

ACKNOWLEDGEMENTS

**AN INTEGRATION OF THE THEORIES OF JL HOLLAND
AND DA KOLB: A THEORETICAL AND EMPIRICAL
STUDY OF VOCATIONAL PERSONALITY AND LEARNING
STYLE TYPES**

BY

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In loving memory of my parents

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TABLE OF CONTENTS

	Page
TABLES	vii
FIGURES	x
SUMMARY	xi
OPSOMMING	xiii

CHAPTER ONE INTRODUCTION

1.1	GENERAL INTRODUCTION	1
1.2	PROBLEM FORMULATION	2
1.3	AIMS OF THE STUDY	3
1.4	ORGANIZATION OF THE PRESENT RESEARCH REPORT	3

CHAPTER TWO STUDENT DEVELOPMENT

2.1	INTRODUCTION	5
2.2	STUDENT DEVELOPMENT THEORIES	7
2.2.1	Psychosocial theories	7
2.2.2	Cognitive-structural theories	11
2.2.3	Person-environment interaction theories	12
2.2.4	Typology theories	12
2.3	FACTORS AFFECTING STUDENT DEVELOPMENT	13
2.3.1	Academic development	13
2.3.2	Career development	15
2.3.2.1	<u>Person-environment interaction theories and work adjustment theory</u>	15
2.3.2.2	<u>Developmental theories</u>	15
2.3.2.3	<u>Social cognitive models, including social learning and self-efficacy theory</u>	18
2.3.3	Personal development	19
2.4	OUTCOMES OF STUDENT DEVELOPMENT	20

2.5	PROMOTING STUDENT DEVELOPMENT	22
2.5.1	Promoting student development through academic development	22
2.5.2	Promoting student development through career development	22
2.5.3	Promoting student development through personal development	23
2.6	CRITICISM OF THE THEORIES OF STUDENT DEVELOPMENT	23
2.7	SUMMARY	24

CHAPTER THREE

JOHN HOLLAND'S THEORY OF VOCATIONAL PERSONALITIES AND WORK ENVIRONMENTS

3.1	INTRODUCTION	26
3.2	THE THEORY	27
3.2.1	<i>In our culture, most persons can be categorized as one of six types [R, I, A, S, E, C].</i>	27
3.2.1.1	<u>Development of the personality types</u>	28
3.2.1.2	<u>Description of the types</u>	29
3.2.1.3	<u>Literature on the personality types</u>	29
3.2.1.4	<u>Assessment of the types</u>	40
3.2.2	<i>There are six model environments [R, I, A, S, E, C].</i>	41
3.2.3	<i>People search for environments that will let them exercise their skills and abilities, express their attitudes and values, and take on agreeable problems and roles.</i>	42
3.2.4	<i>Behavior is determined by an interaction between personality and environment.</i>	43
3.2.5	The hexagonal model	44
3.2.6	Differentiation	47
3.2.7	Consistency	48
3.2.8	Identity	49
3.2.9	Congruence	50
3.2.10	The classification system	52
3.2.11	Six further assumptions	53
3.3	PRACTICAL USE OF HOLLAND'S THEORY	54
3.3.1	Career counselling and career development as an aspect of student development	54
3.3.2	Education	56
3.4	CRITICISM OF THE THEORY	56
3.5	SUMMARY	59

CHAPTER FOUR

DAVID KOLB'S THEORY OF EXPERIENTIAL LEARNING AND
LEARNING STYLES

4.1	INTRODUCTION	60
4.2	THE THEORY	60
4.2.1	Characteristics of experiential learning	60
4.2.1.1	<i><u>Learning is a continuous process grounded in experience</u></i>	61
4.2.1.2	<i><u>The process of learning requires the resolution of conflicts between dialectically opposed modes of adaptation to the world</u></i>	61
4.2.1.3	<i><u>Learning is a holistic process of adaptation to the world</u></i>	62
4.2.1.4	<i><u>Learning involves transactions between the person and the environment</u></i>	63
4.2.1.5	<i><u>Learning is the process of creating knowledge</u></i>	63
4.2.1.6	<i><u>The experiential learning cycle</u></i>	63
4.2.1.7	<i><u>Developmental stages of experiential learning</u></i>	65
4.2.2	Learning abilities and styles	67
4.2.3	Assessment of learning styles: The Learning Styles Inventory (LSI)	72
4.2.3.1	<i><u>The LSI-1976</u></i>	73
4.2.3.2	<i><u>The LSI-1985</u></i>	85
4.2.3.3	<i><u>Normative (non-ipsative) versions of the LSI</u></i>	93
4.3	PRACTICAL USE OF KOLB'S THEORY	97
4.3.1	Establishing relationship between learning styles and fields of study and career choices	97
4.3.2	Managing the learning process	98
4.3.3	Learning and problem solving	101
4.3.4	Student guidance	101
4.3.5	Lifelong learning	102
4.4	CRITICISM OF THE THEORY	102
4.5	SUMMARY	106

