

Assessment of Dermatoglyphics Multiple Intelligence Test (DMIT) Reports: Implication to Career Guidance Program Enhancement of Academic Institutions

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Abstract - This research aims to assess the reports generated from the Dermatoglyphics Multiple Intelligence Test (DMIT) administered by selected DMIT resource companies and consultancy firms in India with the end view of identifying its implication to career guidance program enhancement of academic institutions.

This paper employed the descriptive research method which involved the use of documentary analysis, questionnaires and interviews with purposively selected respondents supported by the researchers' analysis and insights with reference to the content of the data.

Findings of this research revealed that the dermatoglyphics, as a scientific discipline, began with the publication of Purkinje's thesis (1823) and Galton's classic book, *Fingerprints* (1892); DMIT is a remarkable offshoot of Howard Gardner's *Theory of Multiple Intelligences* which has the following salient features: Overview of the Dermatoglyphics and the Dermatoglyphics Multiple Intelligence Test/Analysis; Personality Assessment; Profile based on Gardner's Multiple Intelligences and Dunn's Brain Lateralization Theories; Learning Styles; Competency and Compatibility Profiles; Working Style; Leadership Style; Management Style; Report Interpretation; and Customized Academic and Relationship Advises; the respondents of this study gave their perceptions with reference to the beneficial results of the DMIT; and the foregoing findings have some implications that may be used by academic institutions to enhance their career guidance program.

Keywords - Career Guidance Program, Dermatoglyphics, Dermatoglyphics Multiple Intelligence Test/Analysis, DMIT, Multiple Intelligences

I. INTRODUCTION

Careers can make or break a person and the people around the person. It seems that a lot of individuals however fail to recognize this, especially in developing countries. Career guidance and development programs are often done haphazardly, even in academic institutions where there are guidance counselors.

In countries like India and the Philippines, where unemployment, underemployment, overseas employment are common, a serious focus on this matter is very important. Families and generations have been affected by this situation.

Careers affect the amount of money earned and how it must or could be spent. They affect friendships, links, and connections as one usually establishes relationships in the area of work. They influence the attitudes and values of people. They determine how much time is spent at work, with family and friends, for pursuit of

other interests, or for leisure activities. Likewise, they affect the kinds of institutions where they are employed, the nature of the work, the type of working environment, and the levels of responsibility one might reach. All these show how extensive the impact of careers on human beings can be. If people take the wrong career path, they may end up as broken persons.

Frank Parson's *Choosing a Vocation* (1909) was perhaps the first major work which is concerned with career guidance. Parson developed a framework to help individuals decide on a career. This framework contained a three part formulation: a clear understanding of oneself, aptitudes, abilities, interests, resources, limitations, and other qualities; knowledge of the requirements and conditions of success, advantages and disadvantages, compensations, opportunities, and prospects in different lines of work; and true reasoning of the relations of these two groups of facts (Zunker,

2002). According to Parson, ideal career choices are based on matching personal traits and personality with job factors to produce the best conditions of success. Parson's framework became the basis of the contemporary trait-factor theory of career development in which the present study is anchored.

The United Nations Educational, Scientific and Cultural Organization (UNESCO) averred that a guidance program should help students to develop into full human beings, capable of maximizing their potential in all personal, educational, social or career-related respects (UNESCO, 2001).

The primary mission of the guidance and counseling program is to provide a broad spectrum of personnel services to the students. These services include student assessment, the information service, placement and follow-up, and counseling assistance. These four areas constitute the core of any guidance program and should be organized to facilitate the growth and development of all students (Erford, 2010; Erford, 2011; Neukrug, 2011). One of those four core areas of the guidance program is assessment. The assessment service is designed to collect, analyze, and use a variety of objective and subjective personal, psychological, and social data about each student. Its purpose is to help the students to better understand themselves (Lunenbergh, 2010).

