

Conference Proceedings

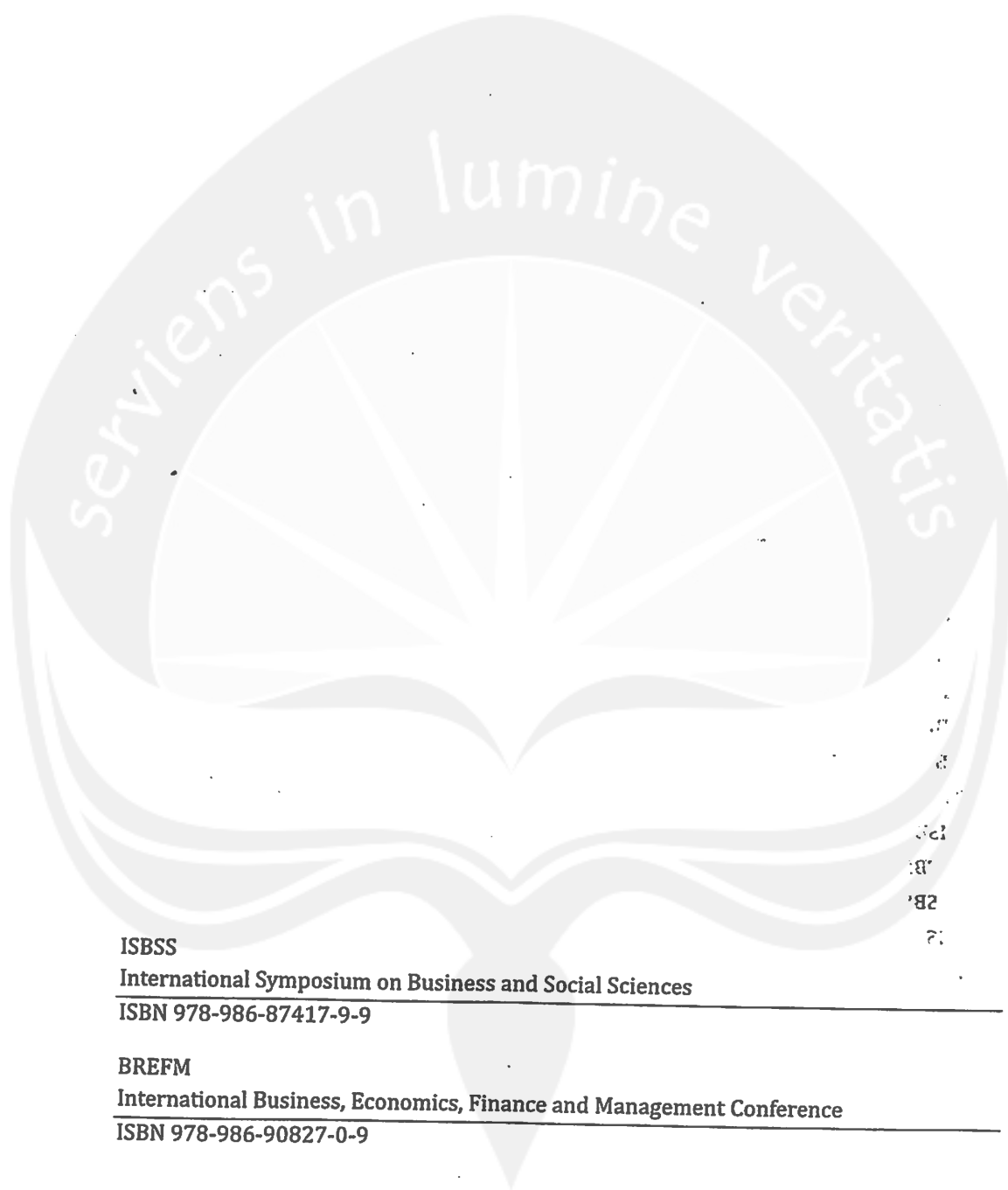
July, 2015
Hokkaido, Japan

ISBSS

International Symposium on Business and Social
Sciences

BREFM

International Business, Economics, Finance and
Management Conference



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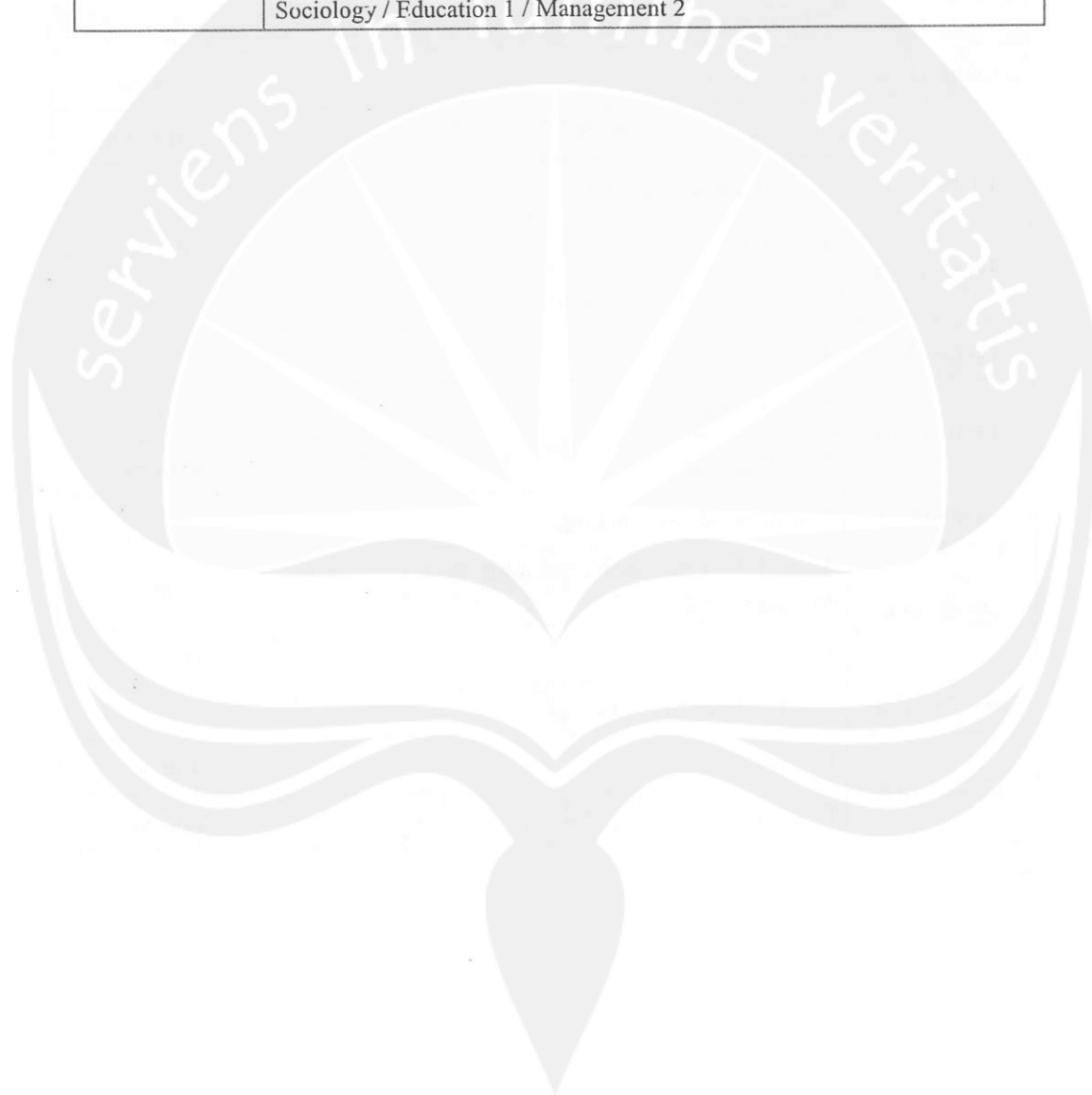
Conference Schedule

Monday, July 20, 2015 Oral Sessions		
Time	Information	Venue
13:00-17:00	Registration	
14:00-15:30	Marketing 1	Roma
	Education 1	Venezia
	Management 1	Raffaeollo
15:30-15:45	Tea Break & Networking	
15:45-17:15	MIS-Management Information System 1	Roma
	Finance & Accounting 1	Venezia

Monday, July 20, 2015 Poster Sessions B1, Renaissance Sapporo Hotel	
Time	Information
16:00-17:00	Poster Session(1) Management 1 / Communication

Tuesday, July 21, 2015 Oral Sessions		
Time	Information	Venue
08:00-18:00	Registration	
09:00-10:30	Economics 1	Roma
	Business 1/ Management 2	Venezia
	Education 2	Michaelangelo
	Finance & Accounting 2	Davinci
10:30-10:45	Tea Break & Networking	
10:45-12:15	Social Science Keynote Speech Keynote Speaker: José G. Vargas-Hernández Paper title: <i>Thinking as a Critical Factor of Business Competitiveness</i>	Raffaeollo
12:15-13:30	Lunch Time	
13:30-15:00	Psychology 1	Roma
	Business 2	Venezia
	Management 3	Raffaeollo
15:00-15:15	Tea Break & Networking	
15:15-16:45	Politics	Roma
	Communication 1	Venezia
16:45-17:00	Tea Break & Networking	
17:00-18:00	Marketing 2	Roma
	Education 3	Venezia

Tuesday, July 21, 2015 Poster Sessions B1, Renaissance Sapporo Hotel	
Time	Information
09:30-10:30	Poster Session (2) Psychology / Economics / Finance & Accounting / Marketing / Culture / Sociology / Education 1 / Management 2



Wednesday, 22 2015
Oral Sessions

Time	Information	Venue
08:30-18:00	Registration	
09:00-10:30	Management 4	Roma
	Education 4	Venezia
	Finance & Accounting 3	Raffaello
10:30-10:45	Tea Break & Networking	
10:45-12:15	Psychology 2	Roma
	Business 3 / Communication 2	Venezia
12:15-13:30	Lunch Time	
13:30-15:00	Economics 2	Roma
	Sociology / Law 1	Venezia
15:00-15:15	Tea Break & Networking	
15:15-16:45	MIS-Management Information System 2 / Management 5	Roma
	Education 5	Venezia
16:45-17:00	Tea Break & Networking	
17:00-18:00	Finance	Roma
	Law 2	Venezia

Wednesday , July 22, 2015
Poster Sessions
B1, Renaissance Sapporo Hotel

Time	Information
09:30-10:30	Poster Session (7) Management 3
11:00-12:00	Poster Session (8) Education 2 / Business 1 / MIS-Management Information System
15:00-16:00	Poster Session (10) Business 2 / Management 4

Oral Sessions – July 22

Management 4

Roma

2015/07/22 Wednesday 09:00-10:30

Session Chair: *Prof. Chow Hau Siu, Irene*

BREFM- 22553

The Quantitative Model of Better Integration on New Product Development

Cheng-An Tsai | *Shih Chien University*

ISBSS-4319

How Diversity and Inclusiveness Affect Work Performance

Wong Yin Yee | *The University of New South Wales*

Chow Hau Siu, Irene | *Hang Seng Management College*

Victor P. Lau | *Hang Seng Management College*

ISBSS-4382

Changes in Japanese-Style Management Considering Gender Perspective

Tomoko Komagawa | *Hokkaido University*

ISBSS-4406

The Role of Organization in Facilitating Knowledge Retention Activities in Sports Organizations: A Malaysian Experience

Siti Aishah Wahab | *Universiti Teknologi MARA*

Sohaimi Zakaria | *Universiti Teknologi MARA*

Dang Merduwati Hashim | *Universiti Teknologi MARA*

ISBSS-4442

Perceived Values, Customer Satisfaction and Behavioral Intentions of Choosing Add-On Services of Low Cost Carriers

Hsin-Hui Pu | *Chinese Culture University*

Yi-Ting Shih | *Chinese Culture University*

ISBSS-4461

**Drivers of Continuance Intention towards Cloud Computing Service: The Dedication
and Constraint-Based Mechanism on Google Apps for Work (GAW)**

Nalal Muna | *Politeknik APP Jakarta*



BREFM- 22553

The Quantitative Model of Better Integration on New Product Development

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Abstract

Although numerous effective-integration mechanisms have contributed to new product development (NPD) performance, barriers exist to matching technologies and market opportunities. Goal incongruity is a major barrier to cross-functional integration. Previous research has recognized the goal incongruity barrier, but the insufficient research does not provide a concrete integration mechanism to solve this significant problem. This study proposes a quantitative model that considers 3 functions including research and development, marketing and management as a global collaborative NPD team, and adopts a multidimensional perspective of an integration definition to encompass information sharing, effective decision making to accomplish common goals, and joint efforts to solve goal incongruity. We encompass 6 factors and 5 goals in building the quantitative model to ensure that cross-functional departments incurred a sufficient amount of goal incongruity. The model contributes to integrating cross-functional departments with a multidimensional perspective of integration and considers multifunctional goal incongruity. The sensitivity-analysis example provides a set of quantitative and structured bases for effective decision-making in simulating different situations. This study adds to quantitative precision and sensitivity analysis to increase applicability and ease of use for effective NPD decision making.

Keyword: New product development, Integration mechanism, Cross-functional cooperation, Goal incongruity, Quantitative model, Sensitivity analysis

1.Introduction

Effectively integrating research and development (R&D) with marketing contributes to NPD success[1-5]. Considerable research has only examined bi-functional cooperation, focusing exclusively on R&D and marketing integration[6]. Empirical studies applying a multifunctional approach that includes the management perspective are scant.

Although numerous effective-integration mechanisms have contributed to NPD performance [5,7-8], barriers exist to matching technologies and market opportunities. A systematic approach is necessary to overcome the cross-functional barriers for accurately assessing

technology applicability across market units for mitigating risk and uncertainty[9]. Goal incongruity is a major barrier to cross-functional integration[2,5,10], which is the extent to which different functional departments subscribe to different goals, use different decision criteria in resource allocation, manage diverse risks, and differ in their time-to-market perspectives. Large numbers of cross-functional departments involve more goal incongruity, resulting in extreme decision-problem complexity. Previous research has recognized the goal-incongruity barrier[2,5,10-11], but the insufficient research does not provide a concrete integration mechanism to solve this significant problem. Therefore, we propose a model to conquer these barriers by considering multifunctional-goal incongruity.

The literature lacks a precise definition of cross-functional integration[5]. Scholars have characterized integration as communication through meetings and information flow among departments [2] or as collaboration among various departments to accomplish common goals [10,12]. Certain scholars [13-14] have recommended a multidimensional perspective. Thus, our work encompasses three dimensions: (a) information sharing, (b) effective decision making to accomplish common goals, and (c) joint efforts to solve goal incongruity.

Our study differs from previous research in four aspects: First, we apply a multi-functional design that considers three functions, including R&D, marketing, and management, as a global-collaborative NPD team. Second, we adopt a multidimensional integration definition to encompass information-sharing, effective decision making to accomplish common goals, and joint efforts to solve goal incongruity. Third, in building a quantitative model, we consider various factors to ensure that cross-functional departments incur a sufficient amount of goal incongruity. Finally, by using sensitivity analysis, our example shows information sharing, joint efforts to solve goal incongruity, and better decision making. Our study adds to quantitative precision and sensitivity analysis to increase applicability and ease of use for effective NPD decision making.

The remainder of this study is structured as follows. We first introduce the conceptual foundations of this study and derive a quantitative model. We subsequently show an example with sensitivity analysis and outline the results. Finally, we discuss the research-related and managerial implications, limitations, and future research.

2. Model Development

Before constructing the models, we clarify certain assumptions as follows:

- (a) Many different global-market segments exist.
- (b) Many types of new product can be produced in a different global-market segment.
- (c) Different types of NPD require different core-technology levels.

(d) Different global-market segments have different competitiveness levels or risk levels.

We use the following terminology:

AM_i = the i th global-market segments

X_{ij} = the j th new product in i th global-market segments

RT_{ij} = the required core technology level of j th new product in i th global-market segments. Level will be from 1 to 9.

ET_{ij} = the existing core technology level of j th new product in i th global-market segments. Level will be from 1 to 9.

RL_{ij} = the risk level of j th new product in i th global-market segments. Level will be from 1 to 9.

CL_{ij} = the competitiveness level of j th new product in i th global-market segments. Level will be from 1 to 9.

DC_{ij} = the developing cost of j th new product in i th global-market segments.

DT_{ij} = the developing time of j th new product in i th global-market segments.

DB_{ij} = the developing benefit of j th new product in i th global-market segments.

We followed certain procedures in obtaining the models:

(1) Risk threshold

A different risk level exists for a new product in different global-market segments. A company cannot afford unlimited risk in facing NPD. Thus, the company must control NPD total risk within a certain threshold. We thus present the following equation:

$$\sum_{i=1}^n \sum_{j=1}^k RL_{ij} X_{ij} \leq Risk \text{ Shreshold} \quad (1)$$

(2) Competitive threshold

A different competitive level exists for a new product in different global-market segments. The company can afford a certain level of competitiveness when introducing NPD. Thus, it must control the total NPD competitive level within a certain threshold. We thus present the following equation:

$$\sum_{i=1}^n \sum_{j=1}^k CL_{ij} X_{ij} \leq Competitiveness \text{ Shreshold} \quad (2)$$

(3) Developing cost DC_{ij} and budget constraint

For each new product, the main factors influencing the developing cost DC_{ij} is the gap between the required core technology level RT_{ij} and the existing core technology level ET_{ij} . We assume they have the following relationship (i.e., a larger gap indicates a greater development cost with quadratic increasing).

$$DC_{ij} = m(RT_{ij} - ET_{ij})^2 + n(RT_{ij} - ET_{ij}) + q \quad (3)$$

(4) Because of resource limitations, the sum of all possible developing costs should be less than the budget constraint. Thus, we have the following equation:

$$\sum_{i=1}^n \sum_{j=1}^k DC_{ij} X_{ij} \leq \text{Budget Constraint} \quad (4)$$

(5) Developing time DT_{ij} and time limit

For each new product, the main factors influencing the developing time (innovation speed) DT_{ij} is the gap between the required core-technology level RT_{ij} and the existing core-technology level ET_{ij} . We assume they have the following relationship (i.e., a larger gap indicates a longer development time with quadratic increasing).

$$DT_{ij} = a(RT_{ij} - ET_{ij})^2 + b(RT_{ij} - ET_{ij}) + c \quad (5)$$

(6) Because of resource limitations, the sum of all possible developing times should be less than the time limit. Thus, we have the following equation:

$$\sum_{i=1}^n \sum_{j=1}^k DT_{ij} X_{ij} \leq \text{Time Limit} \quad (6)$$

(7) Developing benefit DB_{ij}

For each new product, the main factors influencing the developing benefit DB_{ij} is the gap between the required core-technology level TL_{ij} and the existing core-technology level ET_{ij} . We assume they have the following relationship (i.e., a larger gap indicates obtaining a more significant benefit with quadratic increasing).

$$DB_{ij} = e(TL_{ij} - ET_{ij})^2 + f(TL_{ij} - ET_{ij}) + g \quad (7)$$

(8) Model Formulation

Our quantitative model addresses “how to select the optimal combination of NPD projects in different global-market segments by maximizing the benefits of combining NPD within the competitiveness-threshold level, risk threshold, developing budget constraint, and time limit at the stage of business-case evaluation.” We thus integrate all equations to formulate the model as follows:

$$\begin{aligned}
& \text{Max} \quad \sum_{i=1}^n \sum_{j=1}^k DB_{ij} X_{ij} \quad (8) \\
& \text{Subject to:} \quad \sum_{i=1}^n \sum_{j=1}^k DC_{ij} X_{ij} \leq \text{Budget Constraint} \\
& \quad \sum_{i=1}^n \sum_{j=1}^k DT_{ij} X_{ij} \leq \text{Time Limit} \\
& \quad \sum_{i=1}^n \sum_{j=1}^k RL_{ij} X_{ij} \leq \text{Risk Shreshold} \\
& \quad \sum_{i=1}^n \sum_{j=1}^k CL_{ij} X_{ij} \leq \text{Competitiveness Shreshold} \\
& \quad X_{ij} = 0 \text{ or } 1 \\
& \quad i=1-5, j=1-3
\end{aligned}$$

3. Illustrative Example

ABC Innovation Corp. is considering introducing different NPD projects in different global-market segments. The marketing department is responsible for collecting the necessary information of expected risk level and competitive level in Japan, USA, Taiwan, China, German, and England markets, as shown in Table 1. To maximize the overall benefit, they should find the optimal NPD-project combination. Risk and competitiveness can be measured using a scale of 1 to 9, with 1 being the lowest and 9 being the highest.

Table 1 Marketing information

Market AM_i	Product type X_{ij}	Risk Level RL_{ij}	Competitive level CL_{ij}
Japan	X_{11}	4	3
	X_{12}	2	5
	X_{13}	7	2
USA	X_{21}	5	6
	X_{22}	7	5
	X_{23}	8	3
China	X_{31}	6	7
	X_{32}	3	5
	X_{33}	4	6
Taiwan	X_{41}	3	5
	X_{42}	6	4
	X_{43}	7	2
Europe	X_{51}	4	5
	X_{52}	6	2
	X_{53}	5	3

Based on marketing information, the R&D department estimates the required core-technology level TL_i and the existing core-technology level, as shown in Table 2.

Both core and existing technologies can be measured using a scale of 1 to 7, with 1 being the lowest and 7 being the highest.

Table 2 R&D information

Market AM_i	Product type X_{ij}	Required core technology TL_i	Existing core technology ET_i
Japan	X_{11}	5	3
	X_{12}	5	3
	X_{13}	6	3
USA	X_{21}	6	4
	X_{22}	7	4
	X_{23}	8	4
China	X_{31}	5	2
	X_{32}	4	2
	X_{33}	4	2
Taiwan	X_{41}	4	3
	X_{42}	6	3
	X_{43}	7	3
Europe	X_{51}	5	3
	X_{52}	7	3
	X_{53}	6	3

After obtaining marketing and R&D information, the top management executive summons marketing and R&D managers as a global-collaborative NPD team to evaluate the developing benefit, estimate the developing cost and developing time regarded as trade-offs relationship[14] for each different NPD project, as shown in Table 3. The global-collaborative NPD team also estimates m = US\$ 10 million, n = US\$ 3 million, q = US\$ -10million in $DC_{ij}=m(TL_{ij} - ET_{ij})^2+n(TL_{ij} - ET_{ij})+q$; a = 4 weeks, b = 5 weeks, c = 10 weeks in $DT_{ij}=a(TL_{ij} - ET_{ij})^2+b(TL_{ij} - ET_{ij})+c$; and e = US\$ 12 million, f = US\$ 10 million, g = US\$ 20 million in $DB_{ij}=e(TL_{ij} - ET_{ij})^2+f(TL_{ij} - ET_{ij})+g$.

Table 3 Management integration information

Market AM_i	Product type X_{ij}	Developing cost DC_{ij}	Developing time DT_{ij}	Developing Benefit DB_{ij}
Japan	X_{11}	46	36	88
	X_{12}	46	36	88
	X_{13}	104	61	158
USA	X_{21}	46	36	88
	X_{22}	104	61	158
	X_{23}	182	94	252
China	X_{31}	104	61	158
	X_{32}	46	36	88
	X_{33}	46	36	88
Taiwan	X_{41}	8	19	42
	X_{42}	104	61	158
	X_{43}	182	94	252
Europe	X_{51}	46	36	88
	X_{52}	182	94	252
	X_{53}	104	61	158

The previous steps show information sharing of cross-functional departments. This cooperation facilitates knowledge sharing between marketing and R&D, allowing them to develop technologies related to customer needs [1]. The following processes will illustrate (b) effective decision making accomplishes common goals, and (c) joint efforts to solve goal incongruity.

Goal incongruity is a major barrier to R&D-marketing integration [2,5]. Goal incongruity is the extent to which marketing and R&D members subscribe to different goals, use different decision criteria, and think differently regarding time. Thus, further steps must include setting common goals to solve goal incongruity. In addition to evaluating the developing benefit, cost, and time for each NPD project, the global-collaborative NPD team must also set developing cost and time thresholds by considering the limited resources of ABC Technology Corporation. The total developing cost should not exceed US\$ 800 million, total developing time of not more than 400 weeks, total risk level of not more than 50, and total competitive level of not more than 40. This example shows that marketing, R&D, and management managers share information but have different priorities in various goals. They require a quantitative model with structured bases to make effective decisions and solve goal incongruity.

We thus formulate this information to a quantitative lingo model as follows:

$$\begin{aligned}
 &\text{Max Developing benefit} \\
 &= 88 * X_{11} + 88 * X_{12} + 158 * X_{13} + 88 * X_{21} + 158 * X_{22} + 252 * X_{23} + 158 * X_{31} + 88 * X_{32} + 88 * \\
 &X_{33} + 42 * X_{41} + 158 * X_{42} + 252 * X_{43} + 88 * X_{51} + 252 * X_{52} + 158 * X_{53} \\
 &\text{Subject to:} \\
 &46 * X_{11} + 46 * X_{12} + 104 * X_{13} + 46 * X_{21} + 104 * X_{22} + 182 * X_{23} + 104 * X_{31} + 46 * X_{32} + 46 * \\
 &X_{33} + 8 * X_{41} + 104 * X_{42} + 182 * X_{43} + 46 * X_{51} + 182 * X_{52} + 104 * X_{53} \leq 800; \text{Budget} \\
 &\text{constraint} \\
 &36 * X_{11} + 36 * X_{12} + 61 * X_{13} + 36 * X_{21} + 61 * X_{22} + 94 * X_{23} + 61 * X_{31} + 36 * X_{32} + 36 * \\
 &X_{33} + 19 * X_{41} + 61 * X_{42} + 94 * X_{43} + 36 * X_{51} + 94 * X_{52} + 61 * X_{53} \leq 400; \text{Time limit} \\
 &4 * X_{11} + 2 * X_{12} + 7 * X_{13} + 5 * X_{21} + 7 * X_{22} + 8 * X_{23} + 6 * X_{31} + 3 * X_{32} + 4 * X_{33} + 6 * \\
 &X_{41} + 7 * X_{42} + 4 * X_{43} + 6 * X_{51} + 5 * X_{52} \leq 50; \text{Risk threshold} \\
 &3 * X_{11} + 5 * X_{12} + 2 * X_{13} + 6 * X_{21} + 5 * X_{22} + 3 * X_{23} + 7 * X_{31} + 5 * X_{32} + 6 * X_{33} + 5 * X_{41} + 4 * \\
 &X_{42} + 2 * X_{43} + 5 * X_{51} + 2 * X_{52} + 3 * X_{53} \leq 40; \text{Competitiveness threshold}
 \end{aligned}$$

The optimal solution of this model is obtained with the product-portfolio of producing X_{12} product in Japan, X_{23} product in USA, X_{41} and X_{43} products in Taiwan, X_{52} and X_{53} products in Europe, with an expected benefit of US\$ 340 million.

Our quantitative model provides a process for solving goal incongruity after a decision. The model with sensitivity analysis provides significant information for the global-collaborative NPD team to make decisions under different simulated situations. Thus, the global team conducts sensitivity analysis with reduced thresholds of developing cost, developing time, risk level, or competitive level. The results are presented in Table 4.