CHAPTER FIVE

INTEGRATION OF HOLLAND'S MODEL OF VOCATIONAL
PERSONALITY TYPES AND KOLB'S MODEL OF AND LEARNING
ABILITIES AND STYLES

5.1	INTRODUCTION	107
-----	--------------	-----

5.2	RESEARCH ON VOCATIONAL PERSONALITY TYPES, LEARNING ABILITIES AND STYLES	107
5.2.1	Holland's vocational personality types	107
5.2.2	Kolb's learning abilities and styles	109
5.2.3	Research using both Holland and Kolb measures	111
5.3	AN INTEGRATED MODEL OF VOCATIONAL PERSONALITY TYPES, LEARNING ABILITIES AND STYLES	113
5.4	SUMMARY	117

CHAPTER SIX METHOD OF INVESTIGATION

6.1	PROBLEM FORMULATION AND MOTIVATION FOR THE INVESTIGATION	118
6.2	AIM OF THE STUDY	118
6.3	RESEARCH DESIGN	119
6.3.1	Description of the total sample and subsamples used for analysis	119
6.3.2	Data collection	124
6.3.3	Measurement instruments	125
6.3.3.1	<u>The biographical information questionnaire</u>	125
6.3.3.2	<u>The Self-Directed Search (SDS)</u>	125
6.3.3.3	<u>Two measures of learning style</u>	128
6.3.3.3.1	<u>Learning Style Inventory (LSI)</u>	128
6.3.3.3.2	<u>Learning Style Questionnaire (LSQ)</u>	129
6.4	DATA PROCEDURE	129
6.4.1	Introduction	129
6.4.2	Variables	130
6.4.3	Data processing procedure	131
6.4.3.1	<u>SECTION 1: Evaluation of the psychometric properties of the two measures of learning style, the Learning Style Inventory (LSI) and the Learning Style Questionnaire (LSQ)</u>	131
6.4.3.2	<u>SECTION 2: Investigation of the interaction of the SDS, LSI and LSQ for the BSc and BA groups.</u>	135
6.5	SUMMARY	139

CHAPTER SEVEN

RESULTS AND DISCUSSION

7.1	INTRODUCTION	141
7.2	SECTION 1: EVALUATION OF THE PSYCHOMETRIC PROPERTIES OF THE TWO MEASURES OF LEARNING STYLES, THE LEARNING STYLE INVENTORY (LSI) AND THE LEARNING STYLE QUESTIONNAIRE (LSQ)	143
7.2.1	Description of the sample	143
7.2.2	Item analysis of the LSI	144
7.2.3	Reliability of the LSI	147
7.2.4	Item analysis of the LSQ	148
7.2.5	Reliability of the LSQ	151
7.3	SECTION 2: INVESTIGATION OF THE INTERACTION OF THE SELF-DIRECTED SEARCH (SDS), THE LEARNING STYLE INVENTORY (LSI) AND THE LEARNING STYLE QUESTIONNAIRE (LSQ) FOR THE BSc AND BA GROUPS	152
7.3.1	Description of the sample	152
7.3.1.1	<u>Analysis of the test characteristics</u>	153
7.3.1.2	<u>Discussion of the test characteristics: means, standard deviations, skewness and kurtosis</u>	158
7.3.3	HOTELLING'S T test	159
7.3.4	DISCRIMINANT ANALYSIS	161
7.3.5	FACTOR ANALYSIS	168
7.3.6	INTERCORRELATIONS FOR HOLLAND PERSONALITY TYPES AND KOLB LEARNING ABILITIES	178
7.3.7	FREQUENCY DISTRIBUTIONS OF HOLLAND PERSONALITY TYPES AND KOLB LEARNING STYLES	178
7.4	CONSTRUCT VALIDITY OF THE LSI AND LSQ	184
7.4.1	Construct validity of the LSI	184
7.4.2	Construct validity of the LSQ	186
7.4.3	Comparison of the LSI and LSQ	187
7.5	SECTION 3: DISCUSSION OF RESULTS PERTAINING TO THE PROPOSED INTEGRATED MODEL OF VOCATIONAL PERSONALITY TYPES, AND LEARNING ABILITIES AND STYLES	189
7.6	SUMMARY	193

