Journal of Institutional Research South East Asia

JIRSEA
Volume 15 Number 3, Dec 2017
ISSN 1675-6061

Editor:
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EDITORIAL

Welcome to this *brand new* third edition of JIRSEA for the year. Brand new? Yes, since this is the first time in the history of JIRSEA and SEAAIR that we have a third edition of JIRSEA in a year.

I foreshadowed the impending arrival of this edition in the Editorial of the previous JIRSEA vol. 15 no. 2 following the approval of the SEAAIR Executive Committee meeting in Singapore on 5 September 2017. We are grateful to Associate Professor Dr Teay Shawyun, SEAAIR's Immediate Past President for proposing this historic development in JIRSEA and SEAAIR.

It has been confirmed that this edition will also be Scopus-indexed like the other two each year.

In this edition we publish the *Best Paper* and five (5) *Outstanding Papers* from the SEAAIR Conference of 2017 held in September in Singapore.

The selection of these papers was rigorous. Indeed all papers accepted for presentation at SEAAIR Conferences would have gone through at least two reviews, one at the *Abstract* stage and if successful then at the full paper stage. However, the six papers included in this edition of JIRSEA's would have gone through an additional level of reviews carried out at the Conference. Each of the reviews was carried out by two qualified and widely experienced IR reviewers. Prior to publication, the JIRSEA Editor provided a *final review* particularly to ensure that the papers meet the JIRSEA's publication standards.

In this inaugural JIRSEA's third edition the winning Conference papers cover an eclectic range of aspects of *Institutional Research* (IR). Though perchance, these could be categorized into three major related IR themes, namely, *Students Engagement* (Digamon&Cinches; Wisessathorn), *Operating Standards* (Prospero et al; Petalla&Madrigal) and *Ethics Management* (Orachorn et al; Mendoza). They have not been presented in such discrete groups here, so that they could maintain their wider scopes and inter-relationships within IR.

We welcome comments and suggestions from readers.

Congratulations to all winning authors here and Happy Reading to all of you.

Nirwan Idrus
Editor

SCHLECHTY'S STUDENT ENGAGEMENT CONTINUUM IN THE WORK TEAM EXPERIENCE: A PILOT STUDY

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Abstract

Student engagement in classroom activities is central to students' achievement in the learning process. This study determined the students' level of engagement in work teams using Schlechty's (2002) Student Engagement Continuum Model and explored the students' experiences as determinants of their engagement. After scientific validation and reliability tests, a researcher-formulated scale based on the constructs advanced by Schlechty was used as the data-gathering tool in this study. Data for this exploratory mixed-method research were gathered from 164 students in a public senior high school in Northern Mindanao, Philippines. Results revealed that students' engagement level can be explained by teacher factors. The study concluded that while student engagement may be affected by numerous factors, such as, the activities given to the class, how the teacher employs them, and how students experience them, the teacher factor proved to be the most prominent. This further implies the need for teachers to generate opportunities and adequate holistic support to engage students authentically in all classroom activities.

Keywords: *work teams, teacher-student relationship, student engagement*

Introduction

Discussions on student engagement have always been associated with teachers seeing their key role in influencing engagement. When teachers conduct group activities in the classroom, among the major target is for students to engage and achieve learning. Classroom activities that encourage student engagement are basic to student learning. In many instances, group activities in the classroom trigger engagement as students tend to be more involved in their group context (Trowler, 2010; Krause, 2005). Such engagement is strongly related to achievement as this does not only capacitate students with adequate energy resource in dealing with academic tasks and challenges (Martin & Marsh, 2009) but also ultimately predicts positive learning (Johnson, 2008; Shernoff&Schmidt, 2008).

There are intricacies in getting students to engage. This paper recognizes the multifaceted context of faculty-student engagement especially that of the "emotive factors" which brings the issue of "whether the faculty or student is inspired or passionate enough to engage, disengage or pretend to engage" …" being affected by multifarious social, self and school's needs, personal and psychological variables" (Shawyun&Wattanasap, 2016). In fact, Laird et al. (2009) as cited by Ellis (2013) stressed that numerous intricate complexities beset student engagement. These may affect students' disposition to pursue the learning goals (Rotgans& Schmidt, 2011; Blumenfeld, Kepler&Krajcik, 2006).