Table 4 Sensitivity analysis of the model solution

Constraint / Solution	Original Model	Sensitivity Analysis				
		Senario 1	Senario 2	Senario 3	Senario 4	Senario 5
$\sum_{i=1}^n \sum_{j=1}^k DC_{ij} X_{ij}$	≤ 800	≤ 800	≤ 800	≤ 770	≤ 704	≤ 700
$\sum_{i=1}^n \sum_{j=1}^k DT_{ij} X_{ij}$	≤ 400	≤ 390	≤ 380	≤ 400	≤ 400	≤ 400
$\sum_{i=1}^n \sum_{j=1}^k RL_{ij} X_{ij}$	≤ 50	≤ 50	≤ 50	≤ 50	≤ 50	≤ 50
$\sum_{i=1}^n \sum_{j=1}^k CL_{ij} X_{ij}$	≤ 40	≤ 40	≤ 40	≤ 40	≤ 40	≤ 40
Total Revenue	1044	1020	1002	1044	1044	1020
Expected profit	340	336	306	340	340	336
New Products	$X_{12}, X_{23}, X_{41}, X_{43}, X_{52}, X_{53}$	$X_{13}, X_{23}, X_{31}, X_{41}, X_{43}, X_{52}$	$X_{23}, X_{43}, X_{51}, X_{52}, X_{53}$	$X_{23}, X_{41}, X_{43}, X_{52}, X_{53}$	$X_{23}, X_{41}, X_{43}, X_{52}, X_{53}$	$X_{13}, X_{31}, X_{41}, X_{43}, X_{52}, X_{53}$

The marketing manager claims to reduce total developing time because of essential time-to-market. The team can choose: (a) to reduce the total developing time from not more than 400 weeks to not more than 390 weeks at the expense of deducting a US\$ 4 million expected profit to only US\$ 336 million by choosing a new product-portfolio of NPD projects $X_{13}, X_{23}, X_{31}, X_{41}, X_{42}$, and X_{43} ; or (b) to reduce the total developing time from not more than 400 weeks to not more than 380 weeks at the expense of deducting a US\$ 34 million expected profit to only US\$ 306 million by choosing a new product-portfolio of NPD projects $X_{23}, X_{43}, X_{51}, X_{52}$, and X_{53} .

A new product portfolio As another example, the global-collaborative NPD team decides to reduce total developing cost. The team can choose: (c) to reduce the total developing cost from not more than US\$ 800 million to not more than US\$ 770 million by choosing a new

product-portfolio of NPD projects X_{23} , X_{41} , X_{42} , X_{43} , X_{51} , and X_{52} , and can maintain the expected profit to US\$ 340 million; or (d) to reduce the total developing cost from not more than US\$ 800 million to not more than US\$ 700 million at the expense of deducting a US\$ 4 million expected profit to only US\$ 336 million by choosing a new product-portfolio of NPD projects X_{13} , X_{31} , X_{41} , X_{43} , X_{52} , and X_{53} .

4. Conclusion and Implications

Previous research has emphasized the positive effects of R&D-marketing integration [1,2,5,6,8,10]. We apply a multifunctional approach that includes the management perspective, and then increased the complexity of cross-functional integration which does not allow general conclusions in performance effects. Based on the extended cross-functional integration in global-collaborative NPD teams of R&D, marketing, and management, we address how to strengthen integration. We propose a quantitative model to select the optimal NPD-project combination in different global-market segments by maximizing the benefits of combining NPD within the competitiveness threshold, risk threshold, developing budget constraint, and time limit at the stage of business-case evaluation. Our model includes various goals that may conflict with each other and incur goal incongruity among cross-functional departments. Thus, our model contributes to integrating cross-functional departments with multidimensional perspectives of integration and by considering multifunctional goal incongruity. Furthermore, we echo Kostas's [15] suggestion and develop a systematic approach, with multiple combinations of six variables, for dealing with increasing NPD complexity in the global competition.

This study has several implications for managing NPD projects during the implementation stages. First, the quantitative model provides structured bases and processes to share information and make effective decisions. Our model solves more complex NPD problems than the illustrated example only if more cross-functional departments gather and share more types of information. Second, the common goal setting is important and requires different departments to reach consensus with resource limitations. Third, the sensitivity analysis allows cross-functional departments to simulate solving different goal-incongruity situations.

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How Diversity and Inclusiveness Affect Work Performance

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ABSTRACT

How do diversity and inclusiveness affect work performance? Research evidence from the existing literature seems to suggest a positive relation. However, the mechanism underlying such relationship remains unclear. Building on Kopelman, Brief and Guzzo's (1990) conceptual framework, this study proposes climate for inclusion triggers both emotion (psychological safety) and cognition (cognitive diversity), which ultimately translates into creative and in-role performance. Results from 256 supervisor-subordinate dyads in 45 teams show that inclusive climate is positively associated with cognitive team diversity and psychological safety. For the mediating effects, inclusive climate is indirectly related to both (a) creative performance and (b) in-role performance via psychological safety but not via cognitive team diversity. Theoretical and practical implications are discussed.

Keywords: Inclusiveness; cognitive diversity; psychological safety; creativity

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Changes in Japanese-Style Management Considering Gender Perspective

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ABSTRACT

The factors of “efficient management” and “instability of men’s workforce” make it advisable to change Japanese-style management to a gender-neutral one. Megabanks intend to promote Diversity Management as part of their business globalization process, and accordingly aim to achieve numerical targets for women managers. The current labor shortage has motivated credit unions and cooperatives to seek a new business model that focuses on female entrepreneurship. On the other hand, regional banks continue to utilize a career tracking system based on gender because they rely on a strong business foundation in their regional economies.

Keywords: Japanese-style management, gender-based personnel management, career tracking system, exhibiting women’s ability, financial industry

1. INTRODUCTION

This study focuses on the changes occurring in Japanese-style management, especially personnel management in the financial industry, from a gender perspective and regards women as the key to reviving Japanese companies. The Japanese government led by Shinzo Abe since 2012 has pursued the revitalization of the Japanese economy. It has stressed the active participation of women in the labor force and managerial sectors as being central to economic growth. The financial industry is a representative industry for Japanese-style management and is infamous for its career gap between men and women due to its use of gender-based personnel management.

This study offers two factors in favor of changing Japanese-style management to harness women’s abilities: “efficient management” and “instability of men’s workforce.” “Efficient management” means that if a company recognizes that Japanese-style management has become old-fashioned, it should aim to update its management practices to those more efficient in dealing with present-circumstances. Second, as Japanese-style management assumes longtime employment exclusively for men, the term “instability of men’s workforce” refers to the need for a company facing a lack of stability in such a predominantly male

workforce to expand its pool of potential employees. Accordingly, this study sets two indicators for analyzing the ability of personnel management to include more women in the competent workforce: “job enlargement” and “proportion of women in management positions.”

The case studies focus on three business categories in the financial industry: megabanks, regional banks, and credit unions and cooperatives. Interview-based surveys were conducted at Keidanren (Japan Business Federation), Japanese Bankers Association, Regional Banks of Association of Japan, The Second Association of Regional Banks, The National Association of Shinkin Banks, and Community Bank Shinyo Kumiai.

2. ISSUES REGARDING JAPANESE-STYLE MANAGEMENT

During the 1970s and 1980s, Japanese-style management, particularly personnel management, was observed as one of the keys to understanding Japanese companies' success. After the Great Recession of the 1990s, Japanese companies were obliged to change their management system, as its inefficiency made it unsuitable for Japanese society and the global economy.

Japanese-style management is generally known for three main characteristic management practices: lifetime employment, seniority-based wages and promotions, and enterprise-based unions. For a long time, despite its disadvantages, Japanese-style management benefited both company and employees. For the company, it seemed cost-efficient because it ensured employee loyalty. In return, employees gained job security, albeit in exchange for mobility.

Furthermore, this management style contains a gender-based personnel management element, i.e., there is a mutually complementary relationship between men and women employees in their careers. Workplaces uphold rigid gender-based job segregation because typical gender roles are embedded within personnel policy (Kimoto 2005). Large companies, such as banks, have introduced a career tracking system and have reinforced this gender-based differentiation of job and career opportunities. The career track (*sogoshoku*) includes significant investment in human capital with job rotation and offers the chance for promotion. The non-career track (*ippanshoku*), in contrast, is predominantly filled by women, and usually includes less demanding jobs, with little chance for promotion and less investment in human capital (Komagawa 2007).

In practice, the workforce in a seniority system needs to be thinned out at the top and expanded at the bottom. Japanese companies consider gender-based job segregation an absolute necessity to achieving this (Kumazawa 1996). Thus, Japanese-style management is considered to be economically rational by advocates of gender-based personnel management.

3. FACTORS CHANGING JAPANESE-STYLE MANAGEMENT

After the Great Recession of the 1990s, Japanese companies adapted their personnel practices in varying degrees to address the changing economic environment. Some factors that have forced companies to change are increased competition from the global economy, growth of information technology, rising labor costs for aging employees, labor shortages due to the declining birthrate, and so on.

Studies have shown that many companies continue to see lifetime employment as useful for maintaining employee loyalty and thus a stable workforce. The majority of companies have tried to maintain the lifetime employment system by shifting their emphasis from a seniority-based to a merit-based system (Firkola 2006).

However, this trend is insufficient to understand the reasons for the persistence of current personnel management practices in Japanese companies. Seeking to promote change, the Japanese government has announced a set of measures that (1) support balance between work and family life, (2) promote to managers and boost women's ability to demonstrate their abilities in their work. There are many strategies that businesses can employ, for example, transparency (the Cabinet), Diversity Management Selection 100 (Ministry of Economy, Trade and Industry), Nadeshiko brand (Ministry of Economy, Trade and Industry with Tokyo Stock Exchange, Incorporated) and positive action (Ministry of Health, Labour and Welfare). These strategies demonstrate that management can take advantage of many efficient tools to promoting active participation by women (Komagawa 2014).

The Japanese government's policies seek to make companies aware that gender-based personnel management is irrational. Policies promoting active participation by women seem to be an important factor that leads companies to change from a Japanese-style management. Thus, a gender-aware perspective is required to analyze recent changes in Japanese-style management.

4. RECENT TRENDS in PERSONNEL MANAGEMENT in THE FINANCIAL INDUSTRY

The financial industry can be broken down into three main categories: megabanks, regional banks, and credit unions and cooperatives. They differ in terms of aim (profit or nonprofit), market area (international, regional, or local), and nature of business by law.

Table 1: Figures of women employees in the financial industry

	Megabanks	Regional banks**	Credit unions**	average of all industry(2014)
ratio of women employees	43.4~46.2%*	37.5%	33.5%	32.8%
average of length service	10.9~12.9years (men:16.7~18.1yrs)*	11.8years (men:17.7yrs)	NA	9.3years (men:13.5yrs)
average of age	33.3~35.3years old (men:40.3~41.6yrs old)*	NA	31.2years old (men:41.6yrs old)	40.6years old (men:42.9yrs old)
ratio of women among managers	12.1~16.2%	3.5%	1.7%	8.3%

*Figures are financial group including megabank(2014).

**Figures of Regional banks(2013) and Credit unions(2010) are average of group.

Source: Basic Survey on Wage Structure, Disclosures and internal documents.

4.1 Megabanks

Megabanks have numerous branches both inside and outside Japan. They cover a wide range of business areas including three main areas of banking business: deposits, loans, and exchanges. Recently, this has expanded in many cases to include M&As, derivatives, etc. After the collapse of Japan's economic bubble, megabanks proceeded to expand into the investment businesses for individual customers and overseas businesses.

Megabanks make good use of the Japanese government policies for promoting active participation by women. Personnel management style has been changed from gender-based to gender-neutral because they intend to promote Diversity Management from business globalization and the need for increased sophistication about investment businesses since mid-2000.

Megabanks promote increased active participation by women through "job enlargement" and by increasing the "proportion of women in management positions." "Job enlargement" entails women becoming the main sales staff of investment trusts for elders and working women. Sales staffs of investment trusts have to obtain a financial planner certification. Therefore, early retirement by these employees mean the firm would incur serious human resources losses. In terms of the "proportion of women in management positions," it totaled around 14 percent in 2014. This is higher than the average of all industries covered (8.3 percent).

The method for enabling women to exhibit their ability is "efficient management." To be truly global banks, they must empower women, who comprise about 45 percent of their

workforce. More and more women continue to work after their marriage and childbirth. Megabanks have increasingly become aware that women employees are competent human resources.

Megabanks set numerical targets for women managers and introduce support systems to foster a balance between work and family life. For example, the Bank of Tokyo-Mitsubishi UFJ set and achieved numerical targets for promoting women employees: women employees to be promoted to 300 line management positions and women managers to comprise 15 percent of the total by the end of March 2015. Megabanks are currently trying to modify the career tracking system which is gender-based personnel management.

4.2 Regional Banks

Regional banks usually operate below the prefecture level. They form a dense branch network in the regions, mainly in the prefectures where their head offices are located. They return public money to normal circulation as designated banks by local governments. In addition, they are primary banks for major companies in their respective regions. Thus, regional banks are central in local economies.

The 64 regional banks in the Regional Banks Association of Japan founded a “group of regional bank presidents who will create ‘A Society in which Women Shine’” in 2014. They announced a “Declaration of Action” and declared that they will set goals regarding the promotion of women in their banks and carry out measures to achieve these goals. Claiming that different views create better values in banks, they seek to send a message about the importance of women’s contributions. These actions are responses to the Japanese government’s policies for promoting active participation by women.

But, at least in 2013, regional banks has failed either to achieve “job enlargement” or to increase the “proportion of women in management positions.” Initially, 3.5 percent of management positions were held by women, with only 8.8 percent of career-track employees (*sogoshoku*) being women. This proportion of women managers is lower than the average of all industries covered (8.3 percent). Regional banks continue to practice gender-based personnel management under the career tracking system.

Furthermore, gender-based job segregation persists even in the career track. The most relevant job for becoming a branch manager is “financing for enterprise”; 29.0 percent of men in the career track take a “financing for enterprise” job, compared with only 12.9 percent of women. More women in the career track (27.8 percent) take a “window clerk” which is less demanding job for the non-career track employees(*ippanshoku*).

Regional banks continue to practice gender-based personnel management because they have not been significantly impacted by business globalization pressures and have sufficient numbers of male employees for a strong business foundation in a regional economy. Thus, while regional banks have less “efficient management,” this is compensated by their facing no “instability of men’s workforce” in their economic environment.

4.3 Credit Unions and Cooperatives

Credit unions and cooperatives are regional financial institutions operating within limited geographic areas. They are distinguished by having a mandate to serve the small- and medium-sized enterprises and the individual residents of their respective areas of operation. Credit unions and cooperatives serve their members as cooperative financial organizations. For this reason, they display a kind of public-service character and contribute to the prosperity of local society.

Credit unions and cooperatives are lagging in terms of human resource development of women due to the financial crisis that occurred during the late 1990s. In credit unions, 1.7 percent of management positions are held by women, in spite of the absence of a career tracking system. The positions of “clerk of deposits,” including “window clerk,” are filled mainly by women, whereas the positions of “marketing staff for sale and financing” are filled predominantly by men. Workplaces exhibit rigid gender-based job segregation. Thus, credit unions and cooperatives achieve neither “job enlargement” nor an increased “proportion of women in management positions.”

The prospect of future labor shortages, however, has awoken credit unions and cooperatives to the need to support women’s empowerment. In credit unions, the largest group of employees is men in their 50s, at over 20 percent. Credit unions stopped recruitment after 2000 because they merged in order to survive the financial crisis. They are thus facing the factor of “instability of men’s workforce” as a pressure for changing from Japanese-style management and are searching for a way to shift from gender-based personnel management.

5. CONCLUSION

This research explores the changes in Japanese-style management, especially personnel management in the financial industry, by considering a gender perspective. Accordingly, this study supposes two factors that create pressure for a firm to change from a Japanese-style management in favor of promoting women’s ability: (1) “efficient management” and (2) “instability of men’s workforce.” Two indicators of exhibiting women’s ability are identified

and analyzed: (1) “job enlargement” and (2) “proportion of women in management positions.”

Megabanks promote active participation by women through both “job enlargement” and increasing the “proportion of women in management positions.” The method used for exhibiting women’s ability is “efficient management.” Megabanks have intended to promote Diversity Management in response to increased business globalization and sophistication since mid-2000. Megabanks make good use of the Japanese government’s policies for changing from a gender-based to a gender-neutral personnel management style. Recently, megabanks have attempted to curtail long working hours, especially for men. They aspire to utilize merit-based management, not management based on company loyalty.

Regional banks fail to achieve either “job enlargement” or an increased “proportion of women in management positions.” Regional banks continue to practice gender-based personnel management under the career tracking system. This reflects the fact that they have not been significantly impacted by business globalization on the one hand, while on the other, they have sufficient male employees for a strong business foundation in their regional economies. Regional banks face less “efficient management,” with no “instability of men’s workforce” in their economic environment. Regional banks lack the provision for a labor shortage resulting from Japan’s declining birthrate.

Credit unions and cooperatives have also failed to achieve “job enlargement” and an increased “proportion of women in management positions” despite the absence of a career tracking system. Credit unions and cooperatives are lagging in terms of human resource development of women because the financial crisis of the late 1990s caused them to undergo a series of mergers and employee consolidation; they have largely not needed to hire new employees so there has been little scope for them to expand numbers of women employees. Nevertheless, credit unions and cooperatives realize that they must support women’s empowerment because they fear a labor shortage in the future. They have thus been influenced by the factor of “instability of men’s workforce.” Credit unions and cooperatives are seeking a new business model that focuses on women entrepreneurs and consumers living in local communities. Furthermore, this model may offer important jobs to women employees and generate changes in the gender-based personnel management system.

This paper has shown that the factors underlying changes to Japanese-style management in favor of better utilizing women’s abilities are “efficient management” and “instability of men’s workforce.” These pressures have increasingly motivated companies to develop

women's abilities, have efficient management in their view, and boosted awareness of women as human resources. Thus, women are the key to reviving Japanese companies.

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The Role of Organization in Facilitating Knowledge Retention Activities in Sports Organizations: A Malaysian Experience

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Abstract

Like other countries, the Malaysian Government and sports organizations strive to produce world-class athletes who would excel in international tournaments. Annually, these organizations allocate a substantial amount of budget to fund programs and activities to enhance the knowledge, skills and performance of athletes in all types of sports. A pertinent method that is normally employed is the engagement of renowned coaches on a contractual basis to train and coach the athletes. However, despite the efforts taken by the relevant sports agencies and the government, it is observed that Malaysia has not been relatively successful in making a prominent presence on the international sporting arena. A study was conducted to explore how the sports organizations manage, retain and preserve the knowledge imparted by their coaches to the athletes for sharing purposes and making it available to new athletes even after the coaches have left the organization. This paper reports on the roles played by such sports organizations and factors that promote knowledge retention therein. Managers of sports associations were interviewed and the findings could be used as an initial framework to assist these organizations to leverage their coaches' knowledge in their quest to produce medal-winning athletes on international arenas and boost up their Return on Investment (ROI).

Keywords: Knowledge Retention, Organizational Factors, Sports Knowledge, Sports Organizations, Malaysia

1. Introduction

The globalization and advancement of information technology are among several factors that lead to the drastic changes and the driving force for organizations to increase their corporate interest towards knowledge as a source of competitive advantage (Argote, McEvily, & Reagans, 2003; Ichijo & Nonaka, 2007; Lahti & Beyerlein, 2000). Many organizations notice that their greatest asset is the knowledge held by their employees and therefore, the needs of leveraging the value of knowledge are also increasing.

Knowledgeable employees are indispensable for organizations as their contributions enhance the organization's performance. According to Wong (2005), organizations are becoming more knowledge-intensive by focusing more on people's minds rather than hands. The shift from industrial society to knowledge society has created workers who are more highly specialized, learning becomes tools for individual development and knowledge being universally accessible (Drucker, 1994). This statement is parallel to Barth (2000), cited from Dalkir (2005), who found that in the year of 2000 only 20 percent of the workers were devoted to industrial work and the rest were knowledge workers. Drucker (2002), further states that the success and survival of every organization will depend on the performance of its knowledge assets. Knowledge assets of an organization are vital for competitive advantages because of the employees' profile that are unique and cannot be imitated or easily duplicated by competitors (Larson & Luthans, 2006).

Knowledge can be obtained from experienced and skilled workers. Therefore, sports organizations would normally hire and retain excellent personnel who possess valuable knowledge, experience and skills. They are subsequently used to train the organization's athletes to help them to compete successfully in international tournaments. The challenge of sports organizations is to ensure that their experienced and skilled workers do not leave for other organizations. In Malaysia, we often learn of sports organizations which face problems in retaining their best coaches who sometimes resign to pursue better job opportunities elsewhere. When experienced staff retire, resign or are terminated from the organization, the critical knowledge and experience they possess will leave with them. Therefore, it is imperative that organizations develop a strategy to prevent critical knowledge loss as employees leave, by keeping track and capturing what knowledge workers have, and by documenting that knowledge and passing it to new employees.

2. Background of Sports Organizations in Malaysia

Malaysia is a Federation that comprises thirteen States of Kedah, Selangor, Penang, Negeri Sembilan, Kelantan, Terengganu, Johor, Melaka, Pahang, Perlis, Perak, Sabah and Sarawak and three Federal States of Kuala Lumpur, Putrajaya and Labuan. Generally sports organizations can be classified into three sectors: public, non-profit or voluntary, and professional or commercial (Hoye, Smith, Westerbeek, Steward, & Nicholdon, 2005).

The development of sports performance in Malaysia is normally undertaken by public organizations, many of which are affiliated with the Olympic Council of Malaysia (National Sports Policy, 2003). The Malaysian Government's role has been confined to those carried out by the Ministry of Youth and Sports, the National Sports Council and the Malaysian Schools Sports Council. The various sports bodies either under the Federal or State Government of Malaysia also collaborate for the development of sports in Malaysia (National Sports Policy, 2003).

As a young nation, sports plays a very special role in Malaysia's nation-building process and the government is wholly committed to building a culture of sports in Malaysia that stretches from the grassroots to the elite (Mohd Najib, 2011). However, the retention of talented employees including coaches, is a challenge for most sports organizations today (Taylor, Doherty, & McGraw, 2008). The same situation happens in Malaysia, where there is a lack of high caliber coaches to coach athletes (Khoo, 2012; Mazlan, 2012).

Consequently, when experienced staffs retire, resign or are terminated from the organization, critical knowledge and experience will also leave with them. Since tacit knowledge must be attached to explicit knowledge for the latter to be processed, codified, stored, understood and retrieved successfully (Hamza, 2009), regardless of whether these knowledge workers resigned or retired, organizations could retain some account of knowledge during their tenure (Bender & Fish, 2000; Walsh & Ungson, 1991).

Hence, there are questions of how the sports organizations manage, retain and preserve the knowledge imparted by their coaches to the athletes for sharing purposes and making it available to new athletes even after the coaches have left the organization. This paper, therefore, attempts to report on the organizational factors that promote knowledge retention activities in these organizations.

3. Literature Review

The importance of knowledge as the source of an organization's competitive advantage has been given attention in several fields. Knowledge is very important in organizations

because if lost, it could weaken an organization's performance. According to Drucker (1993), the only meaningful resource that can lead to the attainment of social and economic results is knowledge. It is a dynamic process that is created in social interactions among individuals and organizations.

Wang (1999) states that knowledge is considered as part of the production resources, which must be transferred, applied, and improved in order to generate creative ideas to a particular problem or challenge. Since the creation and transfer of knowledge have become an important factor within and between organizations (Ichijo & Nonaka, 2007), knowledge management (KM) could be used as a means of reducing the risk of critical knowledge loss in organizations (Hana & Lucie, 2011). KM is a set of activities, initiatives and strategies that companies use to capture, store, and transfer knowledge for organizational improvement (Alavi & Leidner, 2001; Dalkir, 2005; Zack, McKeen, & Singh, 2009).

KM helps organizations to manage knowledge and achieve competitive advantages over their competitors. This is because KM deals with the management of knowledge to improve organizational performance (Dalkir, 2005; Wiig, 1997) and to maintain the continuity of that knowledge in organizations (Lahaie, 2005; Serenke & Bontis, 2004) by creating a common space for individuals to exchange and create knowledge (Alavi & Leidner, 2001; Margaryan, Miligan, & Littlejohn, 2011).

Knowledge retention is one of the major components of KM. Knowledge retention encompasses the fundamental concept that knowledge is an asset and needs to be leveraged and delivered by capturing, adapting and transferring knowledge to others (Dewah, 2012). Managers who want to retain the knowledge in their organizations will find themselves dealing with facts (know-what), cause-and-effect relationships (know-why), skill-based processes (know-how), and interpersonal networks (know-who) in order to make knowledge accessible when required.

4. Research Methodology

4.1 Research Context

In order to explore and examine sports officers' and coaches' experience in retaining knowledge in sports organizations, the qualitative approach was adopted to discover and understand the participants' views on knowledge retention and usage in their organizations. As an outsider to the sports organizations, this approach could be helpful to the researcher, as stressed by Creswell (2009), that a "qualitative research is exploratory and is useful when the researcher does not know the important variables to examine" (p. 18).

The focus population for the interview consisted of sports officers and sports coaches from the State Sports Council (SSC) and State Sports Organizations (SSO) in Malaysia. The participants were identified through purposive sampling in order to acquire their experiences on knowledge retention issues. The purposive sampling allowed for sampling across various locations in the Klang Valley.

4.2 Research Instrument

The interview was selected as the primary method for data collection because of its potential to elicit rich, and detailed description (Bloomberg & Volpe, 2008) and to capture a person's perspective of an experience (Goodenough & Waite, 2012). Therefore, data for this research was collected using a semi-structured interview that was audio-taped, with their consent, which allowed participants to respond openly to the interview questions. The suitability and usefulness of interviews as a method to capture data of that nature has been explained elsewhere (e.g. by Patton, 2002).

Once the data has been collected, it was summarized by a thorough examination of all the data, codification, identification of patterns and themes, and interpretation of the meaning of the themes (Bloomberg & Volpe, 2008). Figure 1 shows a schematic diagram of the data analysis in qualitative research which was adopted.

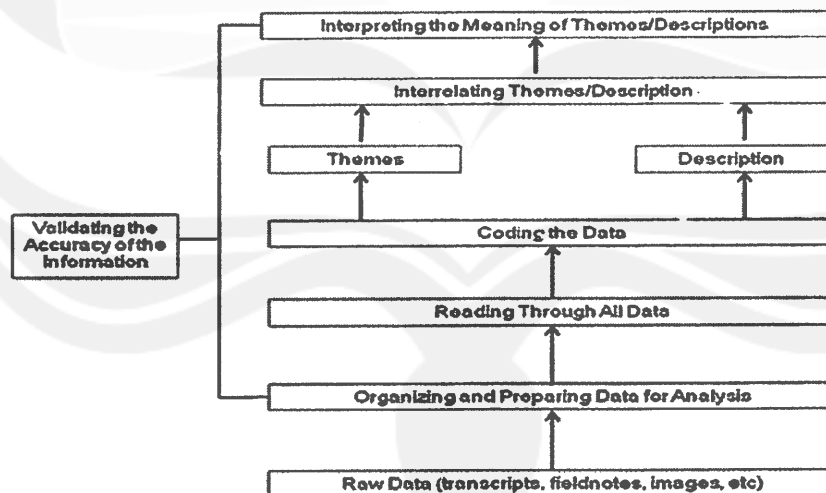


Figure1: Data Analysis in Qualitative Research

(Creswell, 2009, p. 185)

5. What do organizations do in retaining the coaches' knowledge?

Organizational factors are key factors that promote knowledge transfer in organizations. It includes programs that organizations use to improve the retention of knowledge in the organizations. Below is a part of the results from the interview with Malaysian State Sports Council (SSC) on the programs and strategies employed in sports organizations in Malaysia.