CHAPTER EIGHT

SUMMARY AND RECOMMENDATIONS

8.1	SUMMARY	197
8.2	RECOMMENDATIONS	200
8.2.1	Further research to validate the proposed integrated model	200
8.2.2	Further research to investigate the psychometric properties of the LSI and the LSQ	201
8.2.2.1	<u>Suspected response bias</u>	201
8.2.2.2	<u>Reliability and validity</u>	202

REFERENCES	203
-------------------	-----

APPENDIX A BIOGRAPHICAL INFORMATION QUESTIONNAIRE

APPENDIX B LEARNING STYLE INVENTORY

APPENDIX C LEARNING STYLE QUESTIONNAIRE

TABLES

	Page
TABLE 2.1	CHICKERING'S SEVEN VECTORS: GENERAL DEVELOPMENTAL DIRECTIONS 9
TABLE 3.1a	THE HOLLAND PERSONALITY TYPES 30
TABLE 3.1b	THE HOLLAND PERSONALITY TYPES 31
TABLE 4.1	THE FOUR STAGES OF THE LEARNING CYCLE 64
TABLE 4.2	THE FOUR LEARNING ABILITIES 68
TABLE 4.3	CHARACTERISTICS OF THE FOUR LEARNING STYLES . 69
TABLE 4.4a	CHARACTERISTICS OF THE FOUR LEARNING STYLES . 70
TABLE 4.4b	CHARACTERISTICS OF THE FOUR LEARNING STYLES . 71
TABLE 5.1	INTERCORRELATIONS FOR THE LSI-1985 AND VPI AS REPORTED BY HIGHHOUSE AND DOVERSPIKE (1987) 111
TABLE 5.2	FREQUENCIES OF HOLLAND PERSONALITY TYPES AND KOLB LEARNING STYLE TYPES AS REPORTED BY ATKINSON <i>et al.</i> (1990) 112
TABLE 6.1	DISTRIBUTION OF THE TOTAL SAMPLE AND SUBSAMPLES USED FOR ANALYSIS 120
TABLE 6.2	COMPOSITION OF THE ANALYSIS SAMPLE ACCORDING TO FIELD OF STUDY AND GENDER 122
TABLE 6.3	COMPOSITION OF THE ANALYSIS SAMPLE ACCORDING TO FIELD OF STUDY AND CULTURAL GROUP 123
TABLE 6.4	COMPOSITION OF THE ANALYSIS SAMPLE ACCORDING TO FIELD OF STUDY AND HOME LANGUAGE 123
TABLE 6.5	DISTRIBUTION OF THE LSI AND LSQ SUBSAMPLES ACCORDING TO THE ORDER IN WHICH THE TWO LEARNING STYLE INSTRUMENTS WERE COMPLETED (GROUP 1 AND GROUP 2) 133
TABLE 7.1	HOTELLING'S T TEST FOR GROUP 1 AND GROUP 2 . . 144
TABLE 7.2	ITEM ANALYSIS FOR THE LSI 146