Various countries and states recognize the important role of guidance counselors in nation building. These guidance counselors typical work settings include K-12 schools, colleges and universities, hospitals, mental health clinics and private practice offices. The counselors play an extremely significant role as proactive agent - promoting, developing, implementing and evaluating career development programs. In counseling youths for their career development and eventual placement, counselors may employ a variety of facilitative techniques to increase self-awareness, career awareness, career exploration, and planning and decision making (Gibson & Mitchell, 2003). Likewise, they make use of assessment tools to help the learners identify their career interests, skills, abilities, and learning styles. One of these assessment tools is the Dermatoglyphics Multiple Intelligence Test (DMIT), an offshoot of the Dermatoglyphics technology.

Dermatoglyphics refers to the branch of science which studies the patterns of skin ridges present on the fingers, toes and the soles of human beings. MindTech (2010) revealed the congenital links between one's fingers and intrinsic qualities and talents.

Since 1823, scientists have discovered that fingerprint patterns and inner intelligence are related to each other. Fingerprints are formed during the 13th to the 19th week of pregnancy. This concept has been confirmed by many researchers and has been published in many literatures as well. Fingerprint patterns are consistent throughout the lifetime, unless there are forms of disturbances introduced that changes the genetic composition. From then onwards, scientists incorporated dermatoglyphics with the theory of multiple intelligences. With the help of these, a person's personality and hidden talents can be evaluated and classified consequently (www.jazzabrain.com).

The Multiple Intelligence (MI) Theory was proposed by Prof. Howard Gardner of Harvard University in 1983 in his pioneering book called *Frames of Mind* to define the concept of intelligence. This theory extends traditional notions of the gifted child by defining various kinds of intelligence of which a child may stand out, namely; linguistic, musical, logical/mathematical, visual/spatial, bodily/kinesthetic, intrapersonal, interpersonal, and naturalistic. In a nutshell, multiple intelligence theory is a pluralized way of understanding the intelligence (www.jazzabrain.com).

Howard Gardner's MI Theory made a strong impact among many educators all across the globe. This led many educational theorists to embrace the MI theory because it provides opportunities for authentic learning based on the students' needs, interests and talents. Many academic institutions are now re-structuring their curriculum according to these intelligences.

The website of Jazzabrain (2011) cited that MI and fingerprints are related through clinical trials. Just as the development of fingerprints of a person is directly linked with the development of the brain, intelligence too is closely associated with the development of the brain (Garret, 2014). The inception of various types of intelligences occurs within the brain during the gestation stage, and subsequently these intelligences start exhibiting themselves in various forms and ways after the child takes birth. The inherent intelligence of a person is reflected by the brain, and fingerprints provide information regarding the structure and development of the brain. Therefore, by studying the fingerprints of a person, the forms and manifestation of various types of intelligences too can be determined, generally in the form of a test commonly referred to as the Dermatoglyphics Multiple Intelligence Test (DMIT), according to Garrett (2014).

The DMIT is an assessment tool which compares, analyzes and classifies the patterns of the skin grains

and ridges of each person's fingerprint. This analysis gives a comprehensive insight of one's innate intelligence distributions, potentials, preferred learning and communication styles. It also provides opportunities to assess one's career interests, to explore career options and to create educational development plan.

While the scientific communities all over the world are still in awe of the potential of the DMIT in mapping human development potential, it has quietly made headways into the academe (Brain Wonders, 2011). Based on the tenets of Gardner's MI theory, the DMIT maps a scientifically accurate trajectory of skills development and talent intensification for individuals.