5.1 Staff development

Development of skills and professional qualifications are at the core of the organizations' major strategies. The interviews showed that organizations main concern is the *Professionalism* of new coaches during the selection process. This shows that sports organizations put high emphasis on the coaches as a mechanism to develop their athletes. They select coaches who possess remarkable track record and achievements. Below are some comments made by the sports officer to illustrate the point above.

"There are many coaches in Malaysia; therefore it is important to see which level they are.... If the tournament is at the state level and most competitive events, so coaches need to know elements of sports science."

"..Second on technical aspects....s/he must be experienced and [organization] encouraged if s/he is a former athlete [who represented the country], have good achievement records in sports and have academic qualifications."

"Usually we work with associations. This is because an association will know better which coaches are more suitable for the athletes. But this selection should be in accordance with the criteria that we want."

"In one of the criteria that have been documented, each coach needs to submit complete certification as well as report on her/his achievements. Then, we refer for information regarding their performance from their previous employer."

The management also understands that staffing is a central issue, therefore "*Hiring the Right People*" could help them to have knowledgeable experts in their organizations.

"In the early stage we ask him/her to submit a resume and we have a pre- interview. The pre-interview is for coaches who have never been with us and it's within our department before we propose their name to top management for interview. We want to know whether that coach is suitable to work with us or not. If we feel he/she is unsuitable we will discuss it with the association and ask them to find another coach."

"... for example foreign coaches, they come using tourist pass and train athletes. If their performance meets with our expectation then management will proceed with proper appointment letter for them to train athletes."

"The contact normally lasts one to two years. So usually 6 months before the contract ends we ask him to submit an application to renew the contract if she/he is interested to continue working in Malaysia."

"Evaluations are based on the achievements of athletes who trained directly under him/her [coach]. First based on results in all of the tournaments, and second based on mastery of technical aspects [for subjective sports]."

"When talking about technical mastery this is very subjective We asked associations to conduct technical tests for the athletes. Indirectly, an athlete's presentation reflects on the coaches' performance."

In addition, the most efficient way to acquire knowledge is through employees training (Swieringa & Wierdsma, 1992). Training is the best and most effective way of capturing human wisdom (*'Developing People'*).

"...coaches need to have critical thinking, to analyze his/her athletes based on science not instinct."

"For development programs we organize seminars and conventions for coaches in collaboration with State Sports Organizations ... coaches are required to join and attend the programs."

Figure 2 is a schematic diagram of the main results from the interview which were discussed above and incorporate the three components of *staff development of professional background of coaches, hiring suitable people and developing people*.

From the interview, the management is really concern on *Professionalism* of new coaches. Therefore, the professional backgrounds of coaches are based on their academic qualification. The management understands that previous experience as athletes is an important factor for coaches to transfer their skills to athletes. In addition, the length of the coaches' engagement with State Sports Organizations also gave them an opportunity to recommend suitable coaches to the organizations. Besides that, the management is also concern on previous

performance of coaches, therefore by contacting previous employer has become the first engagement process in selecting new coaches.

Consequently, management who oversee the important of coaches in enhance sports performance will *hire the right people* in organizations, such as the ongoing process of sports organization that are very selective and conducting pre-interview with a new coach. For international applications longer engagement trial-and-error process with the sports organizations is one of the possible outcomes to recruit the best coaches in sports organizations. In addition, for contract renewal, each coach is responsible to submit their application to the management. However, for management to extend the contact is based on coach's current performance and various tests to athletes.

In order to enhance knowledge of coaches, sports organizations develop various programs to train people in organizations. Therefore, in order for coaches to develop training method through scientific knowledge, all coaches need to attend seminar and development program when needed throughout their contract in sports organizations.

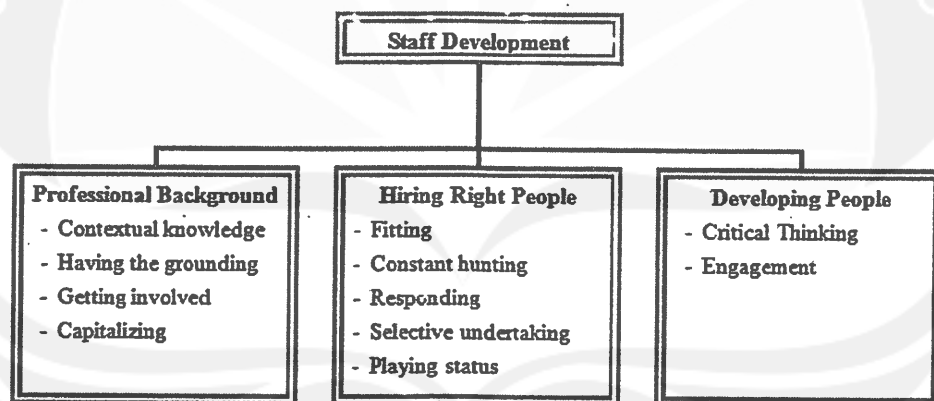


Figure 2: Components of Staff Development

6. Conclusion

Since each organization has its own culture, processes, objectives and goals, it can be expected that the nature of the organization's supportive environment in the organization is vital for retaining knowledge. According to DeLong (2004) two key sections in the human resource area in the organization which are affected by lost knowledge are employee retention and recruitment. He added that in order to nurture organizational knowledge or memory it is important for organizations to have integrated approaches to address retirement, retention and recruiting. The interviews showed that the recruitment and selection process

was handled as expeditiously as possible in order to select the best possible experts. Before coaches were appointed, management ensured that the experts meet necessary criteria. It is one way sports organizations can ensure the knowledge can be stored in the organization.

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392-409.

1. The first step in the process is to identify the problem. This involves gathering information about the situation and understanding the needs of the stakeholders involved.

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**Perceived Values, Customer Satisfaction and Behavioral Intentions of
Choosing Add-On Services of Low Cost Carriers**

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Abstract

The low cost carriers (LCC) are getting popular in the Asia market in recent years. This study aims to understand customers' perceived values, customer satisfaction and behavioral intentions of purchasing add-on services from LCC. The results show that customers' perceived values of using the LCC add-ons, particularly in the emotional dimension, led to their behavioral intentions to the add-ons. Customer satisfaction was influenced positively by perceived values of add-ons, especially by the emotional values and values for money. Moreover, customers' behavioral intentions were affected positively by their satisfaction on the LCC add-on services. The results are hopefully to enhance the understanding of passengers' choices of add-on services, and show practical meanings for the improvements and profits of the LCC industry.

Key words: Low Cost Carriers, Add-on Services, Perceived Values, Customer Satisfaction, Behavioral Intentions

1. Introduction

The development of low cost carriers (LCC) can be dated back for over forty years. The growing is still promising globally in recent years. Southwest Airline in the USA started the low cost strategy and successfully broke through the market during the economic depression in 1971. The different operating model was therefore named LCC since then (Choo and Oum, 2013; Southwest, 2014). Ryanair and easyJet, the two largest Europe LCCs, entered the market in 1985 and 1995 respectively (Ryanair, 2014; EasyJet, 2014). The LCC market expansion in Asia was launched by Air Asia from Malaysia, followed by the companies such as Jetstar Asia Airway and Scoot Airway from Singapore, Peach Aviation and Vanilla Air

from Japan, and t'way Air and Jin Air from Korea, etc. In Taiwan, V air created its own brand LCC since 2014, and Tigerair Taiwan cooperated with Tigerair from Singapore by China Airline from Taiwan.

The market share of LCC increases accordingly. Lin (2013) reported that only 8% of the global airline market was occupied by LCC in 2001, but after ten years the market share increased to 26%. The Asia markets show its potential especially in recent years. The LCC capacity share within Asia-Pacific is 24.5% of seats in 2013. The percentage within Southeast Asia is even higher (57.8%) in 2013 (Sobie, 2014). The growing of LCC in Taiwan is rapid, too. Wang's report (2014), following the statistics by Civil Aeronautics Administration (CAA) in Taiwan, showed that around 260,000 passengers took LCC in 2009, 650,000 in 2010, 910,000 in 2011, and over one million in 2012. The figure had even reached two million three hundred and twenty thousand in 2013.

LCC is generally popular with its low cost. In comparison with the full service carriers (FSCs), the charging scheme of LCC is based on paying separately for each service. The LCCs make the flight journey, usually short haul, as simple as possible, and turn the extra services into additional income (Liu, 2014). Apart from the price of the flight seats, the customers have to pay extras for choosing these add-on services to meet their own needs, such as luggage weights, meals or entertainments on board, etc. By simplifying the services to cut down the cost, the price of LCC tickets is 40% to 60% cheaper than FSCs (Laworn, 2002; Gillen and Morrison, 2003; Kim and Lee, 2011; Escobar-Rodríguez and Carvajal-Trujillo, 2014).

The LCC provides cheaper choice of seats for travelling and seems to attract some customers successfully. However, the customers' views on the add-on services remain to be clarified. Are the customers really willing to spend extra money for the add-on services? What important values can they perceive from purchasing the add-on services? Are they satisfied with the extra charges and the process of buying the add-on services? Will they keep paying for the add-on services in their future trips while taking LCC? How the factors above may interact with each other? Current research seldom focused on add-on services of LCC. Thus, the purpose of this study is to understand customers' perceived values, customer satisfaction and behavioral intentions of purchasing add-on services from low cost carriers.

2. Literature Review

2.1 Perceived Value

Perceived value can be regarded as the assessment of the overall benefits on the products or services the customers make. The evaluation is based on the perceived quality of procedures

and the outcomes obtained from the relative price or cost for services (Zeithaml, 1988; Heskett, Sasser and Schlesinger, 1997; Tam, 2004; Chen and Chen, 2010). In other words, perceived value is the balanced trade-off between 'receiving' and 'giving away' by the customers (Zeithaml, 1988; Doods, Monroe, and Grewal, 1991; Tam, 2004; Hsu and Lin, 2015).

Conceptually, customers' values are perceived between their gains and losses. However, many empirical studies have measured perceived values by overall evaluations rather than by comparing the differences. Scales with several constructs have been developed. The perceived value scale (PERVAL) proposed by Sweeney and Soutar, (2001) has drawn more attention. The four dimensions of PERVAL are emotional values, social values, quality/performance (functional) values, and price/value for money (functional) values. Studies applying PERVAL or similar dimensions and questions to measure perceived values can be found in tourism and hospitality fields (Sánchez, Callarisa, Rodríguez, and Moliner, 2006; Lee, Yoon, and Lee, 2007; Chang, 2008; Eid and El-Gohary, 2015), and other cases of purchasing decisions (Walsh, Shiu, and Hassan, 2014; Hsu and Lin, 2015). Instead, utilitarian values and hedonic values are used for measuring perceived values (Ha and Jang, 2010; Hyun, Kim, and Lee, 2011; Chang and Tseng, 2013). Similarities can be observed between utilitarian and functional values. Likewise, hedonic values express some of the customer emotions.

2.2 Behavioral Intention

Behavioral intention is viewed as the possibilities of behavior confirmation. It is an important indication of customers' future behavior and a sign of whether the customers would keep receiving services from one company or transfer to another (Zeithami, Berry, and Parasuraman, 1996; Lai and Chen, 2011). Customers' behavioral intentions reflect the service providers' abilities. The main behavioral intentions include recommending the company to others, spreading positive word-of-mouth, willing to be a partner of the company, and loyalty to the company (Reichheld and Sasser, 1990; Zeithami et al., 1996; Bendeall-Lyon and Power, 2004; Liang and Zhang, 2011; Chang and Polonsky, 2012).

Customers' behavioral intentions may be caused by their perceived values. Hyun, Kim, and Lee (2011) conducted a research in chain restaurants to investigate the relationship among customers' emotions induced by advertisements, their perceived values and behavioral intentions. The results indicated that perceived values influenced behavioral intentions positively. Lai and Chen (2011) studied passengers' behavioral intentions after taking public transfer services. The relationship among service quality, perceived values, satisfaction, participation, and behavioral intentions was explored. Passengers' behavioral intentions in the

future was positively impacted by their perceived values. Considering the focal interests on the LCC add-on services of this study, the first research hypothesis is proposed as follows.

H₁: Customers' perceived values of purchasing LCC add-on services will positively influence their behavioral intentions to add-ons.

2.3 Customer Satisfaction

Customer satisfaction can be defined as emotional reactions to the differences of services between previous expectations and perceived performances after consumption. Therefore, satisfaction raises relatively when the customers feel better than they anticipate. On the contrary, dissatisfaction presents when expected performances are not reached (Oliver, 1980; Rust and Oliver, 1994; Tam, 2004; Chen and Chen, 2010; Saleem and Raja, 2014; Kärnä, 2004). Customer satisfaction can also be seen as the overall subjective judgement of products or services after purchase. It can be measured by the performance of specific attributes (Gunderson, Heide, and Olesson, 1996; Su, 2004).

Previous studies have indicated the positive influence of perceived values on customer satisfaction. The higher values the customers perceive, the more satisfaction they may have. To understand customers' behavior of purchasing travel products via TV shopping, Chen and Tsai (2008) examined the relationship among perceived values, involvement, customer satisfaction, and loyalty. The results supported the positive influence of perceived values on customer satisfaction. Hsu and Lin (2015) explored the mobile application buying behavior by the amended expectation confirmation model, in which the effects of confirmation on perceived values and satisfaction of paid mobile APPs were analyzed. For actual and potential consumers, their satisfaction was affected significantly by some perceived values. For the paid services of LCCs, the second hypothesis is hence listed below.

H₂: Perceived values of customers purchasing LCC add-on services will positively influence customer satisfaction of add-ons.

Prayag, Hosany, and Odeh (2013) pointed out that the relationship between satisfaction and behavioral intentions can be applied in tourism and marketing research. They examined the impact of emotional experiences on satisfaction and behavioral intentions to visit the historical and cultural site of Petra in Jordan. When the tourists felt satisfied with their visits, they would revisit or recommend to others. On the other hand, dissatisfied tourists could lead them not to revisit or spread negative word-of-mouth. Ha and Jang (2010) proposed a model among perceived values, familiarity, satisfaction, and behavioral intentions to be tested for Korean restaurant customers in the US. The findings supported the influence of customers' satisfaction on their behavioral intentions. For the professional football spectators, their

satisfaction also influenced on behavioral intentions (Theodorakis, Alexandris, Tsigilis, and Karvounis, (2013). The influence was still supported in the study of LCC customers (Kim and Lee, 2011). Therefore, it may be logical to make the third hypothesis below.

H₃: Customer satisfaction of LCC add-on services will positively influence behavioral intentions to add-ons.

The research framework is shown as follows (Fig. 1).

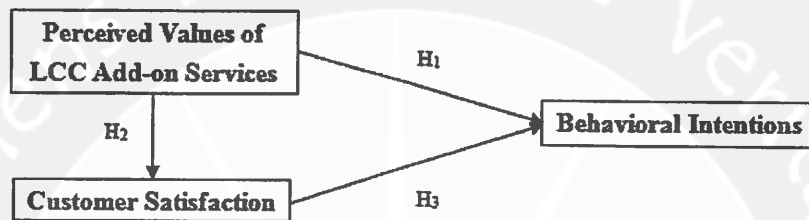


Fig. 1: The research framework

3. Method

3.1 Participants and Procedures

The research population was comprised of the customers who had the experiences of taking LCC flights and also purchasing the add-on services of LCC. Convenience sampling was used. 'Google form' was used for its function of creating free online questionnaires. The web link of the research questionnaire was delivered via travel-related fans pages on Facebook, and discussion boards like PTT (popular community website in Taiwan) to reach the population. The questionnaire distributing dates were from 26 April to 10 May 2015. A total of 230 questionnaires were received. However, only 143 people among all the respondents fit in the requirement of the research population (with experiences on taking LCC and also buying add-on services). After deleting one invalid case, the total number of valid questionnaires was 142. The valid responding rate was 62%.

3.2 Materials

Data were collected by using a self-administered questionnaire as an instrument. There were five parts included in the questionnaire: the respondents' previous experience of taking LCC and purchasing the add-on services, customers' perceived values of the LCC add-on services, customers' satisfaction after using the add-on services, their behavioral intentions to buy the LCC add-on services, and their personal profile. The perceived values of the LCC add-on services were measured by the scale developed by Hsu and Lin (2015). The scale included

four dimensions: Performance, Value for money, Emotional, and Social, which was based on the PERVAL proposed by Sweeney and Soutar (2001). There were 16 items adapted in this scale. For measuring customer satisfaction about the LCC add-ons, 3 items from Ha and Jang (2010) and 3 items from Theodorakis, Alexandris, Tsigilis, and Karvounis (2013) were adapted. Moreover, 3 questions from Ha and Jang (2010) were revised for measuring customers' behavioral intentions to buy the LCC add-on services. All measures in the three scales used 5-point Likert-type response format, in which five points meant strongly agree, one point meant strongly disagree.

4. Results

4.1 Descriptive Analyses

Some of the major findings are listed as follow. The descriptive statistics of the respondents' profiles are shown in Table 1. Most of the respondents were female (71.8%), single (86.6%), university graduated (70.4%). The age group of the sample was mainly 20 to 29 (55.6%), followed by 30 to 39 (36.6%). most of the respondents' monthly income was between 30,000 to 39,999 TWD (33.8%). Service industry (22.5%) and student (18.3%) were the basic types of occupation. Most respondents lived in Northern region of Taiwan (78.9%).

Table 1 also displays the samples' experiences of taking LCCs and purchasing LCC add-on services. Nearly two third (61.3%) of the respondents had taken LCCs for less than three times. However, 58.5% of them paid for add-ons for their recent LCC flights in less than six months. Japan was the most visited destination (72.5%) for the respondents' previous LCC experiences with purchasing add-on services. Peach Aviation (21.8%) and Vanilla Air (21.8%) were the LCCs taken by more respondents for their last trips with add-on buying. The questionnaire web link posted firstly on some Facebook fans pages related to Japan trips and received quick responses was the possible reason for the high percentages. Among different add-ons, most customer paid for extra luggage weight (56.2%) in their previous LCC trips.

Table 2 shows the descriptive statistics and Cronbach's α values of the scales and dimensions. The means of the three scales on five-point basis were: 3.355 for perceived values, 3.721 for customer satisfaction, and 3.678 for behavioral intentions. The highest mean of the four dimensions of perceived values was performance (3.645), followed by emotional (3.554), value for money (3.502) and social values (2.443). The respondents agreed most with the acceptable, consistent, and stable quality performance of the LCC add-on services. However, they considered the social values less important while buying add-ons.

The three main scales of the research demonstrate high reliability (Table 2). The Cronbach's alphas for the scales of perceived values, customer satisfaction, and behavioral intentions are 0.958, 0.958, and 0.880, respectively. The internal consistency of each scale is reached. The range of the alphas of the four dimensions of perceived values is from 0.913 to 0.930. The reliability is also satisfying.

4.2 Hypotheses Testing

To test the research hypotheses, linear regression was used. Table 3 shows that whether the overall perceived values of LCC add-on services might influence LCC customers' behavioral intentions. The simple linear model was acceptable ($F=134.487$, $p<0.001$). Nearly half of the variance of behavioral intentions was explained by perceived values ($R^2=0.490$). Customers' perceived values could positively influence their behavioral intentions ($\beta=0.700$, $t=11.597$, $p<0.001$). Therefore, customers with higher perceived value of the LCC add-ons presented higher behavioral intentions to purchase add-ons in the future. The first research hypothesis (H_1) was supported.

Table 1: Descriptive statistics of the respondents' profiles and their experience of taking LCCs and purchasing LCC add-on services ($n=142$)

Variables	Items	Frequency	%	Variables	Items	Frequency	%
Gender	Male	40	28.2	How many times had you taken LCC (including last time)	Under or 3 times	87	61.3
	Female	102	71.8		4~6 times	39	27.5
Marital status	Single	123	86.6	When did you bought add-on services last time	7~9 times	6	4.2
	Married	19	13.4		10~12 times	6	4.2
Highest educational level	Senior high (or below)	5	3.6	Over 13 times	Over 13 times	4	2.8
	College	6	4.2		Less than six months	83	58.5
	University	100	70.4		Six months to less a year	29	20.4
Age	Graduate school	28	19.7	Previous destination by LCC with add-on buying	One to less two years	22	15.5
	Under 20	3	2.1		Two to less three years	6	4.2
	20~29	79	55.6		Over three years	2	1.4
	30~39	52	36.6		Japan	103	72.5
	40~49	7	4.9		Singapore	10	7.0
Personal monthly income (TWD)	50~59	1	0.7	The LCC you took with add-on buying last time	Thailand	8	5.6
	Under 20,000	21	14.8		Indonesia	5	3.5
	20,000~29,999	23	16.2		Malaysia	5	3.5
	30,000~39,999	48	33.8		Oceania	4	2.8
	40,000~49,999	21	14.8		Korea	3	2.1
	50,000~59,999	13	9.2		China	2	1.4
	60,000~69,999	5	3.5		Philippines	1	0.7
Occupation	70,000~79,999	2	1.4	Add-ons you bought last time	Americas	1	0.7
	80,000 or above	9	6.3		Peach Aviation	31	21.8
	Service industry	32	22.5		Vanilla A's	31	21.8
	Student	26	18.3		Scot Airways	26	18.3
	Industrial/Manufacturing	21	14.8		Jetstar Asia Airway	24	16.9
	Public servant/Teacher	21	14.8		Others	11	7.7
	Military service/Police				Air Asia	10	7.2
	Business/Trade	18	12.7		V Air	7	4.9
	Self employed	13	9.2		Tigerair Taiwan	1	0.7
Region of residence in Taiwan	Others	9	6.3	Luggage weight	Others	1	0.7
	Housekeeping	2	1.4		Meal	50	22.1
	Northern region	112	78.9		Sent choice	47	20.8
	Central region	11	7.7		Others	2	0.9
Southern region	Southern region	16	11.3				
	Others	3	2.1				

Table 2: Descriptive statistics and Cronbach's α values of the scales and dimensions ($n=142$)

Scales and dimensions	Mean*	Standard deviation	Cronbach's α	Standardized Cronbach's α
Perceived values	3.355	0.744	0.958	0.959
Performance	3.645	0.787	0.916	0.917
Value for money	3.502	0.880	0.930	0.930
Emotional	3.554	0.848	0.926	0.926
Social	2.443	0.953	0.913	0.913
Customer satisfaction	3.721	0.885	0.958	0.958
Behavioral intentions	3.678	0.912	0.880	0.879

*: 1 indicates 'strongly disagree', 5 indicates 'strongly agree'

Table 3: Simple linear regression for overall perceived values of LCC add-on services to customers' behavioral intentions ($n=142$)

Independent variable	B	β	t	R	R^2	Adjusted R^2	F
(Linear model)				0.700	0.490	0.486	134.487***
(Constant)	2.400	–	3.148**				
Perceived values	0.161	0.700	11.597***				

** $p<0.01$, *** $p<0.001$

The influences of customers' perceived values of LCC add-on services on their behavioral intentions to add-ons can be understood further by examining individual effects of the four value dimensions. The results of multiple regression are presented in Table 4. The whole linear model of four dimensions of perceived values influencing behavioral intentions was sustained ($F=35.620$, $p<0.001$). Among all the dimensions, perceived emotional value was the crucial reason for explicating customers' intentions to LCC add-ons ($\beta=0.458$, $t=3.955$, $p<0.001$). The more positive emotions of using add-ons the customers had, such as relaxed, good, enjoyable, etc., the higher possibilities the customers would buy add-on services again, spread positive things about the services, or recommend to others to buy LCC add-ons.

Table 4: Multiple linear regression for four dimensions of perceived values of LCC add-on services to behavioral intentions ($n=142$)

Independent variables	B	β	t	R	R^2	Adjusted R^2	F
(Linear model)				0.714	0.510	0.495	35.620***
(Constant)	2.443	–	3.010**				
Performance	0.056	0.062	0.532				
Value for money	0.159	0.205	1.662				
Emotional	0.296	0.458	3.955***				
Social	0.040	0.041	0.582				

** $p<0.01$, *** $p<0.001$

Hypothesis two (H_2) was also supported. Table 5 shows that the simple linear model was sustained ($F=346.539$, $p<0.001$). High percentage of the total variance of customer satisfaction was explained by perceived values ($R^2=0.712$). Customers' perceived values of LCC add-on services could positively influence customer satisfaction of add-ons ($\beta=0.844$, $t=18.616$, $p<0.001$). The higher perceived values of the LCC add-ons the customers had, the better satisfaction the customers would feel.

Table 5: Simple linear regression for overall perceived values of LCC add-on services to customer satisfaction ($n=142$)

Independent variable	B	β	t	R	R^2	Adjusted R^2	F
(Linear model)				0.844	0.712	0.710	346.539***
(Constant)	2.128	–	1.915				
Perceived values	0.376	0.844	18.616***				

*** $p<0.001$

The study explored further the effects of the perceived value dimensions on customer satisfaction by multiple regression (Table 6). The linear model was found reasonable ($F=115.389$, $p<0.001$). Customers' emotional values of using LCC add-on services and feelings of value for money could contribute significantly to their satisfaction of purchasing add-ons in previous LCC trips. Emotional dimension of perceived values played an important role to affect customer satisfaction ($\beta=0.661$, $t=8.352$ $p<0.001$), as well as to affect behavioral intentions as reported above. Moreover, customer satisfaction also linked directly to value for money dimension ($\beta=0.219$, $t=2.603$ $p<0.01$). When the customers felt that the add-ons were reasonably priced, economical, good quality to the price, and value for money, stronger customer satisfaction of add-on services would be found.

Table 6: Multiple linear regression for four dimensions of perceived values of LCC add-on services to customer satisfaction ($n=142$)

Independent variables	B	β	t	R	R^2	Adjusted R^2	F
(Linear model)				0.878	0.771	0.764	115.389***
(Constant)	2.105	–	1.956				
Performance	0.081	0.046	0.577				
Value for money	0.331	0.219	2.603**				
Emotional	0.828	0.661	8.352***				
Social	-0.039	-0.021	-0.435				

** $p<0.01$, *** $p<0.001$

Table 7 demonstrates the results for outlining the effect of customer satisfaction on behavioral intentions. The linear model was found acceptable ($F=162.166$, $p<0.001$). Customer satisfaction could explain 53.7% of the total variance of behavioral intentions to the LCC add-on services ($R^2=0.537$). When the customers felt more satisfied with the LCC add-ons, stronger behavioral intentions to the add-ons would be found ($\beta=0.733$, $t=12.734$ $p<0.001$). Lastly, hypothesis three (H_3) was still supported.