TABLE 7.3	INTERCORRELATIONS FOR THE SCALES OF THE LSI .	147
TABLE 7.4	ALPHA COEFFICIENTS FOR THE SCALES OF THE LSI .	147
TABLE 7.5	ITEM ANALYSIS FOR THE LSQ	150
TABLE 7.6	INTERCORRELATIONS FOR THE SCALES OF THE LSQ .	151
TABLE 7.7	ALPHA COEFFICIENTS FOR THE SCALES OF THE LSQ	151
TABLE 7.8	COMPOSITION OF THE SAMPLE ACCORDING TO FIELD OF STUDY AND GENDER	152
TABLE 7.9	COMPOSITION OF THE SAMPLE ACCORDING TO FIELD OF STUDY AND CULTURAL GROUP	153
TABLE 7.10	MEANS, STANDARD DEVIATIONS, SKEWNESS AND KURTOSIS FOR THE DISTRIBUTION OF VARIABLES FOR THE COMBINED GROUP	155
TABLE 7.11	MEANS, STANDARD DEVIATIONS, SKEWNESS AND KURTOSIS FOR THE DISTRIBUTION OF VARIABLES FOR THE BSc GROUP	156
TABLE 7.12	MEANS, STANDARD DEVIATIONS, SKEWNESS AND KURTOSIS FOR THE DISTRIBUTION OF VARIABLES FOR THE BA GROUP	157
TABLE 7.13	HOTELLING'S T TEST FOR THE BSc AND BA GROUPS	159
TABLE 7.14	POST HOC: t TEST RESULTS FOR THE BSc AND BA GROUPS	160
TABLE 7.15	DISCRIMINANT ANALYSIS OF THE COMBINED BSc AND BA GROUP WITH THE SDS AS VARIABLE: Classification function, F-Matrix and Classification matrix	161
TABLE 7.16	DISCRIMINANT ANALYSIS OF THE COMBINED BSc AND BA GROUP WITH THE LSI AS VARIABLE: Classification function, F-Matrix and Classification matrix	163
TABLE 7.17	DISCRIMINANT ANALYSIS OF THE COMBINED BSc AND BA GROUP WITH THE LSQ AS VARIABLE: Classification function, F-Matrix and Classification matrix	164
TABLE 7.18	DISCRIMINANT ANALYSIS OF THE COMBINED BSc AND BA GROUP WITH THE SDS, LSI AND LSQ AS VARIABLES: Classification function, F-Matrix and Classification matrix	166

TABLE 7.19	FACTOR ANALYSIS OF THE COMBINED BSc AND BA GROUP	168
TABLE 7.20	FACTOR ANALYSIS OF THE BSc GROUP	171
TABLE 7.21	FACTOR ANALYSIS OF THE BA GROUP	174
TABLE 7.22	INTERCORRELATIONS FOR HOLLAND PERSONALITY TYPES AND KOLB LEARNING ABILITIES AS MEASURED BY THE LSI FOR THE BSc GROUP	179
TABLE 7.23	INTERCORRELATIONS FOR HOLLAND PERSONALITY TYPES AND KOLB LEARNING ABILITIES AS MEASURED BY THE LSI FOR THE BA GROUP	179
TABLE 7.24	INTERCORRELATIONS FOR HOLLAND PERSONALITY TYPES AND KOLB LEARNING ABILITIES AS MEASURED BY THE LSQ FOR THE BSc GROUP	180
TABLE 7.25	INTERCORRELATIONS FOR HOLLAND PERSONALITY TYPES AND KOLB LEARNING ABILITIES AS MEASURED BY THE LSQ FOR THE BA GROUP	180
TABLE 7.26	FREQUENCIES OF HOLLAND PERSONALITY TYPES AND KOLB LEARNING STYLE TYPES AS MEASURED BY THE LSI FOR THE BSc GROUP	182
TABLE 7.27	FREQUENCIES OF HOLLAND PERSONALITY TYPES AND KOLB LEARNING STYLE TYPES AS MEASURED BY THE LSI FOR THE BA GROUP	182
TABLE 7.28	FREQUENCIES OF HOLLAND PERSONALITY TYPES AND KOLB LEARNING STYLE TYPES AS MEASURED BY THE LSQ FOR THE BSc GROUP	183
TABLE 7.29	FREQUENCIES OF HOLLAND PERSONALITY TYPES AND KOLB LEARNING STYLE TYPES AS MEASURED BY THE LSQ FOR THE BA GROUP	183
TABLE 7.30	FREQUENCY OF LEARNING STYLES AS MEASURED BY THE LSI FOR THE BSc AND BA FIELDS OF STUDY ...	185
TABLE 7.31	FREQUENCY OF LEARNING STYLES AS MEASURED BY THE LSQ FOR THE BSc AND BA FIELDS OF STUDY ...	187

