね。  
(that dictionary looks good)

B. ええ、とても \_\_\_\_\_。 \_\_\_\_\_。  
(convenient and good) (never used?)

A. ええ、ありません。ちょっと \_\_\_\_\_。  
(may I borrow)

5. A. \_\_\_\_\_ さん、いまから \_\_\_\_\_。  
(Mori) (do, something?)

B. ええ、アルバイト (part time job) へ \_\_\_\_\_。  
(must go)

6. A. この \_\_\_\_\_ を \_\_\_\_\_。  
(novel) (have you ever read?)

B. 私は \_\_\_\_\_。  
(haven't, but Yamashita sensei has read)

A. どんな \_\_\_\_\_ か。  
(novel, had said)

B. \_\_\_\_\_ とても \_\_\_\_\_。  
(long, but) (interesting, said)

A. そうですか。じゃ、\_\_\_\_\_。  
(try to ask Yamashita sensei)

7. A. \_\_\_\_\_さん、-te form のうたを\_\_\_\_\_ください。  
(Smith) (sing)

B. いいえ、私は\_\_\_\_\_ですから山本せんせいに\_\_\_\_\_ください。  
(bad at) (please ask)

うたを\_\_\_\_\_よ。  
(singing, good at, might)

Bonus Question : Write the following words in Kanji :

1. difficult

2. name

3. Korea

4. Problem

5. classroom

## APPENDIX C

## Gender Differences in the Results of the Group Embedded Figures Test

GEFT	Male	Female
18	5	5
17	11	3
16	2	3
15	1	0
14	1	3
13	4	3
12	1	0
11	3	2
10	1	1
9	0	1
8	0	0
7	0	1
6	1	1
5	0	0
4	0	0
3	0	0
2	0	1
1	0	1
Total	30	26
Mean	15.033	13.080
Std Dev	3.056	4.940

## APPENDIX D

### CONSENT FORM

I agree to participate in the research entitled "Cognitive Styles and Achievement of Japanese" conducted by Junko Majima (Dept. of Language Education, UGA, 542-9447). I understand that this participation is entirely voluntary ; I can withdraw my consent at any time without penalty and have the results of the participation, to the extent that it can be identified as mine, returned to me, removed from the research records, or destroyed. The following points have been explained to me :

1) The reason for the research is to better understand the difficulties that American college students face in learning Japanese as a foreign language in relation with cognitive styles. The benefits that I may expect from the research are :

- to be able to learn/teach Japanese in a better program
- to be able to know better ways of learning/teaching the language

2) The procedures are as follows :

Interviews of the instructors and a few selected students in the Japanese language classes. Interviews will be taped. The tapes will be erased in April 1994.

3) The discomfort or stress that may be faced during this research is :

Learning or teaching a foreign language can be stressful, therefore, it might be uncomfortable to talk about stressful experiences.

4) Participation entails the following risks :

No risks are foreseen. Participation or non-participation will not effect grade or class standing.

5) The results of this participation will be confidential and will not be released in any individually identifiable form without my prior consent unless otherwise required by law.

6) The investigator will answer any further questions about the research, now or during the course of the project.

---

**Signature of Investigator    Date**

---

**Signature of Participant    Date**

**Please sign both copies of this form. Keep one and return the other to the investigator.**

Research at The University of Georgia which involves human participants is carried out under the oversight of the Institutional Review Board. Questions or problems regarding these activities should be addressed to Heidi L. Roof, M. S., or Dr. C. Michael Moriarty ; Institutional Review Board; Office of V. P. for Research; The University of Georgia, 604A Graduate Studies Research Center ; Athens, Georgia 30602 ; Telephone (706) 542-6514 or 542-5988.

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大阪外国語大学学術研究双書18

Learner Difference and Japanese Language Education : A Study of Field  
Dependence/Independence Cognitive Styles and Japanese Language  
Learning

学習者の個人差と日本語教育

—「場依存・場独立」認知スタイルと日本語学習の一研究—

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