Table 7: Simple linear regression for customer satisfaction to customers' behavioral intentions
($n=142$)

Independent variable	B	β	t	R	R ²	Adjusted R ²	F
(Linear model)				0.733	0.537	0.533	162.166***
(Constant)	2.605	—	3.828***				
Customer satisfaction	0.378	0.733	12.734***				

*** $p < 0.001$

5. Conclusion

In recent years LCC has become a new trend in airline industry. In the past, literature of the LCCs has researched about secondary airports application, customer loyalty towards LCC, or ticket price, etc. Yet, there are still not much research focused on add-on services. This study would like to understand the relationship between customers' perceived values, customer satisfaction and behavioral intentions of buying LCC add-on services. Therefore, the study proposed hypotheses, utilized questionnaire for data collection and further analyzed the results. Three research hypotheses were all supported. Customer perceived values of add-on services had positive influences on their behavioral intentions. Among the four dimensions of perceived values of LCC add-ons (performance, value for money, emotional and social), only emotional values had significant influence on behavioral intentions. Customer satisfaction of LCC add-ons was affected positively by perceived values, and induced positive behavior intentions towards add-on services. Emotional dimension and value for money were discovered to be decisive perceived values leading to customer satisfaction.

The emotional dimension of perceived values had shown positive influence on both customer satisfaction and behavioral intentions to LCC add-ons. It is an academically important finding and worth to be explored more. Even though the add-on services are more functional or utilitarian, as long as the customers are relaxed, enjoyable, and feeling good, they can still feel satisfied with add-on services, and are willing to buy add-on services again, spread positive things about the services, or recommend to others to buy LCC add-ons. Future research may discuss the explaining power of emotional values in more details. Practically, discovering emotional values in functional add-on services and trying to deliver them to the customers could be a useful strategy to enhance satisfaction and encourage future purchase.

Although the LCC customers are often emotionally affected, they are still realistic since the customers who choose LCC flights for saving travel costs have to pay extra for the add-on services. Consequently, value for money accounts for their satisfaction greatly. For those who need to carry more luggage, choose better seats, eat on flight, or even arrange earlier check-in or book for arrival transportation package, etc., they would not mind paying more for the

essential services if they can recognize the inevitability of the extra costs and feel them worth paying. By providing reasonable pricing scheme and economical and good-quality add-on services, the LCC airlines can keep their customers satisfied and benefit from add-on selling.

This study is not without any limitation. The sample was required to have experiences of buying LCC add-ons. It filtered out nearly forty percent of the respondents who actually accessed to the online questionnaire link. It caused a smaller sample size during inadequate sampling period before reporting the preliminary results (in this conference). Since the study is still undergoing, the researchers are expecting more valid sample to filling this online questionnaire.

It was difficult to judge whether the sample distribution reflected the actual LCC passenger profiles and experiences. Online access is prone to getting younger generation to fill in the questionnaires. Biased combination with higher percentages of younger, single, lower income, or student sample might be a collateral effect. However, it is also likely that LCCs attract budget-oriented travelers who are generally younger. The research questionnaire link was initially posted on Japan related Facebook travel website for possibly more responses. It may also affect the results, such as higher percentages of the respondents' previous destinations were Japan, and more Taiwanese passengers bought add-on services on Japan based LCC flights. To balance the sample source, further research could try to post the questionnaire link on different types of travel websites.

Paying add-on services is distinctive for the LCCs in comparison with the FSCs. Turning unfamiliar and reluctant customers into satisfactory status in using paid add-ons takes time and efforts. LCC airline companies should notice the importance of emotional values from the customers' view. Besides, LCCs ought to keep the 'value for money' perceptions of add-ons by maintaining reasonable quality of existing add-ons and developing more different add-on services. Add-ons are not just auxiliaries. Innovative ideas can be created for adding the values of add-ons to serve for customers' needs.

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**Drivers of Continuance Intention towards Cloud Computing Service: The
Dedication and Constraint-Based Mechanism on Google Apps for Work
(GAW)**

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ABSTRACT

Continuance Intention towards a product or service is pivotal for company's survival especially those who prerequisite monthly or annual subscriptions. In this high competitive business, continuance intention become critical success factor for any company. It is important to understand some factors influencing continuance intention to use a product or service in terms of whether they are attracted-to or locked-in using a product.

Replicated from prior research by Zhou *et al.* (2012) about the dedication-constraint mechanism, this study aims to examine factors (utilitarian value, hedonic value, personalization and learning that influence their satisfaction, affective commitment and calculative commitment) which is more salient between the dedication-based mechanism or the constraint-based mechanism that influence continuance intention in using Google Apps for Business (GAB) which renamed as Google Apps for Work (GAW) since 2014.

This research examined 11 hypotheses using Structural Equation Model. The sample was 224 Google Apps for Work users taken from registered users at Matrix Connexion Sdn. Bhd, Malaysia. This findings shows that the dedication-based mechanism is more salient than constraint-based mechanism. Utilitarian value and Hedonic value are all useful in enabling satisfaction and affective commitment. Meanwhile, calculative commitment that has been formed by personalization and learning have no significant effect on continuance intention in using GAW.

Keywords: Google Apps for Work, the dedication-based mechanism, the constraint-based mechanism, continuance intention

I. INTRODUCTION

The overwhelming of registered users for Google Apps hit more than 425 million users worldwide subscribed for the free version. In 2013, Google officially announced to terminate

the free version of Google Apps which kept around 5 million businesses made the move to Google Apps for Business, the premium version of Google Apps, to help employees work better together and be more productive, wherever and whenever they work. Continuing its successful history, in 2014 Google Apps for Business was officially renamed to Google Apps for Work. The rebranding of Google Apps for Business was meant to create a new way of doing work by empowering people into “enterprise” business (Google, 2014).

In order to cater this huge number of Google Apps users, Google embraces Google Authorized Reseller (GAR) as extension hand of Google to cater greater market expansion in helping SMB enterprises shifting to Google Apps (Google, 2012).

Besides the strong competitive nuance among its GAR, one factor that affect the sustainability of the company is in customer basis. Since Google Apps is based on subscription system which charged their user annually, continuous customer is one of the critical success for the company, failure to retain existing customer would seriously jeopardize the viability of Google Apps in the future. Moreover, it is widely believe that retaining customer is more cost-effective than acquiring new one (Thompson, 2005). The objective of this research is to identify factors that affect customer continuance intention in using Google Apps for Work.

II. LITERATURE REVIEW

2.1. Cloud Computing

Ried *et al.* (2010) summarized that cloud computing is a standardized IT capability (services, software or infrastructure) which delivered via internet technologies in a pay-per-use, self-service way.

The emergence of cloud computing into business is because of the pressure on IT to save money. Williams (2010) stated that cloud computing proposed some benefits that affect the company in positive ways, which are: *financial benefit*, cloud computing business model can be purchased on a pay-per-use basis, it can reduce the overhead by offloading the problems of procuring, installing, managing and maintaining hardware. *Technological benefit*, Organization can quickly provide new employees with user accounts for the cloud service in every device they are willing to access it. Since it is web-based application, it doesn't need specific device. All the service can be accessed on any device that support web-browser. *Operational and Features benefit*, cloud computing frees organization from common IT administrative tasks by using the appropriate cloud computing services such as buying, installing, supporting and updating desktop business software on specific PCs, tracking hardware and software assets. *Environmental benefit*, according to Viviane Reading, EU Commissioner for Information Society and Media said that businesses in Europe were about

to replace only 20% of all business trips by video conferencing, it could save more than 22 million tons of CO₂ per year (Williams, 2010).

2.2. Google Apps for Work

Google Apps is a web application suite. It includes communication, collaboration and productivity applications. Google introduces Google Apps, that covers applications for word processing (Docs), spreadsheet, presentations, scheduling (Calendar), e-mail (Gmail), communication (Gtalk and Video), which offer better email performance with 25GB drive storage, unlimited users, customer support 24/7 and many more. It is the new alternative to Microsoft Office suite programs designed favorably for companies in all size.

2.3. Technology Acceptance Model (TAM)

First introduced by Davis (1989), the TAM is a theoretical extension of the theory of reasoned action (TRA) that been used to better explain user's acceptance. TAM explained that attitudes towards using a system determine behavioral intention, which in turn lead to actual system use. As explained also in theory of planned behavior (TPB), behavioral attitude affect behavior intention, which in turn affect the actual behavior. Attitude refers to the degree of a person's favourable or unfavourable evaluation or appraisal of the behavior in question. Individuals form positive attitude towards GAW, they will have a stronger intention towards adopting it, and thus they are more likely to use it.

2.4. Continuance Intention

A new stream of research shows that post adoption behavior or user's continuance intentions are mainly driven by the perceived fit between the IT application and the user's needs. Shih and Fang (2004) ascertained that sustaining and increasing post adoption use is more important than the initial adoption. This post adoption behavior includes repurchase, repeated usage or replacement with upgraded products after the initial adoption.

User continuance behavior with new technology is based on two streams: satisfaction and commitment. Garbarino and Johnson (1999) said that satisfaction is an overall evaluation based on the total experience of a service over time. Similar to satisfaction, commitment is recognized as an essential ingredient for successful long term relationship. Zhou *et al.* (2012) added that commitment is defined as psychological state that compels an individual towards a course of action. Commitment conceptually differs from satisfaction and is suggested as a better predictor of behavioral intention than satisfaction. Lee (2010) stated that the higher the satisfaction, the higher their commitment.

Odekerken-Schröder and Bloemer (2000) distinguished two types of motivation that precede the commitment construct: constraints and dedication. According to the relationship marketing literature, users are motivated to maintain relationship with a service provider either because they really want to or because they believe they have no other option. Zhou *et al.* (2012) postulated that cloud computing service continuance intention is determined by two distinctive yet interrelated mechanism: affective commitment as the manifestation of the dedication mechanism and calculative commitment as the manifestation of the constraint mechanism.

Li *et al.* (2006) explained that affective commitment refers to the psychological state of a user demonstrating an affective and emotional attachment to the service. Zhou *et al.* (2012) identified that utilitarian value and hedonic value as perceived value that affects affective commitment. Hirschman and Holbrook (1982) described consumers as either “problem solver” or “fun, fantasy, arousal, sensory stimulation, and enjoyment” seeker. This dichotomy has been represented in consumer behavior studies by the themes of consumption behavior “as work” versus the more enjoyable aspects of consumption behavior “as fun” (Ryu *et al.*, 2010).

Kim and Son (2009) proposed that loyalty is primarily explained by two antecedents that represent benefit which is perceived usefulness and satisfaction. It is because (1) Customer considered the current value of the service (perceived benefit) as a cue from which to infer the future value of the service. (2) Consumer is likely to favor long term relationship with the service in anticipating future value. It means that perceived usefulness is the most important determinant of users’ adoption intention.

Based on economical perspective emphasized on costs and benefits, the constraints is mainly stressing to keep a relationship intact. It will create “locked in” situation or forces that favor relationship stability as opposed to relationship quality by making termination of a relationship more economically, socially, personally, or psychologically costly.

The constraint mechanism of commitment is determined by the level of service-specific investment which is personalization and learning. Personalization refers to the extent to which a system has been modified by a user to suit his or her own needs (Zhou, 2012). Meanwhile, learning refers to the amount of time and effort that has been spent by a user to learn the routines, procedures, and features on particular services.

III. RESULT AND DISCUSSION

There are 224 respondents gathered from Google Apps Reseller based in Kuala Lumpur, Matrix Connexion Sdn Bhd. Sample is chosen using convenience sampling from Matrix's customer database. Google Form Questionnaire are sent to 60 Head of IT in companies from Matrix's customer base using Mailchimp, email campaign software. Further, the head of IT from each companies will disseminate the questionnaire to all its peers, colleagues within the company. The data is analyzed using Structural Equation Modeling (SEM) technique via LISREL to examine the measurement model and structural model in sequence. SEM is used to test 'complex' relationships between observed (measured) and unobserved (latent) variables and also relationships between two or more latent variables (Anglim, 2007).

Respondents consist of 166 men and 58 women. Thus, Age of respondents range from less than 21 years old to more than 50 years old from various kind of company industry and occupation such as company employees, engineers, businessman, teaching staff etc.

3.1. Research Findings

The proposed model in this research is evaluated using six fit indices which are the comparative fit index (CFI), the non-normed fit index (NNFI), the root mean square error of approximation (RMSEA), the standardized root mean square residual (SRMR), the goodness-of-fit index (GFI), and the adjusted goodness of fit (AGFI). For each index, an acceptable level of fit is indicated as follows: CFI > 0.95; NNFI > 0.95; RMSEA < 0.08; SRMR < 0.08; GFI > 0.90, and AGFI > 0.80 (Hu and Bentler, 1999).

The measurement model includes 8 factors with their 24 corresponding indicators factors are specified to have a reasonable degree of measurement errors. In particular, the reliability of each item meets its satisfactory as shown in Table 1. below. The reliability of the scale measures for composite reliability ≥ 0.70 and average variance ≥ 0.5 , it passed the recommended values by significant amounts.

Table 1. Measurement Model using CFA

Latent Variable	Indicator	λ	Θ	t-value
Utilitarian value CR = 0.80 AVE= 0.57	UT1	0.69	0.51	10.56
	UT2	0.96	0.32	13.84
	UT3	0.74	0.54	11.22
Hedonic Value CR = 0.89 AVE = 0.74	HED1	0.91	0.32	15.20
	HED2	0.93	0.26	15.83
	HED3	0.88	0.29	15.17
Personalization CR = 0.83 AVE = 0.61	PER1	0.71	0.50	11.17
	PER2	0.91	0.21	14.68
	PER3	0.80	0.49	12.00
Learning CR = 0.82 AVE = 0.60	LRN1	0.69	0.53	10.76
	LRN2	0.92	0.18	15.02
	LRN3	0.79	0.49	11.92
Satisfaction CR = 0.79 AVE = 0.62	SATIS1	0.94	0.34	13.03
	SATIS2	0.76	0.62	10.60
	SATIS3	0.64	0.45	10.40
Affective Commitment CR = 0.77 AVE = 0.54	AFF1	0.60	0.68	8.71
	AFF2	0.96	0.23	13.87
	AFF3	0.81	0.69	11.03
Calculative Commitment CR= 0.74 AVE= 0.51	CAL1	0.88	0.54	10.68
	CAL2	0.80	0.56	10.25
	CAL3	0.56	0.58	8.31
Continuance Intention CR = 0.73 AVE = 0.51	CNT1	0.52	0.73	7.34
	CNT2	0.96	0.29	12.08
	CNT3	0.87	0.91	9.53

Based on the data analysis, $X^2 / df = 2.13$, GFI= 0.84, AGFI= 0.80, NFI= 0.78, NNFI= 0.84, CFI= 0.86 and RMSEA= 0.071. Although some criteria categorized as marginal, it falls into acceptable ranges.

Table 2. Overall Fits of the Measurement Model and Structural Model

Fit Index	Measurement Model	Structural Model	Recommended Criteria
X^2 / df	1.66	2.13	< 3.0
GFI	0.88	0.84	> 0.80
AGFI	0.84	0.80	> 0.80
NFI	0.84	0.78	> 0.90
NNFI	0.90	0.84	> 0.90
CFI	0.92	0.86	> 0.90
RMSEA	0.054	0.071	< 0.08

Based on the data analysis using LISREL 8.8 for Windows regarding hypothesis testing in this research, it summarizes as follow:

Table 3. Estimation for Regression Weight

			Estimates	T-values	Conclusion
Util	————→	Satis	0.16	1.99	Supported
Hedon	-----→	Satis	0.05	0.69	Not Supported
Util	————→	Affect	0.32	3.91	Supported
Hedon	————→	Affect	0.24	3.23	Supported
Satis	————→	Affect	0.23	2.90	Supported
Satis	-----→	Continue	0.02	0.19	Not Supported
Affect	————→	Continue	0.24	1.94	Supported
Person	-----→	Calcul	0.12	1.46	Not Supported
Learn	-----→	Calcul	0.09	1.13	Not Supported
Calcul	-----→	Affect	0.04	0.51	Not Supported
Calcul	-----→	Continue	0.19	1.36	Not Supported

3.2. Discussion

Figure 1 below illustrates the relationship among research variables and research findings. Some hypotheses may not support the previous research findings as explained in some reason follow.

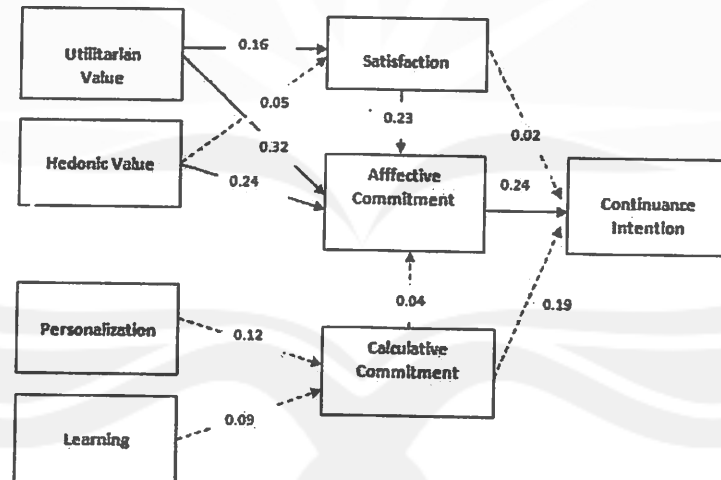


Figure 1. Structural Model Assesment

First, the dedication-based mechanism is more dominant rather than constraint-based mechanism in predicting GAW continuance intention. In dedication-based mechanism, continuance intention is strongly influenced by affective commitment rather than satisfaction. This means that affective commitment is stronger as factor that drive GAW user to continue

using GAW. Therefore, satisfaction doesn't have significant influence on continuance intention directly unless it is mediated by affective commitment.

Gustafsson *et al.* (2005) differed satisfaction and affective commitment in some different aspect. (1) satisfaction is "backward looking" while commitment is more "forward looking". (2) commitment has various means by which to create a level of "stickiness" to keep customers loyal to a target service provide, even when the level of satisfaction may be low. (3) while satisfaction tends to be transitory and to reflect a response to day-to-day events and changing environments, commitment is more enduring over time and stable in the event of short term changes in service performance and other situational influences. Here, commitment is often seen as an outcome of satisfaction.

In terms of their antecedents, utilitarian value and hedonic value are both important factors influencing satisfaction and affective commitment, utilitarian value provide a substantial amount of influential power on satisfaction and affective commitment. Even though hedonic value doesn't significantly influence satisfaction, but it has significant influence on user's affective commitment. This means utilitarian value is stronger factors that predicting user to keep continue using GAW rather than hedonic value. Assael (2001) differs between utilitarian and hedonic needs. He explained that utilitarian needs seek to achieve some practical benefit.

Second, in the constraint-based mechanism, personalization, learning and calculative have no influence on continuance intention towards GAW. It indicates that constraint mechanism do not affect user decision to continue using GAW. The dedication-based mechanism statistically proved to be more dominant on continuance intention rather than the constraint-based mechanism. It means that people who continue using GAW are those who emotionally attach with the services provided by GAW not because there's a force in using GAW. The first reason, the type of research subject studied. Previous study took SVW (Second Virtual World) service for their study. It has different characteristic and benefit than GAW. Choi *et al.* (2011) said that different services induce substantially different user behavior. The second reason, perhaps, referring to the demographic factors of respondents who fill out the questionnaires. Most of the respondents are 6-12 months in GAW, they are currently using GAW, they categorized as early adopter. Choi *et al.* (2011) stated that continuers share similar patterns with early adopters in regards that they favorably view it as innovative changes and new technology. The third reason, perhaps, there are extrinsic and intrinsic factor outside the model that have important role in influencing continuance intention through dedication-constraint mechanism.

IV. CONCLUSION

This research aims to examine the role of constraints and dedication based mechanism as drivers of continuance intention in using Google Apps for Work. Utilitarian value, hedonic value, personalization and learning are external factors that influence internal factor which is satisfaction, affective commitment and calculative commitment that leads to user decision to continue using Google Apps for Work. This research found that user's continuance intention with GAW is determined by two mechanism : dedication and constraint. While the dedication mechanism (affective commitment) has more salient effect on continuance. This affective commitment derived from utilitarian and hedonic value emerged satisfaction as enabler of continuance intention through affective commitment. It indicates that although satisfaction has long been the predominant means of evaluating continuance intention, commitment suggested a better predictor of behavioral intention than satisfaction.

V. ACKNOWLEDGEMENT

The authors would like to thank Dra. Yulia Arisnani Widyaningsih, MBA, Ph.D for supervising my master degree thesis at Gadjah Mada University, Mr. Sean Tay as CEO of Matrix Connexion Sdn. Bhd. for the time and support in finishing my research.

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Education 4

Venezia

2015/07/22 Wednesday 09:00-10:30

Session Chair: *Prof. Thelma V. Pagtalunan*

ISBSS-4409

Cases Analysis on the Elderly-Children Intergenerational Integration Programs in Early Childhood Education Institutes in Korea

Eunju Kim | *Pusan National University*

Joeeun Song | *BK21 Plus Eco-Edu System Research Team, Department of Early Childhood Education, Pusan National University*

Jiyoun Jung | *BK21 Plus Eco-Edu System Research Team, Department of Early Childhood Education, Pusan National University*

ISBSS-4417

A Study on Young Children's Social Strategies in the Korean Traditional Play: Focusing on 'Eoleumtaeng' Play

Joeun Lee | *BK21 Plus Eco-Edu System Research Team*

Taekyung Kim | *BK21 Plus Eco-Edu System Research Team*

Heasoog Jo | *Pusan National University*

ISBSS-4518

Multiple Intelligences Teaching and Assessment: Its Influences on Filipino College Students' Mathematics Performance and Learning Experiences

Rainilyn R. Leonardo | *Bulacan State University*

ISBSS-4522

Teaching Styles and Performance of the Filipino Faculty Members of the College of Science of the Bulacan State University, Philippines: An Assessment

Thelma V. Pagtalunan | *Bulacan State University*

ISBSS-4431

Impact of Happiness and Self-Esteem on Stress in Pre-Service Early Childhood

Teachers

Haeik Hwang | *Pusan National University*

Jeonghwa Tak | *BK21 Plus Eco-Edu System Research Team, Pusan National University*

Hyunmi Kang | *BK21 Plus Eco-Edu System Research Team, Pusan National University*

Eunjung Kim | *BK21 Plus Eco-Edu System Research Team, Pusan National University*



ISBSS-4409

**Cases Analysis on the Elderly-Children Intergenerational Integration
Programs in Early Childhood Education Institutes in Korea**

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Abstract

The purpose of this study is to analyze and categorize the cases of the elderly – children intergenerational integration programs in early childhood education institutes in Korea.

In traditional Korean society grandparents had lived together and reared their grandchildren as a member of extended family and they separated from their grandchildren in the age of nuclear family. Nowadays custodial grandparents have raised their grand-children again to relieve the burden of child rearing as double-income families have increased. Nevertheless, still a majority of the early children are sent to early childhood education institutes and the government and the early childhood education institutes perceive the need of the elderly – children intergenerational integration. This is also accompanied with job creation for the elderly and needs and supports for teachers in early childhood education centers.

This study analyzed the types and their characteristics of the elderly – children intergenerational integration programs in Korea based on the electronic research, preceding research analysis and interview for the further information. The electronic research included government agency and private organization websites and 565 papers having elderly – children keywords were reviewed and 98 papers were extracted focused on the types and their distinctive features of elders- children intergenerational integration programs ongoing now.

The result of the study can be summarized as follows: The programs were categorized into three types- First, government lead integration program which focuses on senior job placement project for welfare, second, private organization lead integration program that aims to educate and spread Korean traditional sense of values, and third, early childhood education institutes lead program which is based on its ecological educational philosophy and encourages community elderly as well as grandparents to participate in diverse events such as traditional seasonal customs and so on.

Finally, we concluded that the elderly –children intergenerational integration programs are getting increased and the elderly – children interaction beyond the ties of kinship brings 1st generation and 3rd generation together and fosters mutual understandings between generations in Korean society.

Key words: the elderly – children intergenerational integration program, senior job placement for welfare, Korean traditional sense of value, mutual understanding between generations

ISBSS-4417

**A Study on Young Children's Social Strategies in the Korean Traditional
Play: Focusing on 'Eoleumtaeng' Play**

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Abstract

The purpose of this study was to explore young children's social strategies found in 'Eoleumtaeng' as a representative of Korean traditional plays. Participants of the study were 13 five-year olds attending Y Nursery who usually had free play sessions outdoor every morning, when they most often enjoyed 'Eoleumtaeng' voluntarily. Since they were at 3 or 4-year olds' classes, those children had enjoyed the traditional play in which they experienced various interactions and used social strategies. From Jan. 12 to Feb. 4, 2015, this author observed and videotaped the children's playing Eoleumtaeng', and examined their social strategies. As a result, this study found that young children were not only enjoying the traditional play together with peers, but also socially developing themselves by using lots of different social strategies such as doing teamwork with peers to achieve shared goals, relying on tricks to make that play more advantageous to them, achieving shared goals through teamwork with peers, making that play more advantageous to them, making arguments to draw out a solution to peer conflicts, and solving conflicts through argument with peers and making discussions to establish rules that regulate reoccurring problems.

Keywords: Social strategy, Traditional play, Eoleumtaeng, Teamwork, Peer conflict

ISBSS-4518

Multiple Intelligences Teaching and Assessment: Its Influences on Filipino College Students' Mathematics Performance and Learning Experiences

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ABSTRACT

The study aimed at integrating multiple intelligences theories in teaching and assessing Mathematics performance of college freshmen students in a state university in the Philippines. The research adopted the semi-experimental design of unequal groups utilizing two intact classes to explore the effects of multiple intelligences teaching and assessment on the experimental group, versus that of the traditional lecture-discussion method on the control group. The achievement posttest results of the two groups revealed that the students in the multiple intelligences teaching group performed significantly better than the students in the traditional instruction group. Furthermore, students in MI group showed more positive learning experiences.

Keywords: multiple intelligences, learning styles, student achievement, learning experiences

Introduction

In the traditional system of teaching, which is purely classical, there is an assumption that all students will learn the knowledge and skills presented to them through the one method utilized by the teacher. In the Philippine educational setting particularly the tertiary level, the traditional method of lecture-discussion is prevalently used. This, however, does not give opportunity for students to learn and grow based on their own preferred mode of learning. Students are left alone in their own devices to figure out how to adjust so that they can cope with the standards. There is a continuous slide of students' performance in Mathematics in the Philippines. Thus, there is an evident need to explore other perspectives to teaching and learning Mathematics that will address students' differences and multiple intelligences.

An American psychologist, Howard Gardner (2011), developed the theory of multiple intelligences. His theory states that people have different intelligences and learn in many different ways. Furthermore, according to this theory, no two individuals have exactly the same profile of intelligences. He suggests that humans have eight intelligences: verbal-linguistics, logical-mathematical, visual-spatial, bodily-kinesthetic, musical-rhythmic, interpersonal,

intrapersonal, and naturalistic. Learning intelligences of students has something to do with how they learn. It may be shaped by intelligence preferences, gender, culture or learning style. The opportunity to learn in ways that make learning more efficient is also likely to make learning more effective. Attention to a student's preferred mode of learning or thinking promotes improved achievement (Tomlinson, 1999). Students will have optimum learning if the concepts, principles and skills being taught are presented in their learning style and they are able to express themselves well.

In multiple intelligences teaching, teachers should first evaluate their own intelligence before carrying out multiple intelligences teaching, and use their dominant intelligence in planning materials and lesson plans. They should also keep track of student performances with observations and written records. This can help to assess each student's intelligence and provide support accordingly. On the other hand, multiple intelligences assessments are usually done by the instructor, the collaborative teachers, and students. This makes the assessments more interactive and unbiased than traditional assessments, which are done by the instructors alone. The assessment of multiple intelligences should be a variety of interesting, substantially beneficial and mutually corresponding activities.