Some of the significant contributions to research relative to dermatoglyphics include: Najafi's (2014) study as regards the association between finger patterns of digit II and intelligence quotient level in adolescents; Adekoya's, Ahmed's, Oboh's and Alimba's (2013) study as regards the relationship between dermatoglyphics and multiple intelligence among selected secondary school students in Lagos State, Nigeria; Nanakorn's, Honark's, Ungpansattawong's, Chaisiwamongkol's, Maneesriwongul's, Suwanwerakamtorn's, Raksasataya's, and Chusilp's (2011) preliminary study on the relationship between fingerprint patterns and Multiple Intelligences (MI); Cunha's and Filho's (2008) study which focused on the identification of the profile of Brazilian women's fencing team based on dermatoglyphics pattern, somatotype and basic physical qualities; Klein's and Fernandes' (2003) evaluation of the relationship among dermatoglyphics characteristics, physical qualities and maturational level of young male and female students; Liu's, Zhang's, Li's, and Tang's (1999) feasibility study which focused on the identification of children's intelligence by dermatoglyphic pattern; Liu's, Zhu's, Zhang's, Wu's, Qi's, Wang's (1996) correlation analysis between fingerprint pattern and intelligence; and Cezaric's (1995) analysis of the quantitative dermatoglyphic traits in persons with high-above-average intelligences.

Several scientific studies on fingerprints have been done over the years, but they received little media attention. This is probably due to public's association of dermatoglyphics analysis with palmistry and fortune telling rather than associating it to an object of scientific interest. Thus, the findings of this investigation will hopefully support the researchers in introducing this technology being touted as one of the next big future-mapping trend in education and as a new method of

evaluating one's inborn intelligences through simple biometrics, where fingerprints hold the key to one's future.

With these thoughts in mind, the researchers were deeply motivated to explore the dermatoglyphics technology through the assessment of the DMIT reports and gain honest implications to enhance the career guidance programs of academic institutions.

II. OBJECTIVES OF THE STUDY

This research aimed to assess the reports generated from the Dermatoglyphics Multiple Intelligence Test (DMIT) administered by selected and recognized DMIT resource companies and consultancy firms in India. Specifically, this research was conducted to identify the historic beginnings of dermatoglyphics, to identify the salient features of the DMIT, to determine the respondents' perception as regards its benefits with the end view of identifying its implication to enhance the career guidance programs of academic institutions.

III. MATERIALS AND METHODS

Research Design

The present study employed the descriptive research design. This research design refers to the method used to describe data and characteristics used to describe the population. The purpose of using the descriptive research method is to acquire accurate, factual, systematic data that can provide readers with an actual picture of the data set that they are reviewing.

Participants

The respondents of the study include 28 administrative authorities, 56 faculty members and 28 guidance counselors who were purposively chosen from selected academic institutions particularly in the cities of the Indian states of Andhra Pradesh, Delhi, Gujarat, Maharashtra, Rajasthan, Tamil Nadu, and Uttar Pradesh. Likewise, the respondents of the study include 56 parents whose children submitted themselves for dermatoglyphics analysis and 56 student-clients of leading DMIT resource companies and consultancy firms which offer programs, certifications, authentications, trainings, remedial courses and other MI and DMIT-related activities.

Instruments

In order to attain the first and second objectives of this study, the researchers made use of documentary materials in the form of DMIT reports from reputable

DMIT resource companies and consultancy firms and inputs from electronic sources and printed publications. And to realize the third and fourth objectives of this paper, the questionnaire and the Interview Schedule (IS) were used as basic tools for gathering data. According to Mercado (1999), the questionnaire is a self-administered research tool which consist of a series of questions and prompts information from the respondents while an IS is an interviewer-administered research tool that influences the reliability and validity of the data gathered from the respondents.

Procedures

An approval to utilize the DMIT reports from the DMIT resource companies and consultancy firms and from the select guidance counselors, faculty members, parents, and students was sought. An approval to conduct the study was also availed of from the administrative authorities of various academic institutions to help facilitate the data gathering.

The Personal Interview Technique (PIT) and the Group Interview Technique (GIT) were employed by the researchers. Considering the limitations of the former, the GIT, as a complementary technique involves interviewing groups instead of individuals. It captures group consensus rather than individual opinion. Above all, this is much faster to conduct than personal interview. The GIT, according to Mercado (1999), is appropriate for gathering data needed in planning action projects while the personal interview is suitable in generating benchmark data that can serve as a basis of comparison for evaluating the impact of the project to the beneficiaries.