FIGURES

	Page
FIGURE 3.1	45
FIGURE 4.1	62
FIGURE 4.2	66
FIGURE 4.3	105
FIGURE 5.1	116

SUMMARY

AN INTEGRATION OF THE THEORIES OF JL HOLLAND AND DA KOLB: A THEORETICAL AND EMPIRICAL STUDY OF VOCATIONAL PERSONALITY AND LEARNING STYLES

by

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The purpose of this study was to explore the relationship between vocational personality and learning style as aspects of student development and the broad aims of the study can be stated as follows:

- to integrate John Holland's model of vocational personalities and David Kolb's model of learning abilities and styles;
- to use subjects representing different cultural groups from two fields of study at the University of Pretoria in an empirical study to investigate the possible integration of the two models;
- to investigate the psychometric properties of two normative forms of Kolb's Learning Style Inventory.

The subjects used in the empirical part of the study were first-year university students registered for English courses for either a science (BSc) or a human sciences (BA) degree. The study was thus placed in the context of student development. A literature study of student development was undertaken. Student development comprises academic development, career development and personal development. In this study Kolb's theory of experiential learning represents an aspect of academic development and Holland's theory of person-environment interaction represents an aspect of career development.

In order to develop a theoretical integration of Holland's model of vocational personalities and Kolb's model of learning abilities and styles a literature study on these two theories was done. The six vocational personality types (Realistic,

Investigative, Artistic, Social, Enterprising, Conventional), the four learning abilities (Concrete Experience, Reflective Observation, Abstract Conceptualization, Active Experimentation) and the four learning styles (Diverger, Assimilator, Converger, Accommodator) were described. Special attention was paid to the literature on the Learning Styles Inventory (LSI), the instrument Kolb devised to assess learning abilities and styles. Kolb's LSI is an ipsative instrument and problems relating to determining the psychometric properties of an ipsative instrument were highlighted. It was decided in this study to use two normative measures of learning style.

A theoretical integration of Holland's model of vocational personality types and Kolb's model of learning abilities and styles was proposed. A description and visual representation of the integrated model was presented.

In the empirical part of this study the interaction of vocational personality type as measured by the Self-Directed Search (SDS) and learning abilities and styles as measured by the Learning Style Inventory (LSI) and the Learning Style Questionnaire (LSQ) for the BSc and BA groups was investigated. Hotelling's T test was used to test for significant differences between the average profiles of these two groups. Discriminant analysis and factor analysis was then carried out. Intercorrelations for personality types and learning abilities for the two groups were determined. Frequency distributions of personality types and learning styles for the two groups were determined. Results pertaining to the proposed integrated model of vocational personality types, and learning abilities and styles were discussed. Although there were some findings contrary to the proposed integrated model, most of the findings confirmed the model. It was decided not to modify the proposed integrated model in the light of the present research findings.

The psychometric properties of the LSI and the LSQ were investigated. Item analysis of each instrument was done and the internal reliability of the four learning ability scales was determined using coefficient alpha. The frequency distribution of the four learning styles for each instrument for the BSc and BA groups was determined. The internal reliability of the LSI and LSQ was found to be relatively high. The bipolar dimensions (AC-CE and AE-RO) theorized by Kolb were confirmed for the LSQ and partially confirmed for the LSI. The presence of a response bias for both instruments was suspected. It would appear that the LSI was more successful than the LSQ in differentiating learning abilities and styles in the sample used.

Recommendations for further research to validate the proposed integrated model and to further investigate the reliability and validity of the LSI and LSQ were made.

'N INTEGRASIE VAN DIE TEORIEË VAN JL HOLLAND EN DA KOLB: 'N TEORETIESE EN EMPIRIESE STUDIE VAN BEROEPSERSONLIKHEIDSTIPES EN LEERSTYLTIPES

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Die doel van hierdie studie was om die verband tussen beroepsersoonlikheidstipe en leerstyl as aspekte van studente ontwikkeling te ondersoek. Die breë doelwitte van die studie kan soos volg gestel word:

- om John Holland se model van beroepsersoonlikheidstipes en David Kolb se model van leervermoëns en leerstyle te integreer;
- om studente verteenwoordigend van verskeie kultuurgroepe en twee studieverelde by die Universiteit van Pretoria in 'n empiriese studie te gebruik om die integrasie van die twee modelle te ondersoek;
- om die psigometriese eienskappe van twee normatiewe weergawes van Kolb se Learning Style Inventory te ondersoek.