In the face of successful studies on the use of multiple-intelligences abroad and locally, it would be interesting to examine the effects of multiple intelligences teaching and assessment on the Mathematics performance and learning experiences of the tertiary students in the Philippines. Thus, this study endeavored to find out if there would be an increase teaching effectiveness through the incorporation of multiple intelligences teaching.

Methodology

The purpose of this study is to make a comparative analysis on the effects of multiple-intelligences teaching and assessment, and traditional lecture-discussion methods on the Mathematics performance and learning experiences of freshmen college students.

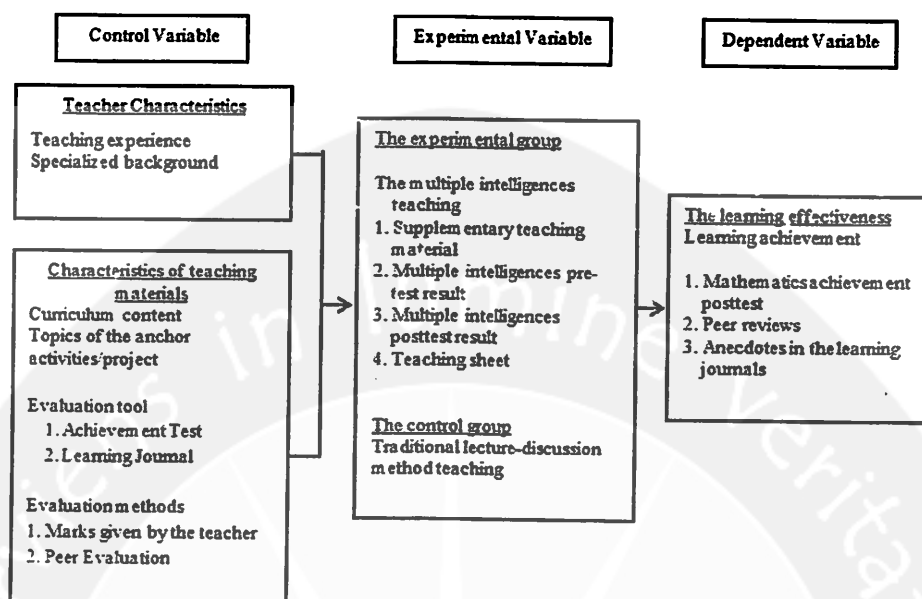


Figure 1. Research Framework

This research framework (shown in Figure 1) was divided into three variables: (1) Control variables: This is the variable that were controlled in order to minimize the effects on experimental results. The students in the experimental group and control group were all from the same major, same year level, had the same textbooks, same course content, same assessment tools, and same instructor. (2) Experimental variable: The students in the experimental group were given multiple intelligences supplementary material in class, whereas the control group used traditional teaching methods and had no supplementary materials. (3) The dependent variables: The difference in learning effectiveness between students from the experimental group and students from the control group and the responses in their learning journals.

The study employed semi-experimental design of unequal groups. The participants were two intact sections of college freshmen from Bulacan State University. To ensure equivalence between the two intact groups, students were pretested prior to experimentation and the results of their pretest were used as the covariate in the study.

The instruments used were the adopted multiple intelligences inventory developed by Howard Gardner (2011) and the achievement test in Math 123 – Plane Trigonometry. The development and validation of the achievement test followed this process: planning the test, face validation,

first validation, item analysis, second trial run and final run and evaluation of the test. This was done prior to the conduct of the experiment.

The researcher administered the multiple intelligences inventory to the students in the experimental group at the start of the semester. Students were encouraged to answer this inventory honestly. The achievement test was then administered to the control and experimental groups to determine the extent and depth of their knowledge in Math 123- Plane Trigonometry. The researcher taught both the experimental and control groups. In the experimental group, the researcher carefully studied the results of the students' learning style inventory and their achievement test. The results served as the basis in adjusting the instruction and assessment to the identified learning needs of the students in the experimental group. Varied instructional materials and formats were provided to the students in each lesson based on their identified learning styles. Flexible grouping was consistently used in the instruction. However, students were allowed to work alone if this was found to be their best modality of learning. While some students preferred to read about the topic, or listen to others discussing it, others claimed to acquire knowledge by manipulating objects associated with the content. Thus, the lessons were presented in a variety of ways by the teacher, using different instructional materials.

The students were also given anchor activities to make learning continuous. Some students even suggested activities that they find interesting. They were also given the freedom to choose to work alone or in groups. They presented their work to the class. A group of students who are greatly visual/spatial learners created a design for shirt printing using the graphs of sine, cosine and tangent functions. Students who are dominantly verbal-linguistic learners made interesting interviews to some professionals like engineers, architects, and even criminology specialist to learn how Trigonometry is being used in their careers. They presented the information they gathered to the class. In addition, a group composed a song integrating all functions of special angles and its corresponding value. On the other hand, one group of students made an interesting presentation on the common mistakes of students in Plane Trigonometry. Students were able to present the misconceptions and defined the corrections. The students were also asked to evaluate their classmates' presentations.

The students were also asked by the instructor to work on a learning journal wherein guide questions were given every week. Anecdotal notes, portfolios, projects, and journal writing were some of the assessment tools used to monitor students' progress. The journal showed that students were more interested to do real-life applications of mathematics. They were motivated when they could apply what they were learning in school to real-life situations.

Shown below are some of the activity worksheets and students' outputs.

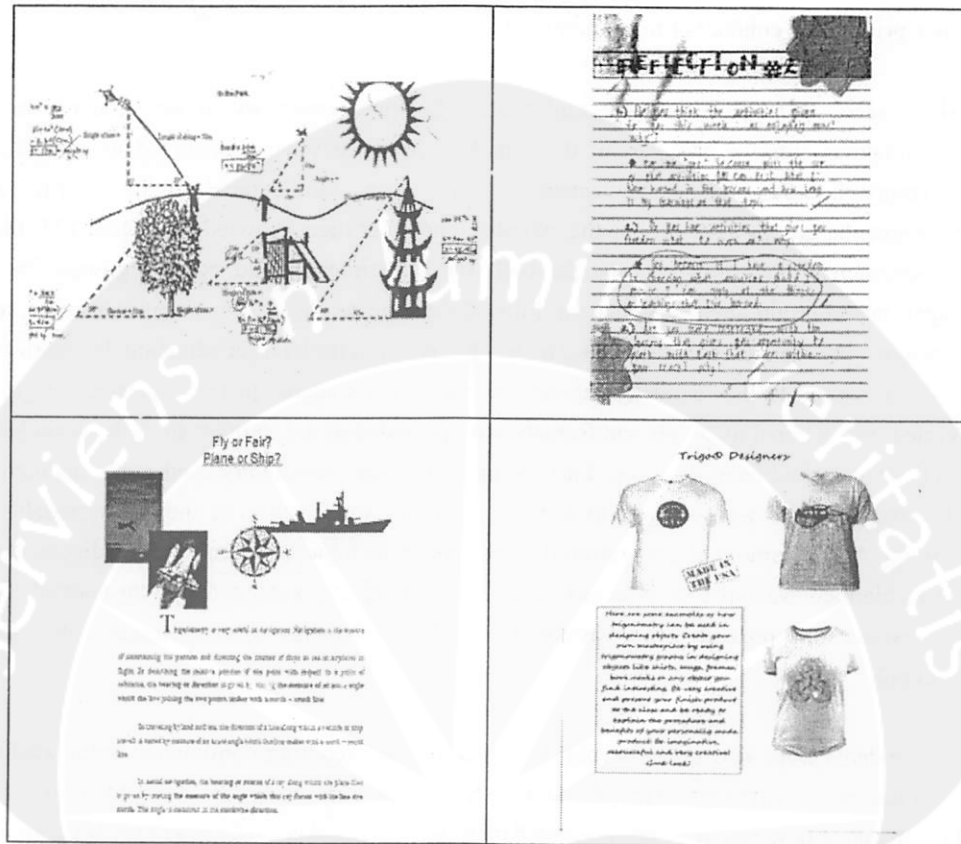


Figure 2 Sample Worksheets, Journal Reflections and Student Outputs

Students in the control group were taught using the traditional lecture-discussion method. The teacher-researcher discussed the lessons in the lecture-format and the students were given seatwork and written activities afterwards. They were also given assignments once in a while.

The following statistical tests were used in the study: (a) t-test for dependent samples to determine if there was a significant difference between the pretest and posttest scores of the students in each learning group; and (b) Analysis of Covariance to determine if there was a significant difference between the mathematics achievement of the students in the experimental and control groups.

RESULTS AND DISCUSSION

The teacher has shown logical-mathematical and visual-spatial as her dominant intelligences. It is therefore recommended that the teacher should carefully design and incorporate his/her

strengths into classroom activities and evaluations to help students improve their achievement and interest in the subject.

Table 1: Learning Profiles of the Students in the Experimental Group

Gender	Population N=30	Intelligences	Average	Standard Deviation	t-value
Male	5	Verbal/Linguistic	25.2	3.83	1.33
Female	25		22.3	4.56	
Male	5	Visual/Spatial	24.4	5.12	1.37
Female	25		21.3	4.54	
Male	5	Intrapersonal	27.2	6.42	1.99*
Female	25		22.3	4.8	
Male	5	Interpersonal	28.4	2.7	1.35
Female	25		25.2	5.17	
Male	5	Logical/Mathematical	29.2	4.32	2.79*
Female	25		22.8	4.77	
Male	5	Musical/Rhythmic	23.8	4.76	1.34
Female	25		20.6	4.91	
Male	5	Bodily/Kinesthetic	21.4	4.72	0.92
Female	25		19.3	4.65	
Male	5	Naturalist	25.8	5.27	1.61
Female	25		21.8	5.07	

Notes. * $p < .05$.

Table 1 shows that generally the multiple intelligences scores of the male respondents were higher than that of the female respondents. The male respondents in the experimental group scored significantly higher than the female respondents in the intrapersonal and logical/mathematical intelligences. This indicates that the male students prefer more to work alone and they are highly into problem solving, critical thinking and deductive reasoning.

To determine the mathematics achievement of the students in the multiple intelligence teaching and lecture-discussion instruction groups, the pretest and posttest mean scores of the students including the standard deviations were obtained.

Table 2: Comparison of the Pretest and Posttest Mean Scores

Groups	Pretest			Posttest			t - value
	Mean	Verbal Interpretation	SD	Mean	Verbal Interpretation	SD	
Multiple Intelligences Teaching (N=30)	12.6	Satisfactory	3.87	32.1	Excellent	4.11	26.02
Traditional Instruction (N=30)	16.9	Satisfactory	5.65	23	Very Satisfactory	5.19	11.16

Table 2 reveals the computed t-value of the comparison of the pretest and posttest scores of the students in the experimental group was 26.02 indicating that their posttest mean score was significantly higher than their pretest mean score. This indicates that significant learning took place. It shows that modifying instruction is more likely to result in greater student engagement and increased achievement. On the other hand, the computed t-value in comparing the pretest and posttest means scores of the students in the traditional instruction group showed that the students got a higher posttest mean score which also indicated that they had additional learning.

To determine whether there was a significant difference between the achievement of the students in the multiple intelligences teaching and lecture-discussion instruction groups, the Analysis of Covariance (ANCOVA) was utilized using the pretest scores of the respondents as the covariate.

In comparing the posttest mean scores of the multiple intelligences teaching and the lecture-discussion instruction groups, the computed F-value (20.01) indicates a significant difference. It implies that the students who experienced teaching that recognizes their unique learning styles improve better in their performance in Mathematics.

The learning journals of the students in the multiple intelligences teaching reveal more positive learning experiences. Students became more responsible, cooperative and disciplined. Multiple intelligences could not only provide teachers with more choices in teaching and assessment methods, but also allow students to demonstrate what they have learned in many different ways that help increase students' motivation and interest. Here are some of the unedited responses of the students in their journals when asked about their perception on the use of multiple intelligences teaching and assessment.

"I find it enjoying working with my group mates because everyone shared their knowledge in answering the activity. They helped me to analyzed and understand the lesson."

“I’m so happy working with them because they help me with my learning. They also gave me a chance to share my ideas with them and I listen to their ideas too.”

“It contributed learning to me. I learned to be open-minded, serious and give patience in answering a difficult problem.”

Gardner’s theory of multiple intelligences suggests that schools should offer individual-centered education, having curriculum tailored to a child’s intelligence preference (Allan & Tomlinson, 2000). It suggests that schools should recognize and respond to the diverse learning styles of students and allow students more room to express themselves, placing equal attention and reassurance on those who show gifts in any one of the eight intelligences.

Conclusion

The findings of the study indicate that responding to the different learning styles of students can better improve their mathematics performance and increase their interest and motivation in the subject. Furthermore, even college students can benefit from teaching strategies that regard them as individuals with unique ways of learning. Also, assessment of students’ performance must be designed in such a way that students can exhibit what they had learn through their own preferred ways. It is therefore recommended that college instructors should explore beneficial teaching strategies that respond to the learning styles of students.

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ISBSS-4522

**Teaching Styles and Performance of the Filipino Faculty Members of the
College of Science of the Bulacan State University, Philippines: An
Assessment**

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Abstract

Teachers play a crucial role in the whole educational process. On their shoulders lie the delicate responsibility of molding the minds of the youth. As such, they should be fully equipped with the necessary competencies and skills for authentic learning to take place.

Recognizing the very potent role of teachers, the researcher decided to embark on the present study to look into the relationship between the teaching styles and teaching performance of the faculty members of the College of Sciences of the Bulacan State University.

The following conclusions were derived by the researcher: 1) majority of the Mathematics and Science faculty members of the College of Science of the Bulacan State University regard themselves as experts with reference to their teaching styles ; 2) majority of the teaching performance of the Mathematics and Science faculty members got a rating of Very Satisfactory; and 3) there is no significant relationship between the teaching styles and teaching performance of Mathematics and Science faculty member of the College of Science of Bulacan State University.

It is recommended that the criteria for Student Evaluation of Faculty Members be revised in order for the same to be aligned with authentic performance of the faculty members. Also, the Administration might devise other ways of assessing the performance of their teachers. Qualitative methods such as in-depth interviews, focus group discussions with students, and many others could be utilized in order to authentically assess the performance of faculty members.

Keywords : teaching styles, teaching performance

Introduction

Two dominant categories of teaching styles have surmised through research; the teacher-centered and the learner-centered. The former is described as the *old school type* ; the

teacher is the sole source of information. He manipulates the discussion and there is no, if not minimal participation from his students. The teacher-centered approach is said to be *content-based*. Whatever is written in the course syllabus must be followed to the letter. The traditional teacher relies heavily on the lecture type of class.

On the other hand, the learner-centered type of teacher is one who allows modifications in the syllabus as the need arises. He varies the concepts and topics according to the peculiar needs of his students. Whereas the teacher-centered approach is more of the common and traditional way classes are conducted; the learner-centered approach to the teaching zeroes in on the needs and learning styles/preferences of each individual student. In the learner-centered approach, the focus is not too much on the content but on outcomes or materials produced by students as an indicator of what they learned in one whole semester. Though the syllabus is still in place, the learner-centered teacher allows modifications or adjustments in the syllabus in consideration of the various needs of his learners.

From these two main categories of teaching styles, other teaching styles have come out through various researches. (Smith, 2000; Gallenstein, 2005; Haladyna & Shaughnessey, 2001). Some of them are the following: direct teaching, peer teaching, problem solving, authoritarian, democratic, permissive, and the like. However, the present study will be primarily based on Anthony Grasha's teaching styles (1999). He categorized teachers into the following: 1) expert, 2) formal authority, 3) personal model, 4) facilitator, and 5) delegator.

Due to the dearth of researches pertaining to teaching styles and performance, the researcher decided to embark on the present study. The study purports to investigate if there is a direct relationship between teaching styles and teaching performance of the faculty members of the College of Science of the Bulacan State University.

Statement of the Problem

The present study aimed to analyze the relationship between the teaching styles and performance of the Mathematics and Science faculty members of the College of Science of the Bulacan State University. Specifically, it sought answers to the following specific questions, to wit: 1) What is/are the predominant teaching style/s of the Mathematics and Science faculty members?; 2) What is the level of performance of the Mathematics and Science faculty members?; and 3) Is there a significant relationship between the teaching styles and teaching performance of Mathematics and Science faculty members?

Theoretical Framework

The present study was primarily based on Anthony Grashas' Teaching Styles which are described as : 1) expert, 2) formal authority, 3) personal model, 4) facilitator, and 5) delegator.

The conceptual model (Figure 1) illustrates the conceptual paradigm used in this study. On the first frame, the Teaching Styles can be found, which are further categorized as: expert, formal authority, personal model, facilitator, and delegator.

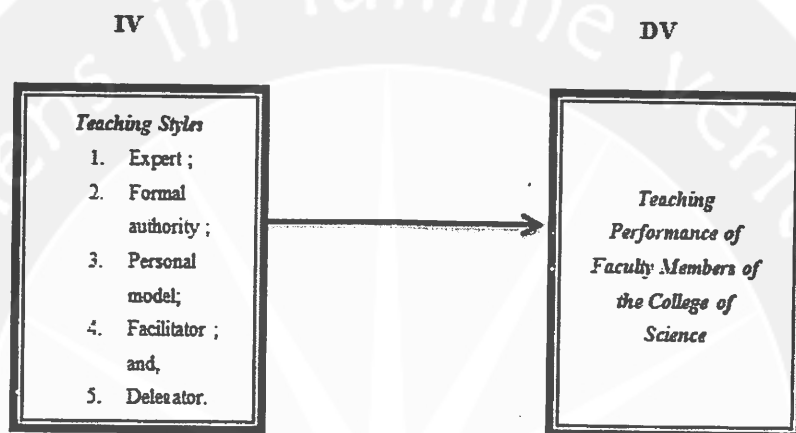


Figure 1. The Conceptual Paradigm of the Study

On the other hand, the second frame illustrates the teaching performance of the faculty members of the College of Science of Bulacan State University. Using the IV-DV Model, the paradigm presupposes that there is a direct relationship between the teaching styles and performance of the Mathematics and Science faculty members of the College of Science of the Bulacan State University.

Methodology

This is a predictive study which utilized the descriptive method in comparing the teaching styles and teaching performance of Mathematics and Science faculty members of the College of Science the Bulacan State University.

The researcher also utilized content analysis of documentary materials which are already existing and accessible, particularly the results of the Student Evaluation of Faculty for S.Y. 2013-2014

Setting of the Study

The College of Science of the Bulacan State University served as the setting of the present study. It comprises two departments : Mathematics and Science. The study was conducted October, 2014.

Respondents of the Study

The Mathematics and Science faculty members were the respondents of the study. From among the forty-two (42) Mathematics faculty members, thirty (30) were identified as respondents of the study. On the other hand, out of forty (40) faculty members from the Science Department, twenty-five (25) were chosen as respondents. The researcher used the rule of thumb in determining the respondents. From among the eighty-two faculty members, 55 were identified as the respondents of the said study, which accounts for 67.07% of the total population. Some faculty members were not included as respondents inasmuch as they were newly-hired faculty members, while others are on leave.

Research Instrument

With reference to the research instrument, the researcher referred to Grasha's Teaching Styles Inventory, which consists of a forty (40) item inventory of the different teaching styles of the teacher-respondents. The respondents were given statements which corresponds to a respective teaching style which were described as : 1) expert ; 2) formal authority ; 3) personal model ; 4) facilitator, and 5) delegator. . The researcher asked the respondents to answer the said instrument as honestly as possible since the results gathered will be used to determine their respective teaching styles.

Also, the Student Evaluation of Faculty for S Y.2013-2014 was used by researcher to analyze the performance of Mathematics and Science faculty members. The said instrument was obtained from the Research and Development Office (RDO).

Results and Discussion

Table 1. Descriptive Measures of Teaching Styles of Mathematics and Science Faculty Members

Teaching Styles	Mathematics			Science		
	\bar{X}	SD	V.I.	\bar{X}	SD	V.I.
<i>Expert</i>	4.38	0.32	<i>Above Average</i>	4.63	0.30	<i>High</i>
Formal Authority	4.36	0.43	<i>Above Average</i>	4.54	0.35	<i>High</i>
Personal Model	4.35	0.22	<i>Above Average</i>	4.47	0.31	<i>Above Average</i>
Facilitator	4.17	0.42	<i>Above Average</i>	4.42	0.51	<i>Above Average</i>
Delegator	4.18	0.36	<i>Above Average</i>	4.24	0.51	<i>Above Average</i>

Table 1 illustrates the descriptive measures of Mathematics and Science Faculty Members with respect to their teaching styles.

It can be surmised from Table 1 that all the five teaching styles of Mathematics faculty members got a verbal interpretation of *Above Average*. *Expert* got the highest mean of 4.38 with standard deviation of 0.32, followed by *Formal Authority* with a mean of 4.36. However, it can also be noticed that there is a very slight difference with reference to the mean scores of the other categories of teaching styles.

For the Science faculty members, two teaching styles obtained a verbal interpretation of *High* the category for *Expert* and *Formal Authority* with a mean of 4.63 and 4.54 respectively while the other three are *Above-Average*. This implies that faculty members of the Mathematics and Science Departments look at themselves as experts and authorities in their respective fields of specialization.

Observing closely the mean scores of the categories of teaching styles, it can be gleaned that although *Expert* got the highest mean, all categories were rated *Above Average*. This shows that there is no really “single best teaching style” but it is more of an amalgamation of several approaches and methodologies suited for the subject matter, especially mathematics and science subjects which are considered theoretical and technical in nature. Even the late Anthony Grasha, the proponent of the *Teaching Styles Inventory* warns against the pitfall of “boxing teachers into a single category”. Instead, Grasha purports that teachers play multiple roles in the classroom and possess some combination of all or most of the classic teaching styles.

This was echoed by Gill (2013), who concluded that today’s ideal teaching style is not an either/or proposition but more of a hybrid approach that blends the best of everything the teacher has to offer. Tomlinson (as cited by Gill) advocated the implementation of “differentiated instruction” to foster a conducive learning environment. Simply put,

differentiated instruction refers to the application of “*student- centered approaches*” to teaching and learning. Differentiated instruction also involves the utilization of instructional styles that considers the individual differences and learning preferences of the students.

On the other hand, Thornton (2013) opined that the most effective teachers vary their styles depending on the nature of the subject matter, the phase of the course, and other factors. He further states that there is **no one best teaching style** and effective teachers know how and when to choose the most appropriate style for the specific situation. Also, Thornton opines that too much reliance on one style causes students to lose interest and become overly dependent on the teacher.

Table 2. Descriptive Measures of the Teaching Performance of Mathematics and Science Faculty Members.

Rating Range	Mathematics Faculty Members	Science Faculty Members	VI
4.6 – 5.0	0	0	Outstanding
3.6 – 4.5	19	16	<i>Very Satisfactory</i>
2.6 – 3.5	8	9	Satisfactory
1.6 – 2.5	3	0	Fair
1.0-1.5	0	0	Needs Improvement
Total	30	25	

Table 2 shows that majority of the teaching performance of the Mathematics and Science faculty got a rating of “*Very Satisfactory*” with a frequency of 19 from the Mathematics Department and 16 from the Science Department. 8 got the rating of “Satisfactory” from Mathematics Department and 9 from Science Department. Only 3 Mathematics faculty got a “Fair” rating and none of the faculty members from both departments got “Needs Improvement”. This implies that Mathematics and Science faculty members generally perform very well when it comes to teaching.

Table 3. ANOVA Summary of the Teaching Styles and Performance of the Mathematics and Science Faculty Members

Source	Sum of Squares	df	Mean Square	F	Sig.
Regression	0.758	5	0.152	0.636	0.673
Residual	11.685	49	0.238		
Total	12.443	54			

Table 3 illustrates the Analysis of Variance (ANOVA) of the teaching styles of the Mathematics and Science faculty members of the College of Sciences vis-à-vis their teaching performance. Since the computed F-value is 0.636, which is greater than .01, meaning, there is no significant relationship between teaching styles and teaching performance of Mathematics and Science faculty members of the College of Science.

The ANOVA revealed that no significant relationship exists between the teaching styles and performance of both mathematics and science faculty members of the College of Science of the Bulacan State University. This can be attributed to the fact that there is an interplay of several factors in terms of student evaluation of the performance of their teachers like personal traits, ability to establish rapport with the students, and many other factors.

This finds support in with the study of Gill (2013) , stating that there is “no one best teaching style” but is actually more of an “integrated approach” which also considers the teacher’s distinct personality and attitudes. Grasha (1999) meanwhile noted that teaching styles should not be boxed as to which is the best approach but in reality, teachers often employ a combination of several approaches, depending on the nature of the subject matter being discussed. At the end of the day, what teachers should focus is the realization of their learning goals and objectives, and be “all things to all students.”

Indeed, awareness of one’s teaching styles is very important since it will enable the teacher to assess whether the methods and strategies being employed in the classroom is indeed relevant and effective. By doing so, appropriate adjustments and modifications may be made so that authentic learning will take place.

Conclusions

Based on the foregoing findings, the following conclusions were derived by the researcher.

1) majority of the Mathematics and Science faculty members of the College of Science regard themselves as experts with reference to their teaching styles ; 2) majority of the teaching

performance of the Mathematics and Science faculty members got a rating of Very Satisfactory; and ; 3) there is no significant relationship between the teaching styles and teaching performance of Mathematics and Science faculty member of the College of Science.

Recommendation

Since the study found out that no significant relationship exists between teaching styles and teaching performance of Mathematics and Science faculty members, it is recommended that the criteria for Student Evaluation of Faculty Members be revised in order for the same to be aligned with authentic performance of the faculty members. Also, the Administration might devise other ways of assessing the performance of their teachers. Qualitative methods such as in-depth interviews, focus group discussions with students, and many others could be utilized in order to authentically assess the performance of faculty members.

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ISBSS-4431

**Impact of Happiness and Self-esteem on Stress in Pre-service Early
Childhood Teachers**

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Abstract

Early childhood teachers who take care of infants, toddlers or preschoolers in a critical period of development have a primary impact on their growth and development. So Early childhood teachers' emotional status should be taken seriously. The purpose of this study was to examine the Self-esteem and Happiness of pre-service early childhood teachers, among their various positive psychological characteristics, as inner personal characteristics affecting Stress. Happiness plays a crucial role in success at work(Boehm & Lyubomirsky, 2008). A happy teacher is satisfied with what he or she do, and that is linked to the improvement of his or her productivity as a member of society(Streimikiene & Grundey, 2009). Self-esteem is identified as a variable that makes it possible to feel good about one's past, present and future, to make the most use of personality strengths and potential by being immersed in life in pursuit of self-realization, to find meaning in daily life and to consider oneself worthwhile. Stress is a variable to have a negative impact on amicable interpersonal relationships, caring and prosocial behavior(Rayn & Deci, 2000). The purpose of this study was to examine the relationship among the Self-esteem, Happiness and Stress in Pre-service Early Childhood Teachers. The subjects in this study were 292 Pre-service Early Childhood Teachers in Busan in South Korea. The collected data were analyzed by a statistical package PASW WIN 18.0. Descriptive statistics analysis was made to obtain statistical data on mean and standard deviation to find out their awareness, and Pearson product-moment correlation coefficients were calculated to look for the correlation between the variables. A stepwise multiple regression analysis was made to compare the relative influence of the variables, and Durbin-Watson value and VIF value were calculated to see if the basic assumptions of regression analysis were satisfied or not. The findings of the study were as follows: First, the early childhood teachers considered the level of their own Happiness, Self-esteem to be above average and Stress to be blow. Second, when the correlation of the Self-esteem and Happiness of the pre-service early childhood teachers to stress was analyzed, Self-esteem had a positive correlation with Happiness. And there was a significant negative correlation among their Happiness and Self-esteem to stress. Third, the independent variable that made the

largest prediction of Stress was Self esteem, followed by pleasure happiness and engagement happiness.