Data Analysis

As with all data, analysis and interpretation are required to bring order and understanding of the study. This requires creativity, discipline and a systematic approach. Thus, the steps relative to analyzing data from the questionnaires and interview schedules, as described by Taylor-Power and Renner (2003), were used in this study. This include: getting to know the data, focusing the analysis, categorizing information, identifying patterns and connections within and between categories, and interpretation of the data.

IV. RESULTS AND DISCUSSION

1. The Historical Root of Scientific Dermatoglyphics

Cave drawings and petroglyph diagrams that date back thousands of years provide an evidence of early man's interest in hands. However, the importance of

such pre-historic samples is subject to broader understanding (www.jazzabrain.com). Dermatoglyphics has a long history in India and China. The use of hand and finger patterns as indicators of character traits or attributes is evident. Traditional beliefs from the aforesaid countries follow the customs of reading certain patterns from fingerprints.

Although the term "dermatoglyphics" was coined by Cummins and Midlo (1926), dermatoglyphics as a scientific discipline began with the publication of Purkinje's thesis (1823) and Galton's classic book, *Fingerprints* (1892). Even though the primary object of Galton's studies was to develop a personal identification system, he investigated the biological variation as shown by fingerprints, the unchangeable characteristics of the fingerprint patterns through longitudinal examinations, the inheritance as well as the racial variation of fingerprint patterns. In spite of the fact that interest in dermatoglyphic research continued unabated from the beginning of the twentieth century, dermatoglyphics entered into a phase of rapid expansion attracting a great number of scientists from all segments of biology, medicine and biological anthropology during the second half of this century (Gyenis, 2000).

2. The Salient Features of the Dermatoglyphics Multiple Intelligences Test.

Different DMIT resource companies and consultancy firms have structured differently their DMIT reports to facilitate reading and comprehension. However, for the purpose of this study, only the most common salient features are presented. These include: The Overview of the Dermatoglyphics Technology and the Dermatoglyphics Multiple Intelligence Test/Analysis; Student's Personality Assessment which measures Adversity Quotient (AQ), Creativity Quotient (CQ), Emotional Quotient (EQ) and Intelligence Quotient (IQ); Student's Profile based on Gardner's Multiple Intelligences and Dunn's Brain Lateralization Theories evident on Fingerprints; Student's Learning Styles based on Visual, Auditory and Kinesthetic Domains; Student's Competency and Compatibility Profiles; Student's Working Style, which serves as basis on how a student organize work, manage time, teach and learn, interact with others, communicate and contribute to the team; Student's Leadership Style, which shows one's style as a leader providing direction, implementing plans, and motivating people; Student's Management Style, which focused on the characteristic ways of making decisions and relating to subordinates; Report Interpretation; and Customized Academic and Relationship Advises.

In order to generate a DMIT report, the DMIT resource companies and consultancy firms adhere to the following procedures: finger capturing; finger print verification; scientific finger print analysis; DMIT report generation in laboratories; and report briefing by and consultation with professional dermatoglyphics counselors.

3. The Respondents' Perceptions with Reference to the Benefits Derived from the DMIT Reports:

3.1 Administrative Authorities of Academic Institutions. With reference to the administrative authorities' perception relative to the benefits of DMIT reports, it is noteworthy to mention that a general consensus was made. Twenty-eight (28) or 100% of the respondents strongly agree that the result of this test can provide a baseline data of theoretical and practical values for administrators of academic institutions in enhancing their policies and guidelines as regards their career guidance programs. They averred that the creative approach or technology known as dermatoglyphics being introduced in this paper may be adapted by academic institutions all over the world as an assessment tool that would ensure their career guidance programs response to the unique needs of their student-clients. This sophisticated software when utilized by these institutions would contribute to the enhancement of their career guidance programs and standards.