Eerstejaarstudente ingeskryf vir kursuse wat in Engels aangebied word in òf 'n wetenskaplike (BSc) òf 'n geesteswetenskaplike (BA) studierigting is gebruik vir die empiriese gedeelte van hierdie studie. Die studie is dus in die konteks van studente-ontwikkeling geplaas en 'n literatuurstudie oor studente-ontwikkeling is onderneem. Studente-ontwikkeling behels akademiese-ontwikkeling, loopbaanontwikkeling en persoonlike-ontwikkeling. Kolb se teorie van ervaringsleer verteenwoordig 'n aspek van akademiese-ontwikkeling en Holland se persoon-omgewing interaksie teorie verteenwoordig 'n aspek van loopbaanontwikkeling.

Om 'n integrasie van Holland en Kolb se teorieë uit te voer is 'n literatuurstudie van dié twee teorieë onderneem. Die ses persoonlikheidstipes (Realisties, Onderzoekend, Artisties, Sosiaal, Ondernemend, Konvensioneel) asook die vier leervermoëns

(Konkrete Ervaring, Reflektiewe Observasie, Abstrakte Konseptualisering, Aktiewe Eksperimentering) en die vier leerstyle (Divergeerder, Assimileerder, Konvergeerder, Akkommodeerder) is beskryf. Literatuur oor Kolb se Learning Style Inventory (LSI) is nagegaan. Die LSI is 'n ipsatiewe instrument en die problematiek rakende die ondersoek van die psigometriese eienskappe van 'n ipsatiewe instrument is uitgelig. Daar is besluit om in hierdie studie twee normatiewe vorms van die LSI te gebruik.

'n Teoretiese integrasie van Holland se model van beroepspersoonlikheidstipes en Kolb se leervermoëns en leerstyle is voorgestel.

Die interaksie tussen beroepspersoonlikheidstipe, gemeet deur die Self-Directed Search (SDS), en leervermoëns en leerstyle, gemeet deur die Learning Style Inventory (LSI) en die Learning Style Questionnaire (LSQ), is in die empiriese gedeelte van die studie vir die BSc en BA groepe ondersoek. Hotelling's T-toets is gebruik om te toets vir betekenisvolle verskille tussen die profiele van die twee groepe. Diskriminantanalise en faktorontleding is uitgevoer. Interkorrelasies tussen persoonlikheidstipe en leervermoëns vir die twee groepe is bepaal. Frekwensies van persoonlikheidstipe en leerstyle vir die twee groepe is bepaal. Resultate wat betrekking het op die voorgestelde geïntegreerde model van persoonlikheidstipes, leervermoëns en leerstyle is bespreek. Alhoewel sommige resultate nie die voorgestelde model ondersteun het nie, het die meeste resultate wel die model ondersteun. Daar is besluit om nie die voorgestelde geïntegreerde model in die lig van die resultate van hierdie studie aan te pas nie.

Die psigometriese eienskappe van die LSI en LSQ is ondersoek. Ite-manalise is vir albei instrumente gedoen en die betroubaarheid vir die vier leervermoëns-skale is deur gebruik van die alphakoëffisiënt bepaal. Die frekwensie van leerstyle vir albei instrumente vir die BSc en BA groepe is bepaal. Die betroubaarheid vir albei instrumente was redelik hoog. Die bipolarêre dimensies (AC-CE en AE-RO) soos deur Kolb voorgestel, is vir die LSQ bevestig en gedeeltelik bevestig vir die LSI. Dit het geblyk dat altwee instrumente 'n responshouding uitgelok het. Dit wou voorkom dat die LSI meer suksesvol as die LSQ was om leervermoëns en leerstyle in die twee groepe te onderskei.

Aanbevelings vir verdere navorsing is gemaak ten opsigte van die validering van die voorgestelde geïntegreerde model asook die verdere ondersoek van die betroubaarheid en geldigheid van die LSI en die LSQ.