Finance & Accounting 3

Raffaeollo

2015/07/22 Wednesday 09:00-10:30

Session Chair: *Prof. Shin-Rong Shiah-Hou*

BREFM-22404

Crossing of Psychological Barriers in the S&P500 Index and Index Futures: Market Dynamics and Their Interaction

Chueh-Yung Tsao | *Chang-Gung University*

BREFM-22389

Do Managers Disclose Non-GAAP Earnings to Manipulate Investors' Perceptions after Regulation G?

Shin-Rong Shiah-Hou | *Yuan Ze University*

Yi-Yun Teng | *Yuan Ze University*

BREFM-22834

Lockup Provision and Institution Investors Trading

Po-Kai Huang | *Aletheia University*

Pang-Ru Chang | *Shih Chien University*

Yao-Min Chiang | *National Taiwan University*

BREFM-22846

Financial Hedging, Earnings Management, and Firm Value

Feng-Yi Chang | *China University of Technology*

Chin-Wen Hsin | *Yuan Ze University*

Shin-Rong Shiah-Hou | *Yuan Ze University*

BREFM-22439

Is the Disposition Effect Related to Locus of Control during Financial Crisis

Ya-Chung Sun | *Vanung University*

Pi-Hsia Yen | *Vanung University*

BREFM-22404

**Crossing of Psychological Barriers in the S&P500 Index and Index Futures:
Market Dynamics and Their Interaction**

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Abstract

Examining the psychological barriers of hundreds and 52-week highs and lows, we demonstrate their existence and effects on the S&P500 index and index futures surrounding the crossings of barriers. While there is a mean effect on the returns prior to the crossings, which is more pronounced for downward crossings, no such effect exists after the crossings. The market is subdued with falling volatility before an upward crossing, but not downward crossing. Not surprisingly, volatility rises significantly during the crossing. After the crossing, volatility subsides. We further report a spillover effect from the index to index futures, with the latter experiencing a rise or fall in price as an upward or downward crossing, respectively, occurs in the former. Detailed analysis of the crossings further reveals that the two markets do not always cross the barriers at the same time. Even when they do, the two markets diverge in the impact with the index rising more than the index futures during upward crossings. On the other hand, the index futures falls more than the index during downward crossings. These findings have practical implications for trading and momentum investing.

BREFM-22389

Do Managers Disclose Non-GAAP Earnings to Manipulate Investors' Perceptions After Regulation G?

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Abstract

This study explores the possibility that managers mislead investor perceptions through the disclosure of non-GAAP earnings even after SEC intervention (Reg G). We find that, on average, some higher qualities of exclusions, such as nonrecurring items, are into non-GAAP reporting. However, managers still manipulate non-GAAP earnings to exclude some recurring items from non-GAAP earnings even when reporting on the reconciliation table. We further use CEO sales of CEO shares as the key factor to test whether CEOs convey good information, affect the firm's stock, and then mislead investors through disclosing non-GAAP earnings. We find that CEOs who sell their shares during the two weeks after earnings announcement date are more likely to disclose non-GAAP earnings, especially if the first trading price after the announcement date is greater than the closing price in the last trading day before the earnings announcement.

Key Words: Non-GAAP Earnings, GAAP Earnings, Exclusions, Nonrecurring Items, Recurring Items, Regulation G

BREFM-22834

Lockup Provision and Institution Investors Trading

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Abstract

Using a unique trading data in pre-IPO market and a unique data of exact days of withdrawing lockup shares, we are able to test the trading behavior of institutional investors around the lockup announce day and expiration day using a sample of 218 IPOs firms from 2005 to 2011 in Taiwan. We are able to find that the abnormal returns of institutional investors are insignificant around the lockup announce day. Also, the relationship between lockup ratio and institutional investor trading around, and the relationship between the lockup ratio and initial return of IPOs are all insignificant. This implies that announcement of lockup ratio carries no information. But, we do find that there is a positive relationship between foreign institution trading and ROE for one year after IPO. It implies that the trading behavior of institution investors around lockup expiration day contains information of long term performance.

February, 2015

1. Motivation

Brau et al. (2005) indicate that pre-IPO shareholders signal their commitment via locking up their share stakes for a specific period. Lockup provision prevents the pre-IPO shareholders from selling the specific percentages of their shares over a certain period following the admission of their firm to the stock exchange (Goergen et al., 2006). Mohan and Chen (2001) indicate that a lock-up agreement is helpful to underwriters in that it prevents the sale of large blocks of securities during the early trading period, reduce the chance of insiders taking advantage of earnings management and convey important information about the ex ante risk of an IPO. Therefore, the insiders in high-quality firms would prefer to lock shares,

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committing to sell them only after information has been revealed, in order to avoid being pooled with the low-quality firms (Yung and Zender, 2010).

Aggarwal et al. (2002) indicate that owner-managers interested in maximizing their personal wealth will focus on the lockup expiration share price. Mohan and Chen (2001) find that abnormal trading activity after expiration of the lockup period signal a firm true value. The institutional investors with private information in IPOs have been supported in literatures (Rock, 1986; Benveniste and Spindt, 1989; Chemmamur, 1993 and Chemmamur et al, 2010). Chemmamur et al. (2010) claim that institutional investor with information from pre-IPO to post-IPO and they find that institutional sales of their IPO allocations over the long-run post-IPO.

Our article considerably enhances understand of the role of institutional investors in lockup in IPOs. First, Taiwan has a unique pre-IPO trading market, called Emerging Stock Market. Second, there are two kinds of lockup provisions in Taiwan, one is voluntary lockup, and the other is mandatory lockup. The reasons of this paper are worth exploring: First, the diversity of lock up contracts across counties and firms in terms of their contractual characteristics may carry different information (Bradley et al., 2000; Espenlaub et al., 2000 and Goergam et al., 2006). Second, the two kind lockup provisions in Taiwan are different from US, UK, France and Germany.

We argue that substantial transactions of institutional investors around lockup announce and expiration day may reveal institutional investors' information in Taiwan. We test the behavior of institutional investors around announce day and expiration day of lockup using a sample of 218 IPOs from 2005 to 2011 in Taiwan. We find that lockup ratio announcement carries no information. However, the trading behavior of institution investors around lockup expiration day contains information of long term performance.

The remainder of the paper is organized as follows. Section 2 is literature review. Section 3 describes our data source, the definition of variables and methodology. Section 4 examines the relationship between trading activities of institution investors around announce and expiration of the lock-up period. Finally, our conclusions are presented in Section 5.

2. Literature review

Bray and Gompers (2003) claim that lockup serves as a signal quality of IPO firms. The mechanisms for issuing firms to convey information are the length of lockup period and the fractions of insider's shares (Brav and Gompers, 2000; Mohan and Chen, 2001; Yung and Zender, 2010). Literatures show that there is information in announce day of lockup, the lockup expiration day also contains information (Aggarwal et al. 2002; Mohan and Chen, 2001 and Field and Hanka (2001)).

3. Methodology

3.1 Data

Our sample includes 218 firms that went IPO between October 25, 2005 and March 1, 2011. All sample firms are subject to a regulation effective in January 2005 that firms must be traded on the pre-IPO market, Emerging Stock Market, for at least 6 months before they apply for an IPO. We obtain daily trading data including price, return, trading volume and shares outstanding from the Taiwan Economic Journal (TEJ). TEJ also provides daily trading data for listed firms after the IPO.

3.2 Methodology and Variable Definition

We use event study method and OLS to test trading of institutional investors around lockup announce day and lockup expiration day. First, we identify announce and expiration day of IPO firms in dataset. Second, we compute the abnormal trading of institutional investor at announce and expiration day, and the cumulative return around announce and expiration day. Final, we test the relationship between trading of institutional investors and return of lockup announce and expiration day using OLS. The variable definition is in Appendix.

4. Empirical Results

We show the summary statistics of lockup in Table 1. The mean of voluntary lockup ratio is 33.91%, the average period of locking shares is 135 days. The average lockup period up to the first day withdrawing shares is 102 days, and the average period for to the last day withdrawing shares is 467 days.

The event day in Figure 1 is announce lockup day. Figure 1 show that the more net buying of institutional investors on three days before the event. Net buying and net selling are more prominent on seven days after event day than any other days, and the volume of net buying is more than net selling on the seventh day after event.

We test the trading behavior of institutional investor whether contain information using regression method in Table 2. The results of variable are all insignificant. It means that the lock-up provision contains no useful information about the IPOs. There is no relationship between the lockup ratio and the IPO pricing.

We further discuss the relationship among the lockup expiration, institutional investors and abnormal return. The regression results of cumulative return and institution investor is in Table 3. We find that the relationship between cumulative return and institution investor is insignificant. However, In Table 8, we find that the positive relationship between foreign institution and ROE for one year after IPO. Because corporate insiders possess information pertinent to the future cash flows of the business, abnormal trading activities occurring immediately after the expiration of the lock-up provision reflects the market's perception of the IPO's true value.

5. Conclusions

The lock-up provision prevents the insiders of IPO firms sell a lot of shares during the early trading period, reducing the chance of insiders taking advantage of earnings management and convey important information about the ex ante risk of an IPO. The institutional investors with private information in IPOs have been supported in literatures. In this article, we test the behavior of institutional investors in announce day and expiration day of lockup. We find that the trading of institutional investors are absent of significant abnormal returns at the announce lockup day. And we find that the positive relationship between foreign institution and ROE for one year after IPO. It implies that the trading behavior of institution investors at lockup expiration day contains information of long term performance.

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Table 1 Summary Statistics for Lockup and IPO variable

Variable	N	Mean	Median	STD	min	max
Lockup	146	33.91	31.535	18.8691	0.26	79.42
Exp_firs.	218	102.51	92	49.472	30	518
Exp_final	218	467.84	374	209.748	365	2037
Exp_average	218	135.60	115.534	76.286	7.635	851.12
Initial Return	218	55.32	36.736	68.061	-10	726.09
ROE	218	18.25	17.13	12.395	-24.22	57.31
Proceeds	218	8.74	8.601	0.694	7.27	12.21
Underwriter	205	0.84	1	0.364	0	1
Leverage	218	36.19	35.025	15.618	4	85.89
Size	218	14.20	14.023	1.036	11.974	18.15
Venture Capital	218	0.44	0	0.498	0	1
Rm	218	0.00	0.001	0.014	-0.044	0.04
High-Tech	218	0.27	0	0.443	0	1
EPS	218	3.97	3.175	3.383	-0.97	23.94

This table presents the summary statistics of variable including sample size, mean, median, standard deviation, minimum and maximum. Definitions of independent variables are as Appendix.

Table 2 Regression analysis of Institutional Investor on Cumulative Return

Variable	1	2	3	4	5	6
Intercept	1.25** (2.58)	1.28*** (2.65)	1.23** (2.55)	1.04** (2.25)	1.03 (2.23)	1.02** (2.2)
AR_All_bs_ann	-6.53 (-1)			-2.26 (-0.36)		
AR_Fg_bs_ann		1.44 (0.08)			18.98 (1.08)	
AR_Dl_bs_ann			-7.77 (-1.1)			-5.45 (-0.81)
R ²	0.0047	0	0.0057	0.0006	0.0056	0.0031
N	212	212	212	212	212	212

This table present regression analysis of the cumulative return during announce lockup day. The dependent variable is cumulative return from model 1, 2 and 3. The dependent variable is abnormal cumulative return from model 4, 5 and 6 definitions of independent variables are as follows. AR_All_bs_ann is the difference between net buying and net selling of three major institutional investors at announce lockup day. AR_Fg_bs_ann is the difference between net buying and net selling of foreign institutional investors at announce lockup day. AR_Dl_bs_ann is the difference net buying and net selling of dealer at announce lockup day. ** and *** represent statistical significance at the 5% and 1% level, respectively.

Table 3 Regression analysis of Institutional Investor on Cumulative Return at Expiration Day

	1	2	3	4	5	6	7	8
Intercept	36.25 ** (83.8 * 5)	36.26 ** (83.7 * 9)	36.2 * (84)	-0.74 * (-1.9 1)	-0.76 (-1.9 5)	-0.74 * (-1.9 5)	-0.74 * (-1.9 1)	-0.76 * (-1.9 5)
AR_All_e xp	-0.02 (-0.02)				3.05 (0.59)			
AR_Fg_e xp		-0.38 (-0.35)				-0.64 (-0.6 5)		
AR_It_ex p			2.51 (0.5 3)				4.43 (1.04)	
AR_Dl_e xp				4.43 (1.04)				3.05 (0.59)
R ²	0.0000	0.0006	0.0013	0.0070	0.0004	0.0019	0.0050	0.0016
N	217	217	217	217	217	217	217	217

This table presents regression analysis of the cumulative return during expiration lockup day. The dependent variable is cumulative return from model 1, 2 and 3. The dependent variable is abnormal cumulative return from model 4, 5 and 6 definitions of independent variables are as follows. AR_All_exp is the difference between net buying and net selling of three major institutional investors at expiration lockup day. AR_Fg_exp is the difference between net buying and net selling of foreign institutional investors at expiration lockup day. AR_It_exp is the difference between net buying and net selling of investment trust company at expiration

lockup day. AR_{Di_exp} is the difference net buying and net selling of dealer at expiration lockup day. ** and *** represent statistical significance at the 5% and 1% level, respectively.

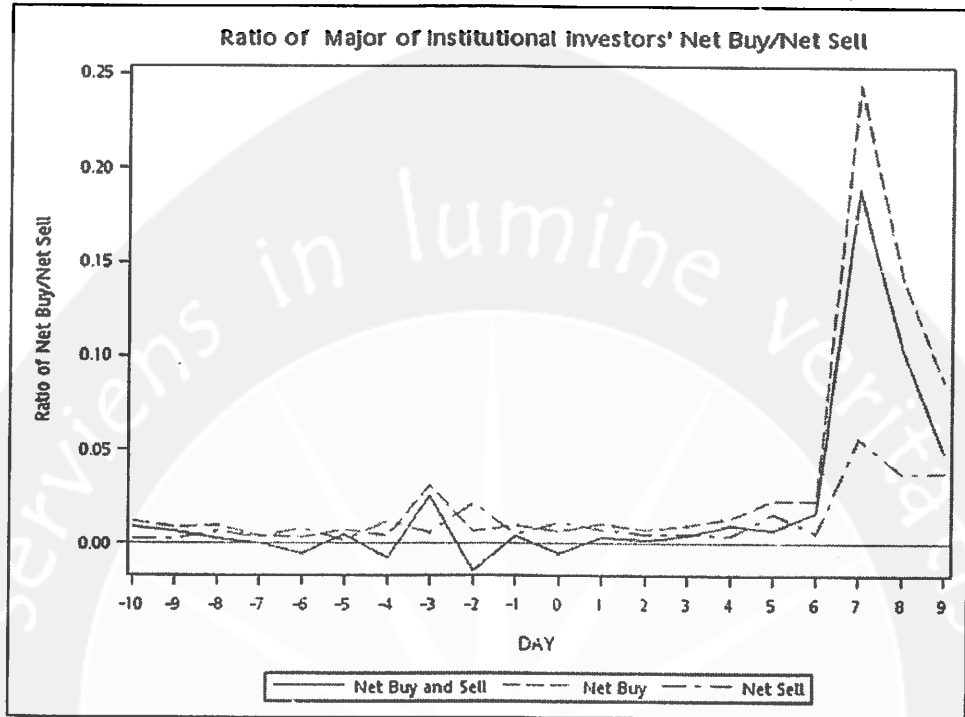


Figure 1 Trading Volume of Major of Institutional Investors at Announce Day

BREFM-22846

Financial Hedging, Earnings Management, and Firm Value

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Abstract

This paper examines whether managers can use financial hedging and discretionary accruals to increase their firms' value. The primary results report that the effects of financial hedging and discretionary accruals on firm value are insignificant. Therefore, we conjecture that the quality of information environment affect the performance of financial hedging and discretionary accruals. We use three variables, analyst coverage, G-index, and idiosyncratic risk, to be proxy for the quality of information environment. We find that the valuation premium of using financial hedging is concentrated among firms with better quality of information environment, while the valuation premium of using discretionary is concentrated among firms with weaker quality of information environment. More generally, our results suggest that the role of information environment in the effect of risk management on firm value is potentially significant. As a result, our paper contributes broadly to the risk management literature by identifying a channel through which real financial statement volatility is costly and directly affects value. Our study extends and integrates two distinct lines of research. The first line examines the effects of discretionary accounting choices and "real" transactions with financial hedging activities on firm value. The second line of research examines the effect of quality of information environment on performance of financial hedging and earnings management.

JEL classification: G30, G32

Keywords: Financial Hedging, Earnings management, Firm value, Quality of Information Environment

1. Introduction

Many academic explores that managers are motivated to report smoothing earnings. The survey of Graham et al., (2005) confirms this point. They find that majority of CFOs prefer smooth earnings. Their survey presents a surprising result that 78% of the surveyed executives would give up economic value in exchange for smooth earnings. Do the smoothing earnings affect firm value? In general, firms (Dichev and Tang, 2008) with better earnings predictability can attract more analyst coverage, and then drive the stock price higher.

The media, academics, and regulators realize that there are two tools used by which managers achieve their tasks of smoothing earnings. First, managers control earnings volatility through discretionary accounting accruals. Second, managers can use derivatives, such as forward, option, futures, and swaps, to mitigate the volatilities of earnings and cash flows generated from changes in interest rates, foreign currency exchange rates, and commodity prices. Barton (2001) finds that financial hedging and accruals management to serve as partial substitutes for smoothing earnings. Although the two tools can be mutually substituted, there are some differences in usage limitations between them. First, SFAS No. 133 which establishes accounting and reporting standards for derivative instruments lead the usage cost of financial hedging greater than accruals management. Second, because of economies of scale, Allayannis and Ofek (2001) find that larger firms are more likely to hedge than smaller firms. Third, unlike hedging activities through financial derivatives, EM is unable to ensure sufficient internal generated funds for investment opportunities. Finally, the regulators, investors, even analysts realize that earnings management is a proxy activity for window dressing.

Given the possibility of substantive differences between financial hedging and earnings management, some factors behind the decisions to use financial hedging or earnings management may create a different effect on the firm value. The literature provides little guidance (with a few exceptions, e.g., Barton, 2001; Picus and Rajgopal, 2002) for considering and explaining the tradeoff between financial hedging and earnings management. Artificially manipulated earnings will be detected and discounted if sufficient information is available (Bitner and Dolan, 1996), while the firms have to disclose hedging information in details, once if they use derivatives based on SFAS No. 133. Therefore, we identify that the quality of firm information environment impact on the relationship between financial hedging and earnings management on firm value. We conjecture that firms with higher quality of information environment are more likely to enhance their value through smoothing earnings used by financial hedging, while firms with lower quality of information environment are

more likely to enhance their value through smoothing earnings used by earnings management. Our empirical results support our predictions.

2. Literature review and hypothesis development

Under the efficient market hypothesis, academics may argue that EM doesn't matter if the requisite information is fully disclosed and thus investors will observe the occurrence of EM and make a reaction. In fact, Trueman and Titman (1988) and Bitner and Dolan (1996) argue that EM is temporal and detectable. In light of this, the argument - that EM increases firm value by reducing bankruptcy costs, expected tax liabilities, and underinvestment problem - depends on the extent to which the capital market cannot fully distinguish the observed smooth earnings stream that is naturally generated from those that are artificially manipulated with opportunistic motivations.¹

The cost of using financial hedging increases after SFAS No. 133. At the same time, the effectiveness of operating financial hedging is determined by operator's ability and economies of scale (Mian, 1996). Therefore, not all firms can operate financial hedging. On the contrary, managers have discretion in recognizing discretionary items to manage earnings. It is costless, while it is difficult for investors to detect how much accruals are discretionary. However, the appropriate financial hedging can really generate sufficient internal funds through reducing cost and enhancing revenues, while EM is unable to ensure sufficient internal generated funds for investment opportunities. How to detect that financial hedging activities are appropriate is determined by the disclosure of firms. Given these discussions, we conjecture that a firm's information environment affect its choice. High quality of information environment, expressed by openness to investors, is related to reduce the agency problems generated from insiders expropriating outside investors. Because of requirements that disclose hedging activities in details, firms with better quality of information environment are more likely to adopt financial hedging to reduce the cash flow volatilities directly. On the other hand, it is easy to smooth earnings through discretionary accruals for firms with low quality of information environment, since high quality of information environment leads to low degree of financial transparency (Barber et al., 2012; Bushman et al., 2004). We can induce the following two hypotheses:

H_{1a}: Ceteris paribus, firms with higher (lower) quality of information environment are more likely to enhance (hurt) their value through smoothing earnings used by financial hedging.

¹ Note that EM is not always problematic. Whether EM is problematic depends on firm managers' motivation.

H_{1b}: Ceteris paribus, firms with the lower (higher) quality of information environment are more likely to enhance (hurt) their value through smoothing earnings used by earnings management.

We follow the historical research to use analyst coverage (e.g., Bushman et al., 2004; Healy and Palepu, 2001; Yu, 2008), corporate governance (e.g., Bushman et al., 2004; Huang et al., 2012; Fich and Shivdasani, 2007), and idiosyncratic risk (Kothari, 2000; Li et al., 2014) to proxy for the quality of information environment.

3. Data

We conduct our investigation with an initial sample of S&P 1500 non-financial firms for the period between 2001 and 2010. Firms that were merged or acquired, or had missing data are dropped from the initial sample. Only those firm-year observations with non-missing Tobin's Q between 2001 and 2010 are included in our analysis. We obtained analyst information from the Institutional Brokers Estimate System (I/B/E/S) database, G-index from IRRC database, accounting variables from Compustat, and return data from CRSP. Our primary sample contains a maximum of 173,417 firm-year observations.

4. Variables Definitions

Following prior works (e.g., Allayannis and Weston, 2001; Carter et al., 2006; Jin and Jorion, 2006; Kim et al., 2006), we use Tobin's Q as a proxy for firm value. Tobin's Q is defined as the ratio of the market value of the firm's assets to the replacement cost of the firm's assets (Chung and Pruitt, 1994). We measure discretionary accruals by employing a cross-sectional modified Jones model (e.g., Dechow et al., 1995; Jones, 1991). Discretionary accruals that are proxy for earnings management are defined as the difference between total accruals and non-discretionary accruals.² Following Demeerjian (2011), we use the data item 'AOCIDERGL' collected from COMPUSTAT to identify whether a firm adopts financial hedging. This item presents unrealized gains and losses from derivatives as a part of other comprehensive income. Finally, we employ the following three variables to identify the quality of information environment: the logarithm of number of analysts covering a specific firm in a given year, G-index produced by Gompers et al. (2003), and idiosyncratic risk measured as the variance of the residual (σ_e^2) from a regression of firm's stock return on the market return for the three-year window from year $t - 1$ to year $t + 1$.

² We measure total accruals as earnings before extraordinary items and discontinued operations less operating cash flows. Not all the accruals are derived from earnings management. Non-discretionary accruals represent the normal level of total accruals that are necessary and are associated with sales and investments of fixed assets.

5. Descriptive Statistics

Table 1 describes the summary statistics for our sample consisting of non-financial S&P 1500 firms between 2001 and 2010. Our sample firms have a mean (median) value of total assets of \$6,634 (1,248) million. The mean (median) value of total sales is \$5,184 (1,175) million. On average, our sample firms conduct operations in about 3 geographic segments and operations in about 2 business segments. As the majority of our sample firms are diversified across different industrial segments. The mean (median) Tobin's Q is 1.313 (1.060). According to financial hedging with derivatives, approximately 43.3% of the sample firms report the use of financial derivatives (mean value of FD is 0.433). The percentage of firms reporting the use of financial derivatives is greater than previous studies,³ indicating the increasing importance of financial hedging in recent years. About earnings management, the mean (median) value of discretionary accruals is 0.079 (0.054).

[Insert Table 1 Here]

6. The Impact of Quality of Information Environment

6.1 Analyst Coverage

The hypothesis H_{1a} conjectures that a more financial hedging can enhance the firm value only if the firm has a better quality of financial information measured by analyst coverage. The hypothesis H_{1b} conjectures that a more earnings management through discretionary accruals can enhance the firm value only if the firm has a weaker quality of financial information measured by analyst coverage. The two hypotheses are tested by the following regression model:

$$\ln(\text{Tobin's } Q_{i,t}) = \sum D \phi_0 + \phi_1 \text{SIZE}_{i,t} + \phi_2 \text{ROA}_{i,t} + \phi_3 \text{Leverage}_{i,t} + \phi_4 \text{R\&D}_{i,t} + \phi_5 \text{CAPXR}_{i,t} \\ + \phi_6 \text{SEG}_{i,t} + \phi_7 \text{GEO}_{i,t} + \phi_8 \text{FD}_{i,t} + \phi_{82} (\text{DANA_Hi}_{i,t} * \text{FD}_{i,t}) \\ + \phi_9 \text{EM}_{i,t-2,t} + \phi_{92} (\text{DANA_Hi}_{i,t} * \text{EM}_{i,t-2,t}) + \varepsilon_{i,t} \quad (1)$$

where *Tobin's Q* is defined as the ratio of the market value of the firm's assets to the replacement cost of the firm's assets. *SIZE_{i,t}* is the logarithm of a firm's total assets at fiscal year-end. *ROA* is the pre-tax return on total assets. *Leverage* is measured by total debt as a percentage of total assets. *R&D* is the R&D expense as a percentage of annual sales. *CAPXR* is the capital expenditure as a percentage of annual sales. *GEO* indicates whether a firm is operationally hedged, and equals 1 if firm *i* reports foreign sales in year *t*, otherwise 0. *SEG* is the logarithm of a firm's total business segments. *EM* denotes the EM measure of

³ For example, 42.6% in Allayannis and Ofek (2001), 32–40% in Allayannis and Weston (2001), and 37.4% in Bartram et al. (2004).

discretionary accruals. $FD_{i,t}$ equals 1, if the firm discloses a non-zero after-tax amount of unrealized gain/loss on derivative transactions or cash flow hedges as a part of accumulated other comprehensive income during the fiscal year; and D_t denotes the window dummies. Firm i is identified as a foreign currency derivative user during fiscal year t . In order to reduce endogeneity problem in the regression, a two-stage least squares (2SLS) regression approach is applied to the estimation of Equation (1). In the 2SLS regressions, we use the credit rating, net operating tax-loss carryforwards (divided by total assets), dividend yield, and foreign sales (Allayannis and Ofek, 2001; Barton, 2001; Gay et al., 2011; Kim et al., 2006; Lin et al., 2008; Pincus and Rajgopal, 2002)⁴ as instrument variables.