3.2 Guidance Counselors. Twenty-eight (28) or 100% of the respondents strongly agree that the result of the DMIT may help the guidance counselors of various academic institutions to critically assess the inherent acumen and aptitude of the student and attempts to map the different creative and cognitive processes within the latter's brain. While most other tests offer, at best, only a static result of a given performance at any time, the respondents believe that the DMIT may assist in the continual mapping of the students' development and growth of talent along an educational gradient. These respondents also believe that the DMIT results may provide inputs as to how understanding one's areas of intelligences can help their institution's alumni make decisions as regards their careers. Likewise, they believe that the results of the said test can help them point out viable career shifts and options that would best utilize their learning and application potential. Furthermore, they strongly agree that the result of this test may be used by the counselors as a proposed input into a career plan and counseling program of their academic institutions.

3.3 Faculty Members. It is noteworthy to mention that 56 or 100% of the teacher-respondents strongly

agree that the DMIT results can be used as baseline data to identify a student's intelligence profile, recognize their strengths, work with their challenged areas, and help them be more successful in school. They stressed that the test can help the students to build on areas in which they struggle and take greater advantage of their gifts, becoming more engaged, confident and motivated. Furthermore, the faculty members specifically those teaching the professional education classes may use the result of this test as a supplemental instructional material in teaching.

3.4 Parents. Fifty-five (55) or 98% of the parent-respondents strongly agree with DMIT's strong impact in helping them to identify and understand their children's inborn talents, attitudes, skills, learning styles and potentials. Likewise, majority of them believe that the DMIT reports will provide them valuable information and a more balanced view of their children's intelligence levels, providing them with an important basis to consult and reflect on when they choose their major areas of specialization that best meets their abilities and potentials. The reports will help their children make smart career choices by helping them understand the many ways they are intelligent.

3.5 Students. It was found out that majority or 54 or 97% of the student-respondents strongly agree that the DMIT reports can provide inputs about their personality traits, attitudes and skills and awareness of their strengths and weaknesses. Likewise, they believe that there are certain personality traits, attitudes and skills that they can bring to their workplace after college. They averred that result of the DMIT can also give them inputs as regards the parallels between approaches to schooling (development of skills and nurturance of personality) and approaches to work (application of training). The self-insight on these personal traits, attitudes and skills preempt their total lifestyle concerns. This personal inventory assessment can lighten them to the occupational mix which makes the individual assume purposely the action in the life/career planning process.

4. The Implication of the Dermatoglyphics Multiple Intelligence Test Results to the Enhancement of Career Guidance Program of Academic Institutions.

Since other researches have been conducted on the same area but on a less extensive scale and that previous studies were primarily concerned with the relationship of fingerprint patterns with the students' multiple intelligences, this study which is a formal assessment of the Dermatoglyphics Multiple Intelligence Test reports administered by various DMIT

resource companies and consultancy firms was conceptualized and conducted.

The present study focused not only in providing a baseline data for its historical development, salient features but it is likewise focused on the benefits and implication derived from the results of the said test.

The result of the interviews conducted has received positive remarks from the respondents specifically from the administrative authorities of academic institutions, guidance counselors, teachers, parents, students, and other stakeholders. It is noteworthy to mention that there was a general consensus from the respondents as regards the DMIT's beneficial effects. They averred that the said test critically assesses the inherent acumen and aptitude of the individual, and attempts to map the different creative and cognitive processes within the student's brain. While most other tests offer, at best, only a static result of a given performance at any time, the DMIT continually maps the students' growth and development of talent along an educational gradient. In real-world academics, DMIT helps individuals augment their already-existing skill sets and make for an enhanced learning experience. It is also worth mentioning that the findings of this study provide baseline data in major course preferences as a measure of the student's goal-setting behavior for their present and future lifestyles/expectations. There is a felt need to strengthen the career guidance programs of academic institutions and a need for career counselors who are well trained for the job. Thus, the plight of the students with diverse background calls for special service from these career guidance counselors. Lastly, the Guidance and Counseling Offices should continue to innovate approaches and utilized assessment tools such as the DMIT in the implementation of their career guidance programs

V. CONCLUSION

The term dermatoglyphics was coined by Cummins and Midlo in 1926. However, as a scientific discipline, it began with the publication of Purkinje's thesis (1823) and Galton's classic book, *Fingerprints* (1892).

Dermatoglyphics Multiple Intelligence Test is a remarkable offshoot of Howard Gardner's Theory of Multiple Intelligences which has the following salient features: Overview of the Dermatoglyphics and the Dermatoglyphics Multiple Intelligence Test/Analysis; Student's Personality Assessment; Student's Profile based on Multiple Intelligences and Dunn's Brain Lateralization Theories; Student's Learning Styles; Student's Competency and Compatibility Profiles; Student's Working Style; Student's Leadership Style;

Student's Management Style; Report Interpretation; and Customized Academic and Relationship Advises.

The result of the interviews conducted relative to the beneficial effects of the DMIT results has received positive remarks from the respondents specifically from the administrative authorities of academic institutions, guidance counselors, faculty members, students, parents, and other stakeholders. They averred that result of the DMIT may be used by the guidance and counseling offices of various academic institutions to critically assess the inherent acumen and aptitude of the students enrolled in their programs and to assist in the continual mapping of the growth and development of the student's talent, attitude and skills along an educational gradient. Likewise, the result of this test may be used by the guidance counselors as a proposed input into a career plan and counseling program of their academic institutions.

The foregoing findings have some implications that may be used by academic institutions to enhance their career guidance program. It is also worth mentioning that the findings of this study provide baseline data in major course preferences as a measure of the student's goal-setting behavior for their present and future lifestyles/expectations. There is a felt need to strengthen the career guidance programs of academic institutions and a need for career counselors who are well trained for the job. Thus, the plight of the students with diverse background calls for special service from these career guidance counselors.

VI. RECOMMENDATION

The researchers recommended that academic institutions may use the findings of this study as basis in the enhancement of their career guidance programs geared towards the attainment of the vision and mission of their educational institutions, the goals of their colleges and the objectives of their various programs; that guidance counselors of academic institutions may restructure or realign their career guidance programs based on dermatoglyphics technology in order meet the growing needs, interests and potentials of their student-clients; that faculty members may use this study as a supplemental instructional material when they teach subjects in line with the new trends in education and technology; that parents may recommend the utilization of the Dermatoglyphics Multiple Intelligence Test/Analysis for the enhancement of the youth's innate intelligence, potentials, preferred learning, communication, working, leadership and management styles as well as the latter's career interests and options. Meanwhile students may submit themselves to the said

tests in order for them to identify, understand, and enhance their own inborn talents, attitudes and skills; that the DMIT resource companies and consultancy firms dedicate and commit themselves in providing their clients with a scientifically accurate trajectory of talent and skills identification and intensification. Future researchers may use this study as a frame of reference when they conduct studies on the same topic to substantiate the present investigation.

ACKNOWLEDGMENTS

The researchers wish to express their personal thanks and appreciation to those who, in one way or another, have helped make this humble work a reality. First and foremost, they wish to thank the Lord for inspiring them during the course of writing this paper. To Dr. Nora Lumbea-Magnaye, the Batangas State University President and the other University officials, for the motivation that help hasten the completion of this study. To the Chief Executive Officers and owners of the DMIT resource companies and consultancy firms, parents and administrative authorities of select academic institutions for allowing them to conduct this study and to use the DMIT reports which drew up the essential and relevant dimensions in this research. To all their friends, all of whom generously gave their time, effort, advice and prayers. They made them realize the value of friendship and the principles about people and human experiences. To the pool of writers whose works were included in this study for posterity, for their emboldened wisdom in every page and figure of this research. The researchers are also very grateful for the wholehearted support extended to them by their loved ones during the writing process. To all of you, the researchers owe their deep gratitude. May God repay you with all the riches from the treasure of His heart.

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