We divide the firms into three quartiles according to their analyst coverage for the respective year. $DANA_Hi$ is a dummy variable that is equal to one if the number of firm's covering analysts is in the top quartile of our sample for the respective year, and zero otherwise. Our hypothesis H_{1a} predicts a negative coefficient on FD and a positive coefficient on $DANA_Hi * FD$, while hypothesis H_{1b} predicts a positive coefficient on EM and a negative coefficient on $DANA_Hi * EM$.

The results are reported in Column (2) of Table 2. The estimated coefficient for FD is significantly negative at -0.5606 and that for $DANA_Hi \times FD$ is significantly positive at 0.9943 , consistent with H_{1a} . That is, holding all other factors constant, the usage of financial hedging (FD) can enhance Tobin's Q by 0.4237% ⁵ for those firms with high analyst coverage (top 33%), whereas it decreases its Tobin's Q by an average of 0.5606% for those firms with medium and low analyst coverage (bottom 66%). On the other hand, the estimated coefficient for EM is significantly positive at 1.7409 and that for $DANA_Hi \times EM$ is significantly negative at -2.3280 , consistent with H_{1b} . That is, holding all other factors constant, each additional unit of discretionary accruals (EM) reduce Tobin's Q by 0.5871% ⁶

⁴ The instrumental variables are selected based upon the following classic studies. The classic M&M theorem implies that risk management is irrelevant to firm value when the financial markets are perfect. In a world of market imperfections, financial risk management theory argues that firms have incentives to employ risk management mechanisms to reduce expected tax liabilities (Mayers and Smith, 1982; Smith and Stulz, 1985; Graham and Smith, 1999), expected costs of financial distress (Smith and Stulz, 1985), and the underinvestment problem from costly external financing (Froot et al., 1993).

⁵ The impact of usage of financial hedging (FD) on Tobin's Q for those firms with high analyst coverage is equal to $\phi_{01} + \phi_{02} = -0.5606 + 0.9943 = 0.4237$.

⁶ The impact of discretionary accruals (EM) on Tobin's Q for those firms with high analyst coverage is equal to $\phi_{01} + \phi_{02} = 1.7409 + (-2.3280) = -0.5871$.

for those firms with high analyst coverage (top 33%), whereas it increases its Tobin's Q by an average of 1.7409% for those firms with medium and low analyst coverage (bottom 66%).

To summarize, even for firms which are already using discretionary accruals (EM), after controlling for firms with high analyst coverage, a greater magnitude of financial hedging is associated with higher firm value. Analysts with training in finance and substantial industry background knowledge can reduce agency costs by monitoring corporate management and providing information about firms to the market. Therefore, investors believe that firms with more analysts' coverage that have lower level of information asymmetries can use appropriate financial hedging to control risk. This belief leads investors to perceive that these firms are more likely to invest more risky investments and to hedge more effectively. Thus, those market values increase.

Alternatively, our results are consistent with the finding that in an environment of low information measured by analyst coverage, the market values increase in informativeness of discretionary accruals. In fact, our paper is closely related to two recent studies. Allayannis and Simko (2009) find that the market premium generated from discretionary accruals is concentrated among firms with low or no analyst following, while Tucker and Zarowin (2006) find that the change in the current stock price of higher-smoothing firms contains more information about their future earnings after control their information environment measured by analyst coverage. Moreover, we enhance the empirical results from the both papers and focus on the additional value of discretionary accruals after controlling the value of financial hedging which can substitutes for discretionary accruals to reduce risk.

6.2 Corporate Governance

Next, we use another variable, G-index, to test our hypotheses H_{1a} and H_{1b} . The two hypotheses are tested by the equation (1), where the G-index that substitutes for analyst coverage is defined as a proxy variable for the quality of information environment. We therefore construct an extreme group that is composed of firms with lowest G-index⁷ (stronger governance mechanism). Those firms ranked in this group are assigned a value of 1 for the dummy variable CG_Hi , indicating best quality of governance mechanism. In the equation (1), CG_Hi substitutes for $DANA$. Our hypothesis H_{1a} predicts a negative coefficient on FD and a positive coefficient on $CG_Hi * FD$, while hypothesis H_{1b} predicts a positive coefficient on EM and a negative coefficient on $CG_Hi * EM$.

⁷ Gompers et al. (2003) define that firms in the lowest decile of the G-index (G-index ≤ 5) are placed in the "Democracy Portfolio", while those firms have the "lowest management power" or the "strongest shareholder rights", indicating best quality of governance mechanism.

The results are reported in Column (3) of Table 2. The estimated coefficient for *FD* is significantly negative at -0.2163 and that for *CG_Hi * FD* is significantly positive at 0.9432, consistent with H_{1a} . That is, holding all other factors constant, the usage of financial hedging (*FD*) can enhance Tobin's Q by 0.7269%⁸ for those firms with best quality of governance mechanism (G-index ≤ 5), whereas it decreases its Tobin's Q by an average of 0.2163% for those firms with lower quality of governance mechanism (G-index > 5). On the other hand, the estimated coefficient for *EM* is significantly positive at 1.1282 and that for *CG_Hi * EM* is significantly negative at -4.7245, consistent with H_{1b} . That is, holding all other factors constant, each additional unit of discretionary accruals (*EM*) reduce Tobin's Q by 3.5963%⁹ for those firms with best quality of governance mechanism (G-index ≤ 5), whereas it increases its Tobin's Q by an average of 1.1282% for those firms with lower quality of governance mechanism (G-index > 5). All results in Column (3) using G-index as a proxy variable for the quality of information environment are qualitatively and quantitatively similar those in Column (2) using analyst coverage.

6.3 Idiosyncratic Volatility

Finally, we use idiosyncratic volatility to test our hypotheses H_{1a} and H_{1b} . The two hypotheses are tested by the equation (1), where idiosyncratic stock return volatility (σ_e^2) that substitutes for analyst coverage is negatively associated with the quality of firm information environment. We divide the firms into three quartiles according to their idiosyncratic stock return volatilities for the respective year. *Info_Hi* is a dummy variable that is equal to one if the firm's idiosyncratic stock return volatility is in the bottom quartile of our sample for the respective year, and zero otherwise. In the equation (1), *Info_Hi* substitutes for *DANA*. Our hypothesis H_{1a} predicts a negative coefficient on *FD* and a positive coefficient on *Info_Hi * FD*, while hypothesis H_{1b} predicts a positive coefficient on *EM* and a negative coefficient on *Info_Hi * EM*.

The results are reported in Column (4) of Table 2. The estimated coefficient for *FD* is significantly negative at -0.3057 and that for *Info_Hi * FD* is significantly positive at 0.6848, consistent with H_{3a} . That is, holding all other factors constant, the usage of financial hedging (*FD*) can enhance Tobin's Q by 0.3791%¹⁰ for those firms with low level of idiosyncratic

⁸ The impact of usage of financial hedging (*FD*) on Tobin's Q for those firms with best quality of governance mechanism is equal to $\phi_{81} + \phi_{82} = -0.2163 + 0.9432 = 0.7269$.

⁹ The impact of discretionary accruals (*EM*) on Tobin's Q for those firms with best quality of governance mechanism is equal to $\phi_{91} + \phi_{92} = 1.1282 + (-4.7245) = -3.5963$.

¹⁰ The impact of usage of financial hedging (*FD*) on Tobin's Q for those firms with low level of idiosyncratic

stock return volatility (bottom 33%), whereas it decreases its Tobin's Q by an average of 0.3057% for those firms with medium and high level of analyst coverage (top 66%). On the other hand, the estimated coefficient for *EM* is significantly positive at 1.6164 and that for *Info_Hi×EM* is significantly negative at -3.7517, consistent with H_{3b}. That is, holding all other factors constant, each additional unit of discretionary accruals (*EM*) reduce Tobin's Q by 2.1353%¹¹ for those firms low level of idiosyncratic stock return volatility (bottom 33%), whereas it increases its Tobin's Q by an average of 1.6164% for those firms with medium and high level of analyst coverage (top 66%). All results in Column (4) confirm similar evidence from Columns (2) and (3), and reinforce the inference that the effects of financial hedging (*FD*) and discretionary accruals (*EM*) on firm value respond by the quality of firm information environment.

[Insert Table 2 Here]

7. Conclusions

Traditionally, managers have two tools, financial hedging and discretionary accruals, to reduce risk generated from the volatilities of earnings and cash flows. Whether managers use financial hedging or discretionary accruals to control risk and then to increase value? The empirical results are mixed. In this paper, we expect that the mixed results are associated with the quality of firm information environment. After controlling the quality of information environment, we find that firms with better quality of information environment (lower level of information asymmetry) are more likely to use financial hedging to enhance value, while firms with worse quality of information environment (higher level of information asymmetry) are more likely to use earnings management to enhance value.

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stock return volatility is equal to $\omega_{b1} + \omega_{b2} = -0.3057 + 0.6848 = 0.3791$.

¹¹ The impact of discretionary accruals (*EM*) on Tobin's Q for those firms with low level of idiosyncratic stock return volatility is equal to $\omega_{b1} + \omega_{b2} = 1.6164 + (-3.7517) = -2.1353$.

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Table 1 Summary Statistics of Firm Characteristics

This table presents summary statistics for our sample of S&P 1,500 non-financial firms. The total sample includes firm-year observations with non-missing Tobin's Q between 2001 and 2010. Tobin's Q is defined as the ratio of the market value of the firm's assets to the replacement cost of the firm's assets in the fiscal year end. FD equals 1, if the firm discloses a non-zero after-tax amount of unrealized gain/loss on derivative transactions or cash flow hedges as a part of accumulated other comprehensive income during the fiscal year. EM is the average absolute value of yearly discretionary accruals scaled by lagged total assets. The discretionary accruals are estimated using Modified Jones model. Analyst coverage is the number of analysts covering a specific firm in a given year. G-index is obtained from IRRC database. E-index provided by Bebchuk et al. (2009) is proxy for managerial entrenchment.

	S&P 1,500 non-financial firms					
	# of obs. (firm*yr)	Mean	Std. Dev.	1st quartile	Median	3rd quartile
<i>Total assets (millions)</i>	14555	6634	26947	456	1248	4069
<i>Total sales (millions)</i>	14555	5184	17479	419	1175	3637
<i>ROA</i>	14518	0.030	0.144	0.012	0.048	0.086
<i>Leverage</i>	14106	0.496	0.208	0.340	0.506	0.649
<i>R&D</i>	14189	0.037	0.065	0	0	0.043
<i>Capital expenditure</i>	14195	0.059	0.068	0.02	0.036	0.068
<i>No. of business segments</i>	11592	1.708	1.044	1	1	2
<i>No. of geographic segments</i>	12870	2.979	2.276	1	2	4
<i>Foreign and export sales/total sales</i>	14510	0.236	0.259	0	0.150	0.422
<i>Tobin's Q</i>	13384	1.313	0.901	0.706	1.060	1.654
<i>FD</i>	14599	0.433	0.496	0	0	1
<i>EM (Discretionary accruals)</i>	12565	0.079	0.087	0.031	0.054	0.095
<i>Analyst Coverage</i>	14555	7.7733	7.1694	2	6	12
<i>Gindex</i>	10022	9.198	2.536	7	9	11

Table 2 The Impact of Quality of Information Environment

This table presents the panel regression results for the impact of the quality of information environment on the performance (proxy for Tobin's Q) of financial hedging (FD) and earnings management (EM). The total sample includes firm-year observations with non-missing Tobin's Q between 2001 and 2010. The proxies for the quality of information environment include analyst coverage, G-index and Idiosyncratic risk. Analyst coverage is the number of analysts covering a specific firm in a given year. G-index is obtained from IRRC database. Idiosyncratic risk is measured as the variance of the residual (σ_e^2) from a regression of firm's stock return on the market return for the three-year window from year $t - 1$ to year $t + 1$. A two-stage least squares (2SLS) regression approach is applied to the estimation of the following equation:

$$\ln(\text{Tobin's } Q_{i,t}) = \sum D \phi_0 + \phi_1 \text{SIZE}_{i,t} + \phi_2 \text{ROA}_{i,t} + \phi_3 \text{Leverage}_{i,t} + \phi_4 R \& D_{i,t} + \phi_5 \text{CAPXR}_{i,t} + \phi_6 \text{SEG}_{i,t} + \phi_7 \text{GEO}_{i,t} \\ + \phi_8 \text{FD}_{i,t} + \phi_9 (\text{Quality_Hi}_{i,t} * \text{FD}_{i,t}) + \phi_{10} \text{EM}_{i,t-1,t} + \phi_{11} (\text{Quality_Hi}_{i,t} * \text{EM}_{i,t-1,t}) + \epsilon_{i,t}$$

Where *Quality_Hi* is defined as highest analyst coverage (*DANA_Hi*), lowest G-index (≤ 5 , *CG_Hi*), and lowest level of idiosyncratic risk (*Idio_Hi*), respectively. Other variables are the same as those in Table 3. Statistical significance at the 10, 5, and 1% level is indicated by *, **, and ***, respectively.

	(1)	(2)	(3)	(4)
		Coverage	G-index	Idio risk
<i>Intercept</i>	-0.1586 (-1.19)	0.0724 (0.50)	-0.1972 (-1.45)	-0.0014 (-0.01)
<i>Size</i>	0.0234 (1.42)	-0.0225 (-1.18)	0.0311* (1.86)	0.0043 (0.27)
<i>ROA</i>	3.1486*** (14.91)	3.0682*** (14.78)	3.1601*** (14.88)	3.0998*** (14.81)
<i>Leverage</i>	-0.3078*** (-3.14)	-0.1421 (-1.37)	-0.3048*** (-3.05)	-0.3384*** (-3.32)
<i>R&D</i>	1.8120*** (8.05)	1.4685*** (6.13)	1.8355*** (7.85)	1.7185*** (7.62)
<i>CAPXR</i>	1.0554*** (6.40)	1.0534*** (5.49)	1.0751*** (6.34)	0.9353*** (5.40)
<i>SEG</i>	-0.0853*** (-3.13)	-0.0413 (-1.40)	-0.0810*** (-2.93)	-0.1104*** (-3.98)
<i>GEO</i>	0.0099 (0.33)	0.0314 (0.96)	0.0114 (0.37)	0.0291 (0.92)
<i>DCD</i>	-0.1288 (-1.05)	-0.5606*** (-3.95)	-0.2163* (-1.74)	-0.3057** (-2.26)
<i>DANA_Hi*DCD</i>		0.9943*** (6.27)		
<i>CG_Hi*DCD</i>			0.9432** (2.53)	
<i>Idio_Hi*DCD</i>				0.6848*** (5.41)
<i>EM_{DAC}</i>	0.9799 (1.55)	1.7409** (2.38)	1.1282* (1.75)	1.6164** (2.37)
<i>DANA_Hi*EM</i>		-2.3280** (-2.14)		
<i>CG_Hi*EM</i>			-4.7245** (-2.51)	
<i>Idio_Hi*EM</i>				-3.7517*** (-3.79)
<i>Adj. R²</i>	0.2792	0.1431	0.2442	0.2174

BREFM-22439

Is the Disposition Effect Related to Locus of Control during Financial Crisis

Pi-Hsia Yen, Ya-Chung Sun
Vanung University

Abstract

One of the important factor of consumer behavior is investors' investment. In the context of behavioural finance, the disposition effect refers to a phenomenon that investors sell winners too early and ride losers too long (Shefrin and Statman, 1985). Previous behavioural finance studies primarily document the existence of the disposition effect addressing the impact of subject riskiness, market states, investment performance, etc., and the key factor of affect investors' disposition effect is the market states.

The specific market state is financial crisis. The investors will have different mental account during the period of financial crisis, and will it impact on the patterns of disposition effect? In our study, we take the locus of control as the investors' mental account that suggest by Rotter (1966), it refers as the reactions of personal to others and the combination of then.

In our study, we study on that will the locus of control impact on disposition effect during financial crisis. We take the investors in Taiwan and China as the research sample, the sample period is from July 2001 to December 2014. We take event study, volatility index and Credit Default Swap index to identify of the period of financial crisis. Therefore, we take quantile regression model to identify the internal and external control investors.

Psychology 2

Roma

2015/07/22 Wednesday 10:45-12:15

Session Chair: *Prof. Stephanie Lee*

ISBSS-4596

Self-Regulation in Adolescent Who Has Experienced Sexual Exploitation

Trifani Mayka Ratri | *Ahmad Dahlan University*

ISBSS-4598

Psycholax Training to Reduce Cheating Behavior among High School Students

Listri Laila Tamami | *Universitas Ahmad Dahlan*

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Yuka Dewingga | *Universitas Ahmad Dahlan*

Indra Permana | *Universitas Ahmad Dahlan*

Giska Mutia Ramadhani | *Universitas Ahmad Dahlan*

ISBSS-4604

Emotion Perception and Social Use of Language in Autism Spectrum Disorders

Yan Grace Lam | *Hong Kong Institute of Education*

ISBSS-4564

Evaluation of the Psychological Health of Adolescents in China

Stephanie Lee | *Hong Kong Polytechnic University*

T. K. Cheng | *UNESCO Hong Kong*

Samson Ma | *UNESCO Hong Kong*

ISBSS-4596

Self-Regulation in Adolescent Who Has Experienced Sexual Exploitation

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ABSTRACT

Adolescence is the most important period in the formation of a mature personality because it's a period where a person looking for identity and the conditions that best fit her expectations. The process of looking for identity is influenced by a healthy living environment, past experiences, future expectations, social support from the significant person, and a positive social environment. For adolescence who have experienced sexual exploitation, the process of looking for identity becomes a very vulnerable state in the formation of a mature personality because of the traumatic experience, unhealthy environments, and a negative association. Poor self-regulation makes the adolescent trapped in a promiscuity and a lot of the negative impact of sexual exploitation. Therefore, this study protocol aims to determine the impacts and self-regulation which is owned by adolescence after experiencing the sexual exploitation.

This study protocol will used qualitative method with case study approach. Subject will be an adolescent in Kulon Progo Ragency who has experienced sexual exploitation chosen by purposive sampling method. Data collection is done by interview, observation, and study documents. Data analysis is done by using content analysis, and the research trustworthiness will be done by data triangulation and member check.

Keywords : self-regulation, adolescent, sexual exploitation

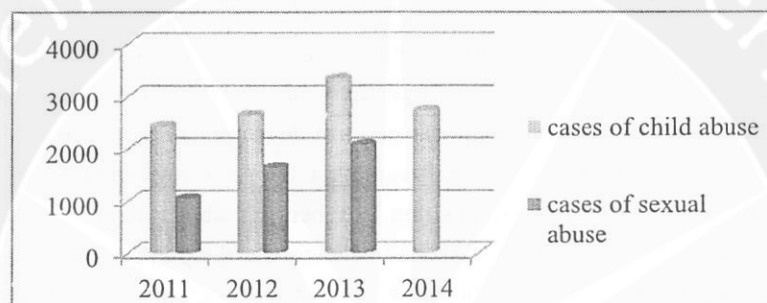
INTRODUCTION

Over the past few years, Indonesia has experienced quite alarming condition associated with high cases of child abuse. Such as the national commission for child protection which is called Komnas PA, which at the end of 2014 states that Indonesia is at a state of emergency due to high incidence of violence against children (Waie, 2014). The most alarming of these conditions that the majority of the cases of sexual abuse of children.

Sexual abuse of children is all kinds of actions involving children in sexual activity, in which an adult or another child who is older or other people who have more knowledge to use it for

sexual pleasure or sexual activity (Maslihah, 2013). Lyness (Maslihah, 2013) mentions sexual abuse of children may be the act of touching or kissing sexual organs of children, rapes, showing pornographic media or objects, and show the child's genitals. The form of sexual abuse of children is increasingly rife is precisely acts of sexual exploitation committed by those closest to the child because it was motivated by economic factors. Sexual exploitation includes child prostitution, child pornography and sex tourism (Wikipedia.org, 2015). The graph below is data on the number of cases of child abuse reported to Komnas PA over the past few years.

Figure 1. Distribution of Number of Cases of Sexual Abuse of Children In Indonesia
According to data Komnas PA 2014 (Waie, 2014).



Kulon Progo Regency, Daerah Istimewa Yogyakarta (DIY) also did not escape the emergency cases of child abuse. According to data recorded by the agency for women's empowerment and society which is called BPPM (2014), in 2012 36.4% of the cases of violence is sexual abuse with 21.9% of them experienced by children of junior high school. In 2013 there were 37.3% of cases of sexual abuse with 21.6% of the victims were children of junior high school. These data only the data that has been recorded or reported it, it fosters the assumption that the number of actual cases is far greater in number, but neither party reported.

Seeing these data, it can be seen that in Kulon Progo, children at junior high school are most vulnerable to violence, especially sexual abuse. Junior high school age children are in the age range 12 to 15 years old and classified as a adolescence. According to Santrock (2007), adolescence is a period of transition the development of childhood to early adulthood. According to Erikson (Santrock, 2007), in this period adolescents are faced with the challenge of finding himself, about who he is and what his life would come when adults. The tasks of these developments make adolescence had a great curiosity, so they are often try new things. Starting from that then make various changes in behavior to conform to the image of his ideal self at the time.

According to Bandura, the way one does change behavior is influenced by two phenomena. First, humans can think and regulate their own behavior so that instead of merely pawns which become the object of environmental influences. Secondly, there are many aspects of personality functioning that involves interaction with other people's person, so the social context in which the behavior was obtained must also be taken into account. Both of these phenomena indicate that human behavior can occur due to the reciprocal interaction between cognitive continuously, behavior, and environment. Through the mutual interaction of the people will be able to determine or control the behavior by controlling the power of the environment, but the person is also controlled by environmental forces (Alwisol, 2012).

Ability to control their own behavior is referred to self-regulation. Bandura (Alwisol, 2012), states that humans have the ability to be able to organize themselves, and influence behavior by regulating the environment, creating a positive support, then held the consequences for their own behavior. So that adolescent can perform development tasks properly and do not fall in the wrong environment, the self-regulation becomes important for being owned. According to Dariyo (2011), self-regulation is a person's ability to manage, control, and directs all the potential, attitude, thoughts and behavior for the purpose of self-development. When a person can control himself, then he will be able to control or regulate their behavior to achieve the end state or purpose (McCullough and Willoughby, 2009).

Have a good self-regulation is quite difficult for adolescents with certain conditions, such as adolescents who are in neighborhoods that are less supportive and have experienced traumatic events such as sexual exploitation. Both of these conditions is certainly cause considerable difficulties for young people to be able to perform the task of development well to achieve mature personality through self-regulation is good also. This is because they get a variety of negative effects from the experience.

The impact of sexual abuse can be experienced by victims may occur physically, socially, and psychologically. Physical impacts include organ damage, insomnia, vulnerability experienced sexually transmitted diseases, and unwanted pregnancies. Social impact include aggressive behavior, isolating themselves, and the worst is to be perpetrators of violence on the same kind of violence in the future. The psychological impact include, feelings of guilt and self-blame, sexual dysfunction, somatization, anxiety, PTSD, depression, panic disorder, schizophrenia, and personality disorders (Sulistyaningsih and Faturachman, 2002; Hidayah 2007, Maslihah, 2013).

For victims of sexual abuse, especially sexual exploitation, impact experienced will usually be more complex. A victim has the possibility to experience three effects at once: physical, social, psychological well where it will potentially lead to impact worse, not infrequently in the end the victim precisely inserting itself in promiscuity. That victims who have suffered the effects of violence or sexual exploitation that does not become worse off until finally trapped on promiscuity, it is necessary to have the right of self-regulation. The impact of what will be experienced by the victim after an incident of sexual exploitation is also highly dependent on the regulation itself, therefore, self-regulation is important.

One example of adolescent who experienced sexual exploitation is the subject in this study. The subject was a 15-year-old girl who now lives with her father since her parents divorced. Subjects are victims of sexual exploitation committed by her mother when she was 14 years old. Subject employed as sex workers to sell her to the men who seek sexual satisfaction. After the incident, her school activities become neglected then she labeled as a bad girl. Her association became increasingly free, she often went with different male friends in a long time. However, her father did not prohibit and impressed not matter to the subject. The subject's neighbors tried to reprimand her, but she returned to repeat her actions so that the neighbors was also labeled by brat.

Once the subject becomes a victim, she did not receive proper psychological assistance so that neither party can give her support. This is resulting the subject can not lead themselves to be at a positive association, but rather to free promiscuity, in other words, the subject has not been able to do with the right of self-regulation. Subjects who remained in adolescence where it should search for identity, the support of a conducive living environment, as well as a positive association as well in order to achieve the ideal conditions for her. However, the unpleasant experience of the subject plus a living environment that negative into a major challenge for the subject to regulate themselves properly and appropriately. Therefore, this study was conducted to determine the impact of what is experienced and self-regulation which is owned by adolescent after experiencing sexual exploitation.

METHODS

Strategy of Inquiry

This study will be conducted using qualitative research methods. According to Creswell (Ahmadi, 2014), qualitative research is an understanding of the proceedings based on a clear methodological tradition to explore social issues or human.

The approach used in this study is a case study approach. According to Anwar (2010), a case study is an investigation of the case study is an in-depth investigation concerning a social unit

so as to produce a picture that is well organized and complete concerning the social unit. The purpose of such case studies is to intensively study the background, the current status, and environmental interactions that occur in a particular social unit (Anwar, 2010).

Sampling

The determination of the subjects in this study is not based on the large number of people are required, but depending on who can provide more important information needed (Ahmadi, 2014). Subject in this study was a girl in Kulon Progo who have experienced sexual exploitation were selected using purposive sampling method.

Data Collection and Data Analysis Method

The data collection method used in this study were interview, observation, and study documents. After the data is collected, the data will be analyzed. In this study, analysis of data using content analysis approach. According Muhadjir (2007), content analysis is a scientific analysis of the contents of the message in a communication. By using this technique researchers can examine the document in the form of a general category of meaning (Soemantri, 2005).

Research Trustworthiness

To qualify the credibility, it will be done triangulation of data. According to Ahmadi (2014), triangulation of data is the use of a variety of data sources to produce findings and interpretations were trustworthy. Researchers will conduct interviews to significant person in this data triangulation step. The reliability of the study was also conducted by qualified dependability through member check is to restore the transcript of the interview on the subject to get a reconfirmation of the validity of such data.

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ISBSS-4598
Psycholax Training to Reduce Cheating Behavior among High School Students

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Abstract

Cheating is a familiar phenomenon in education. Cheating is dishonest behavior to achieve a profit (Eric et al. in Hartanto, 2012). The strategies of cheating behavior are writing down the formulas on small paper or tables, bringing the textbook to the exam room, working together with friends during the test, and so on. The habit of cheating is caused by two factors, namely internal and external factors. This research aims to investigate the effect of psycholax training among high school students and their parents.

The researcher focuses on high school students because this phase is a transition period to adulthood phase where the personality and habits begin to form fixed. The psycholax is an abbreviation of psychoeducation and relaxation, offering two sub training for subjects of cheating behavior and parents. This study is conducted in order to explore the proper method in reducing cheating behavior of high school students and increase the understanding of the parents for positive supporting the students' achievement.

The research method is an experiment with pretest-posttest control group design. The data collection techniques are cheating scale for students and a questionnaire for parents assessing their positive support. Analysis of the data used is the SPSS 16.0 software.

Keywords: Cheating, Psycho-education, Relaxation, Students, Parents.

1. Introduction

Cheating is not a new issue in education. According to Eric et al. in Hartanto (2012), cheating is dishonest effort in gaining some advantages. Sari and Gusniarti (2008) find cheating ways in Indonesia such as bring the small notes, write down the formulas on the table, and bring the note books to the exam room which is the extreme way of cheating. This fact is in contrast with the education purpose mentioned in the preamble of 1945 Constitution which is to develop the nation's intellectual life (educate the generation of nation). Meanwhile the term of to educate itself is never terminated by the highest academic rank or the academic rank gained through cheating.

Schab (in Sujana and Wulan, 1994) found 93% students declare that cheating is normal behavior and as part of life. This statement is reinforced by Hartanto (2012) mentions that cheating behavior is often done by almost all of the students from elementary school (SD) to post graduate (S2 and S3). Those facts show that cheating behavior in Indonesia has been happening for years and also indicating moral crisis in education aspect. Meanwhile, these students are the next generation who will lead Indonesia development. Reflecting from the study, this becomes a problem for educators (teacher), government, parents and society to establish the importance of honest behavior as one of moral characters.

The researchers take senior high school students as the sample because they are at transition period and can't stand toward changes and demands like demands of high academic ranks which comes from the parents and teachers, and also demand of the future career which requires high academic rank. Sari and Gusniarti (2008) explain that at these ages students face runaway phase to get attention, safety, and willingness to explore the interaction with the world which is the reason for students to do violation such as cheating.

Psycholax (psycho-education and relaxation) is two kinds of exercises targeted students' cognitive, affective and psychomotor aspects in order to reduce and even terminate the internal and external aspects of cheating behavior. Psycho-education is giving both parents and students information about cheating behavior, its effect and effort to overcome it. Relaxation is a therapy to prepare student's mental in doing the homework and exam without cheating. The problem in this research is whether the psycholax training is able to reduce the senior high school student cheating behavior and whether psycho-education can give the understanding to parents to accept student achievement positively or not.

The objective of the research is to find the right method to reduce the high school students cheating behavior and improve the positively understanding the students achievement by parents.

2. Theoretical Frame work

2.1 Cheating Behavior

Cheating is dishonest action to gain some advantages (Eric et al. in Hartanto, 2012). Dellington (in Kushartanti, 2009) mentions that cheating behavior is an effort to be succes by cheating or dihonest ways.

According to Azwar (2003), the aspects of cheating behavior are :

- a. Behavior intency, is the belief that the behavior can lead toward the expected or unnecessary result.
- b. Subjective norm, is the belief toward behavior which is normative (behavior desired by other) and motivation to take an act as expected.
- c. Control behavior, is the past experience and the individual presupposition toward how hard and easy the application of the desired behavior.

Hethering and Feldman (in Anderman and Murdock, 2007) group the cheating behavior into four group as follows:

1. Individualistic-opportunistic is student's behavior where they open the note to change the answer when the teacher is leaving the exam room while the test is in process.
2. Independent-Planned is planned plan to cheat in test room using well prepared notes even the answers of the test.
3. Social-Active is cheating behavior which is copying other student's answers by asking, peeking and copying their answer sheet.
4. Social-passive is allowing other students to copy, peek, and ask the answers.

According Hartanto (2012) there are internal and external factors cause the cheating behavior. The internal factors are such as low self-efficacy, low academic capability, time management and procrastination behavior. Meanwhile, the pressure from other students, parents, unclear school rules, and unforceful action of teacher toward students who commit cheating behavior are the external factors that cause cheating behavior.

2.2 Psycho-education

Goldman and Quin (in Bastable, 2002) say that Psycho-education is education for people who experience psychiatric disorders in some areas of study that will help them to reach the goal of treatment and rehabilitation. Meanwhile, psycho-education in this research was given to the research subject that are students and their parents about all of the information of cheating behavior, the impact and efforts to deal with it.

2.3 Relaxation

Relaxation is a relaxed condition of muscle after stretching, while relaxation therapy is a therapy which is pointed toward an effort or teaching the patients to take a rest and relax with the assumption that the muscle in a relaxed condition so that it can reduce the psychological tension (Chaplin, 2005). Relaxation is an exercise to reduce the stress which is divided into four categories (Hartono, 2011):

a. Muscle relaxation

The body in a relaxed condition is the goal of this relaxation which is gained by repeatedly holding the arm and sleeve then release it.

b. Relaxation with breathing exercise

The relaxation which can reduce the tension effectively, breathing as usual, taking a deep breath then slowly breathing it out through the mouth. This relaxation can be done while sitting or lying down and imagining the beautiful and lovely scenery.

c. Relaxation with Hypnosis/autosuggestion

This relaxation can be done by breathing slowly and relax. While exhaling slowly, imagine a positive/good condition. This relaxation method can be done based on the individual belief and will bring benefit if it is done regularly. It's called hypnosis/autosuggestion relaxation.

d. Relaxation in other ways

This relaxation can be done by doing activity such as singing, walking, sitting while enjoying the beautiful scenery or doing favorite activities.

2.4 Psycho-education and Relaxation

Psycho-education's goal is educating patients who have psychiatric problem in courses and will help them receive healing and rehabilitation. The variable taken is cheating behavior.

Psycho-education targets cognitive cheaters at senior high schools which covers things such as informing students about the importance of acting honestly when doing exam or homework, setting cheating indicators categorizing what are said as cheating and categorized as cheating, and giving ways of how to study effectively by managing time so that the students will not do cheating anymore. Psycho-education also targets parents in order to give them understanding about cheating phenomenon in school and how to reduce the external factor of cheating. This can be done by giving a positive behavior toward students achievement, and by giving moral education from parents to students.

Relaxation therapy is a therapy which is focused on teaching patients on how to take rest and relax based on the assumption that relaxed muscle can help reduce psychological tension. The relaxation is intended to reduce the risk caused by internal cheating behavior factor such

as anxiety or worry toward low rank, unconfidence, low self-efficacy, low academic rank, time management, and procrastination (Hartanto, 2012). The researcher wants to find out whether the internal factor of cheating behavior can be reduced or even terminated through relaxation therapy.

2.5 Psycholax Training

Psycho-education and Relaxation (psycholax) can be applied through training to students. Sudjana (2007) mentioned that training is learning effort which is held by organization (agency, government, non-governmental organization, company) to fulfill the organization goals. A successful training is when it is able to reveal facts or performances done by human resources which are like what's desired by the organization which holds the training (Sudjana, 2007).

Psycholax is two kind of training which is targeted to senior high school students which covers cognitive, affective and psychomotoric aspects in order to reduce or terminate the internal and external cheating behavior factors. The training is given for one month. The first two weeks are used to give the training and the training room for the students and the parents is separated because the material given is different. The last two weeks are used for the relaxation to face the exam, which are breathing relaxation and hypnosis/autosuggestion relaxation each.

3. Research stages

The research stage starts by surveying the targeted senior high schools and then selecting the class as the subject of the research (using cluster random sampling) and sharing the scale of cheating behavior to each student. There are twenty students involved, ten of them holding the highest ranks of the cheating behavior are used as the experiment group while the rest are used as control group.

The experiment group is given the psycholax training 4 times, done twice in two weeks and the training room for the students and the parents is separated because the material given is different. Next, to pass the exam, the students are given the relaxation therapy in the form of giving breathing practice and hypnosis relaxation which is given two weeks after the psychoeducation is given. Finally, the cheating behavior scale is re-administered the next week after that. On the other side, the control group is not given any treatment but they have to do the pre-test and post-test.

X_1 T X_2

Y_1 Y_2

Explanation :

X_1 : Experiment group Pre Test

X_2 : Experiment group Post Test

T : Treatment

Y_1 : Control Group Pre Test

Y_2 : Control Group Post Test

3.1 Outcome

The research outcome is that the training can make the cheating behavior among the subjects of the research, who are the senior high school students, is reduced or even terminated. Meanwhile, the parents will understand the cheating phenomenon in education and its external factors and they are able to control them by building positive attitude toward the students' school achievement and giving moral education for them.

3.2 Research Indicator

The triumph of psycholax for students can be seen through post-test result given by the researcher which shows the decrease of cheating behavior intensity than the one of the pre-test result, or even the cheating behavior can be terminated completely. Otherwise, psycholax for parents will be considered a success if the questionnaire shows that parents have positive behavior toward student's school achievement.

3.3 Technique of Data Collection

The research instrument is pre-test and post-test scale. These scales are written favorable statements (supporting the described attributed scaled) used to gather information about behavior indicator which is related to the attribute. The scale is four possible answers which are flexibly chosen by the research subjects ranging from very suitable (VS), suitable (S), unsuitable (U) and Very Unsuitable (VU). Each answer has each score with same range interval and the subject chooses one answer from four possible answers.

The instrument for measuring parents' positive behavior toward their children is questionnaire.

3.4 Data Analysis

The data analysis is using SPSS16.0 software program and the hypothesis is tested using non-parametrical form because of the respondents of the experiments are less than 30 respondents.

3.5 Research Agenda

Here is the time table of research agenda in 18 weeks.

Activity	MONTH																	
	1			2			3			4			5					
Research Preparation																		
Administrative Preparation																		
First Survey Of Data Resource																		
Research Implementation																		
Permit taking																		
Pre-test																		
Implementation of the psycho-education training for parents																		
Implementation of psycho-education training for students																		
Implementation of Relaxation training																		
Post Test																		
Evaluation																		
Data Analysis																		
Preparation of report writing																		
Report Writing																		

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Emotion Perception and Social Use of Language in Autism Spectrum Disorders

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ABSTRACT

Emotion perception is regarded as one domain of social and affective development. Measuring the ability to perceive emotions provides a useful index of social referencing in human interaction. A number of studies suggested that people with autism have difficulty in perceiving and understanding emotions. This has proved to be useful in conceptualizing some of the social impairments of the condition. More recently, a role for the frontal lobe (particularly the right side) in emotion perception has been recognized, and frontal lobe lesions are known to impair pragmatics. The current study, therefore, attempts to evaluate how impairments in emotion perception could have contributed to their pragmatic style in a group of Chinese children with high-functioning autism.

A group of verbal children with high-functioning autism completed a computerized emotion perception tasks and their social language was rated using the Pragmatic Rating Scale. Compared to their typically developing control counterparts stringently matched on verbal and non-verbal intelligence, the autism group performed more poorly when matching “simple” emotions. However, surprisingly, their competence to match “complex” emotions was somewhat the same as their typically developing counterparts. The intriguing results were discussed in relation to the intelligence profiles of the two groups as well as pragmatic anomalies observed in children with autism.

Keyword: Autism Spectrum Disorders, emotion perception, social referencing, theory of mind, pragmatics

1. Introduction

Hobson, a British psychologist, attempted to describe social failure in autism in terms of a lack of this instinctive ability to perceive and understand emotion (Hobson, 1989), what he referred to as a “limited concepts of persons” (Hobson, 1982, 1993, p.12). He observed that individuals with autism had a poor understanding of the experiences and psychological orientation of others; emotional expressions in particular did not hold the same information

for the person with autism compared to people without the condition. For example, children with autism preferred to sort pictures of people by the hats they wore rather than their facial expressions (Weeks & Hobson, 1987). Although it would appear that Hobson's hypothesis of an inability to establish interpersonal relatedness in autism coincides somewhat with "theory of mind" concepts, he contested the "theory of mind" position that mental states were inferred from behavior and could not be directly observed (Hobson, 1993). This he believed to be "restrictively cognitive" (Hobson, 1990, p.114; Leslie & Frith, 1990). Moreover, Hobson even opposed the use of the word "theory" to describe knowledge about human minds as he felt such a description demeaned the subject matter (Hobson, 1993). He asserted that being able to perceive and understand emotion was the more plausible foundation for a "psychological understanding" of the way others feel or think in a given context.

Baron-Cohen (1988) attempted to reconcile this debate by suggesting that the "mentalising" abilities and capacity to perceive emotion are not related in people with autism, but possibly provide two discrete characteristics which might distinguish subgroups of individuals with an autistic spectrum disorder. In spite of this annotation to pause the debate, this proposition was not supported by subsequent studies (Buitelaar & van der Wees, 1997; Buitelaar, van-der-Wees, Swaab-Barneveld, & Jan-van-der-Gaag, 1999b; Kamio, Toichi, Ishisaka, & Zen, 1997; Loveland et al., 1997) and it has proved difficult to disentangle the two concepts.

The current study therefore attempts to replicate findings of an emotion perception deficit in Chinese children with high-functioning autism, with the eventual aim to understand whether such a process contributes to their pragmatic style.

1.1 Methodological Issues

A number of studies have highlighted the importance of matching experimental groups when measuring emotion perception in autism. No significant group difference has been found when groups are matched on verbal ability while significant group differences emerge when the autism group is matched to the control group on non-verbal mental age (Braverman, 1986; Braverman, Fein, Lucci, & Waterhouse, 1989). These unusual observations have been repeated in subsequent studies (Ozonoff, Pennington, & Rogers, 1990; Prior, Dahlstrom, & Squires, 1990). A recent study suggested that both verbal and non-verbal intelligence have impacts on an emotion perception test (Buitelaar et al., 1999b). Therefore, the autism group and normal control group were matched on both verbal and non-verbal intelligence in the present study.

In any study of emotion perception, it is possible to argue that the task design is too subjective, i.e. the designer imposes his/her own interpretation of the stimuli. In order to minimize this bias, inter-rater reliability was assessed between 2 student helpers of which 1 was blind to the task design and the types of emotion included in the test. The inter-rater reliability was high; the Russell and Rao correlation coefficient (for binary coding of responses) = .917.

1.2 Objectives of the study

The objectives of the current study are two-fold: first, to assess the ability to perceive emotions in verbal children with ASD, and second, to examine the possible relationship of such ability with the readings of their pragmatic skills. We hypothesize that the ASD group will exhibit significantly more pragmatic oddities (higher scores on the Pragmatic Rating Scale) and poorer performance on the Emotion Perception task (lower scores) than the typically developing control group. Finally, we expect to find a positive relationship between emotion perception ability and pragmatic skill.

2. Method

2.1 Participants

In the initial screening, 31 children with HFA were recruited from a special school and two Parent Resource Centers serving families with autism children. Thirty-four normal children in the control group were volunteers recruited from different schools.

Children with HFA included in this study received their diagnoses of autism from either clinical psychologists in child assessment centers or pediatric psychiatrists. Caregivers of prospective participants were interviewed before the actual testing. Children with a history of brain injury, fragile-X syndrome, tuberose sclerosis, epilepsy, or other known medical conditions associated with autism (APA, 1994) were excluded.

During the screening interview, all prospective participants completed the verbal subtests of Wechsler Intelligence Scale for Children-Revised (adapted Hong Kong version) (Wechsler, 1981; The Psychological Corporation) as a measure of verbal intelligence. The Raven's Progressive Matrices (Raven, Court, & Raven, 1976) were administered to measure their non-verbal intelligence and any child with an IQ less than 80 was excluded.

For the HFA group, Childhood Autism Rating Scale (CARS; Schopler, Reichler, & Renner, 1988) was used as a screening tool to select participants with similar abilities. The primary caregiver of each child with HFA in the final group was then interviewed using a translated

Chinese-version of the complete Autistic Diagnostic Interview-Revised (ADI-R) (Lord, Rutter, & Le Couteur, 1994) to confirm their diagnoses.

In the final sample, 26 children with HFA with verbal IQ's from 87 to 141, and age ranging from 8.78 to 15.17 years were selected.

The control group comprised 26 normal children with verbal IQ's from 92 to 137, and age ranging from 6.64 to 14.91 years. The male-to-female ratio of the autism group was 22:4, compared to 23:3 in the control group. Each child in the control group was matched to his/her counterpart in the autism group on several variables in descending priority: verbal IQ, non-verbal IQ, age, gender, and socioeconomic status. All participants completed the same battery of tests including WISC-R for verbal IQ and Raven Progressive Matrices for non-verbal IQ. Characteristics of participants included in the final testing are summarized in Table 1.

Table 1. Descriptive characteristics of the sample

	Autism group (n=26) X (SD) range	Control group (n=26) X (SD) range	t	p
CA	11.89 (1.77) 8.78-15.17	10.07 (2.36) 6.64-14.91	3.145	.003
VIQ	116.54 (16.21) 87-141	123 (11.4) 92-137	-1.663	.103
NVIQ	104.85 (8.59) 84-124	108.54 (11.57) 70-128	-1.306	.197
CARS	35.76 (3.79)	not applicable		
Gender (M:F)	22:4	23:3		

T-tests for independent samples were performed to compare the group differences on chronological age, verbal competence, and non-verbal intelligence. The only significant difference between groups was in chronological age.

2.2 Measurement tool

The Emotion Perception Test was used to assess the ability to perceive emotion.

2.2.1 Apparatus

The Emotion Perception Test was deployed on an IBM compatible laptop computer (with a TNT12.1screen) with an Experimental Run Time System platform (ERTS, version 3.28, Berisoft Cooperation, 1987-1999). External ERTS compatibles included the response keypad and the control box connecting the keypad to the computer.

2.2.2 Procedure

The procedure was similar to that used by Ozonoff, Pennington and Rogers (1991), apart from the use of a computer. Four professional stage actors and actresses (two males and two females) had photographs taken of 9 different facial emotional expressions; 4 simple emotions and 5 complex emotions. The simple emotions were happiness, sadness, anger and fear; the complex emotions were contentment, disgust, shame, surprise, and curiosity. One actor and one actress took 2 more pictures of their expressionless faces (indifference) for the practice trials. Thus, there were 38 facial stimuli in total.

The test comprised of 2 practice trials and 36 test trials. In the first practice trial, two expressionless faces (indifferent) of a male and female were presented side by side on the computer monitor. The experimenter asked the participants the prompt question "Do these two persons feel the same?" In the second practice trials, another two faces were presented the same way as in the first practice trial. This time the two faces expressed obviously different emotions (surprise versus indifference). All the participants correctly responded to the two practice trials, and were invited to begin the actual test by pressing the key on the response keypad.

In each test trial, a target face was shown on the left-half of the computer monitor, with four other faces (response choices) on the right, one of which expressed the same emotion as the target (Figure 6.1).

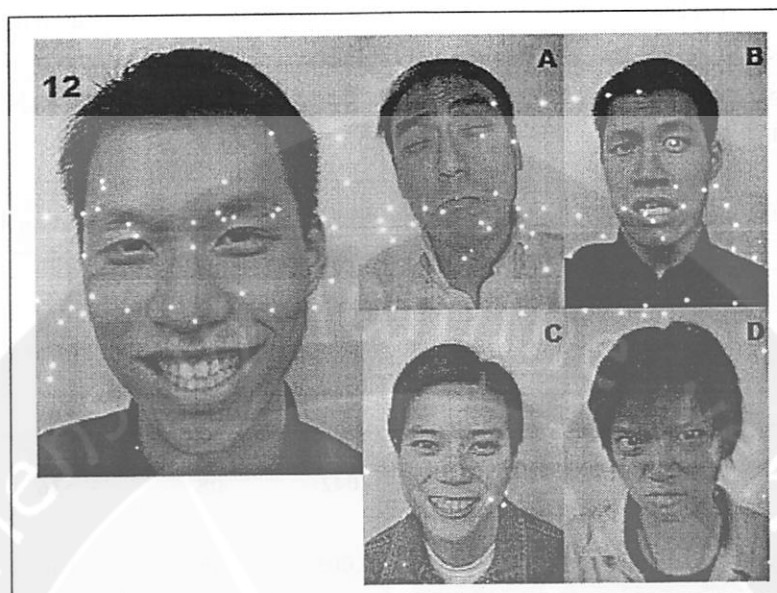


Figure 1. A sample stimulus of Emotion Perception Test

All test trials employed the distracting factor of “identity”, i.e., one of the response faces was the same person as in the target picture but expressed a different emotion.

At the beginning of the test trials, the experimenter gave standardized instructions printed on each scoring sheet (see Appendix 8). Participants were told to match the target face to one of the 4 response choices that should “feel the same way”. The participant was told to read aloud the letter assigned to their chosen match within 90 seconds. The participant proceeded to the following trial by pressing the response key on the key pad.

2.2.3 Scoring

Each correct match was credited 1; and an incorrect match scored 0. The maximum score was 36.

2.2.4 Analysis

A repeated measures MANOVA was performed to compare the total score and the number of correct and incorrect matches, with one between-subjects factor, i.e., group (autism versus normal), and one within-subjects variable, i.e., the type of emotion (simple versus complex).

3. Results

There were significant main effects of group [$F(1,50) = 4.371, p=.042$] and the type of emotion [$F(1,50) = 394.79, p<.001$]. However, the interaction between the two was not

significant [$F(1,50) = 1.69, p=.2$]. Our sample sizes satisfied the requirement to detect medium effect at .05, two tailed (Cohen, 1977). The type of emotion ($\eta^2 = .89$) explained the largest amount of variance on the test performances. Details of the MANOVA results were summarized in table 6.1.

Table 2. Main effects and interaction effects on the Emotion Perception Test

	<i>F</i>	<i>p</i>	η^2	<i>F(a)</i>
Group	4.371	.042	.08	.536
Type of emotion	394.79	<.001	.89	1.0
Group by				
Type of Emotion	1.69	.20	.33	.24

F(a) is the observed power computed using alpha=.05.

Non-directional *t*-tests of dependent variables generated by the MANOVA procedure showed that the autism group had significantly lower total scores [$t(50) = -3.576, p = .001$], and fewer number of correct responses to simple emotions [$t(50) = -3.454, p < .001$] when compared to the control group. However, the group difference in the number of correct responses to complex emotions was not significant [$t(50) = -.729, p = .469$]. The alpha level after Beferroni adjustment was .0167 (see result summary in table 6.2).

Table 3. Group differences in performance on Emotion Perception Test

	Autism group (n=25) X (SD)	Control group (n=26) X (SD)	<i>t</i>	<i>p</i>
Total scores	33.92 (2.08)	35.46 (.71)	-3.576	.001
Total correct responses to simple emotion	14.96 (1.18)	15.81 (.4)	-3.454	<.001
Total correct responses to complex emotion	19.35 (2.08)	19.65 (.56)	-.729	.469

4. Discussion

Unsurprisingly the autism group overall performed significantly less well than the control group on this emotion perception test despite prior matching on verbal intelligence (Braverman, 1986; Braverman et al., 1989). This is consistent with previous findings that even intellectually able children with autism show inaccurate identification of affects (Buitelaar, van-der-Wees, Swaab-Barneveld, & Jan-van-der-Gaag, 1999a; 1999b; Davies et al., 1994; Hobson, 1992; Kamio et al., 1997; MacDonald et al., 1989; Ozonoff et al., 1991).

However, despite performing more poorly than controls when matching 'simple' emotions, the autism group demonstrated competence equal to controls on matching complex emotions. This intriguing finding might be attributed to matching both verbal and non-verbal intelligence here. In previous studies, emotion perception differences between autism and control groups with equivalent verbal ability barely reach significance (Braverman, 1986;

Braverman et al., 1989; Hobson, 1986a, 1986b; Ozonoff et al., 1990; Prior et al., 1990) while matching on non-verbal intelligence unmasks deficits in the autism group (Loveland et al., 1997; Serra, Jackson, van Geert, & Minderaa, 1998). Thus, matching verbal intelligence appears to improve the accuracy of children with autism in identifying complex emotion in a way that is still unknown to us.

Another explanation for this phenomenon may be that complex emotions tend to be expressed in a relatively exaggerated manner. "Simple" emotions include those that are most common in our daily interaction. On the contrary, "complex" emotions are usually invoked by more unusual events or experiences. Older children with autism are thought to be more responsive to manifestations of extreme emotion (Dissanayake, Sigman, & Kasari, 1996). On reviewing the video-recordings, the children with autism appeared over-excited, giggling or even laughing to tears, when they saw expressions of disgust, and surprise. This arousal could have heightened their concentration and motivation to perform in the trials. In comparison, their responses towards simple emotional expressions were calm or even flat.

A quantitative difference in attention allocated to various parts of the face may also contribute to the pattern of results recorded here (Hobson et al., 1988; Langdell, 1978). When matching simple emotions such as sad and angry, upper-face features including the eyes and brows provide significant cues for accurate interpretation of these emotions. Children with autism attend especially to the lower features of a face (Davies et al., 1994; Kasari, Sigman, & Yirmiya, 1993; Langdell, 1978; Yirmiya, Pilowsky, Solomonica-Levi, & Shulman, 1999), and facial expressions of complex emotions such as disgust, shame, and surprise all emphasize the lower-face features (e.g. a wide open or down-turned mouth). This preference of attention might have made matching of complex emotions easier but simple emotions harder for the autism group.

4.1 Implications for pragmatic language

It has already been mentioned (Chapter 3) that one of the important components of pragmatic competence (Thompson, 1997) is the ability to pick up cues such as emotion from the speech or behavior of others. This ability provides the social reference for a response which meets the expectations of others. Thus without the skill to pick up subtle emotional cues, individuals with autism might well exhibit pragmatic deficits.

4.2 Concluding comments

Relative to "theory of mind" deficit and executive dysfunction, the test of emotion perception was rather limited. Certainly this has implications for an analysis of the relative importance of "theory of mind", executive function, and emotion perception to pragmatics. Had time

permitted, a more comprehensive battery of emotion perception tests with cross-modal design would have been preferable.

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Evaluation of the Psychological Health of Adolescents in China

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Abstract

According to the World Health Organization (2010), there is a growing trend of mental health issues such as depression, anxiety and suicide in Mainland Chinese adolescents. Alarming, more than 30 million individuals under the age of 17 years had mental health problems, of which 50-70% failed to seek medical assistance. As early detection facilitates and improves prognosis, it is therefore of utmost importance to detect such cases at an early stage.

The aims of this study are to obtain the prevalence rates of psychological health indicators most important to youths, including depression, anxiety and body dissatisfaction, and to delineate the relationships among various variables.

In the current exploratory study, a survey was administered to 948 youths aged 12 through 18 years at a secondary school in Beijing, China. The battery of psychometric inventories included namely the Patient Health Questionnaire- 9 (Depression), State-Trait Anxiety Inventory (STAI), Sociocultural Attitudes Towards Appearance Questionnaire- 3, Body Satisfaction Stunkard Scale, and General Self-Efficacy Scale. Physical measures such as height, weight, waist circumference, and blood pressure were also obtained.

Data collected will be subjected to various statistical procedures including multiple regression analyses and structural equation modeling, so as to gauge the severity and gain a deeper understanding of the problems.

In the following stage, the current survey will be administered to adolescents from other schools in Beijing. Conclusions drawn will have public health implications, thus shed light on the need for early intervention as well prevention measures.

Keywords: psychological health, adolescents, depression, anxiety, body di

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Business 3 / Communication 2

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2015/07/22 Wednesday 10:45-12:15

Session Chair: *Prof. Pichayalak Pichayakul*

BREFM-22393

The Preferred Theme Park

Jamie Lo | *The Hong Kong Polytechnic University*

Paul Leung | *Holistic Community Association*

BREFM-22821

Shaping Thai Hot Springs to Serve Japanese's Predilections

Pichayalak Pichayakul | *Chiang Mai University*

ISBSS-4405

**Household Accounting of Bank for Agriculture and Agricultural Co-Operatives'(BAAC)
Customers in Sansai District, Chaing Mai, Thailand**

Orathai Dusadeedumkoeng | *Maejo University*

ISBSS-4573

The Study of Users' Facial Emotion toward Commercial Website Appearance

Tzu-Wei Tsai | *National Taichung University of Science and Technology*

Siou-Ming Chung | *National Taichung University of Science and Technology*