Given these complexities impacting on students' pursuit of learning goals, this study chose to focus on the levels of student engagement relative to social and affective variables. It attempted to verify that the extent of students' decision to engage in learning while in group activities, has bearing on their social and affective dimensions. The value of this study lies on the novelty of the scale formulated that operationalized the constructs of Schlechty's Student Engagement Continuum. Thus, this is a pilot study that validated the five levels of the said Continuum using the researcher-made scale.

Framework

Student engagement in classroom activities is central to students' learning process. Studies have found essentials that ensure engagement. These include: the activities and how they are used; the experiences of students measured in terms of motivation; peer to peer interaction; and teacher-student relationship. Hence, this study examined these social and affective variables to determine whether these are prominent on the behavioral manifestations of an engaged and/or disengaged student in work teams. The level of engagement is highlighted using Schlechty's (2002) Student Engagement Continuum.

Student Engagement.

Schlechty's (2002) Student Engagement Continuum claimed that because engagement is an active process, it requires students' commitment to the activity. This can be achieved when they

find importance or value on what is required of them to do. Schlechty (2002) identified five distinct categories and positioned them in a continuum. Each category specified the indicators that clearly set the students into the level they operate in doing the academic activity. According to this author, there are five ways on how students dispose themselves in school-related tasks and activities:

(1) Authentic Engagement (High Attention-High Commitment), which is the highest level of student engagement. In this level, the students see that the activity is personally meaningful, and have the will to persist and learn in the face of difficulty. Likewise, the students feel that their goal is to get the activity right and perform well;

(2) Strategic Compliance (High Attention-Low Commitment) where students in this level still see the value of the work and find the activity as worth doing but only because of marks, grades, approval and class rank. If the work does not guarantee them with these extrinsic returns, they will abandon it. Students are also primarily after teacher recognition and peer appreciation;

(3) Ritual Compliance (Low Attention-No Commitment) is the level where students set learning at a low level and are working only for the sake of compliance and on meeting the minimum requirements. They do the work only to avoid negative consequences such as getting a failing grade or mark. Their prime desire is to avoid teacher**s'** reprimand and peer conflict;

(*4) Retreatism (No Attention-No Commitment)* --- students are disengaged in the classroom task and activity and are emotionally withdrawn. They do not participate in the task, and feel unable to do what is asked and expected of them. Moreover, the students think they cannot do the activity because of deficient capability and of lack of sense of activity relevance; and

(*5) Rebellion (Diverted Attention-No Commitment)* - the students refuse to do the work, do actions to disrupt others. For this level, students develop a negative attitude and poor work, and sometimes encourage others to rebel (Schlechty, 2002).

The distinct levels in the student engagement continuum may be explained in part by the interaction of personal disposition and emotive disposition of both the teacher and student as discussed in the4 T "Takes Two to Tango" Framework of Faculty-Student Engagement (Shawyun, et al., 2016). The said model clarified the interplay of several factors and conditions surrounding faculty-student engagement and emphasized the need to understand the dynamics of the "connection chemistry" and the multi-faceted and multi-directional interactions that occur in teacher-student engagement. This highlights the need for positive mutual teacher-student relationship in the process.

Teacher-Student Relationship.

When teachers address and meet students' needs to be valued and respected, their attachment to school and its activities increases (Chang 2012). Such attachment which yields to positive mutual relationship between the teacher and students makes them learn about their beliefs and dispositions for learning which in effect may direct them towards the academic tasks (Martin & Dowson, 2009).

Peer to Peer Interaction.

Peer to peer interaction is another dimension of student engagement. Numerous studies upheld the necessity of high quality peer-to-peer interaction for school engagement, motivation, and performance. Students who experienced lower peer-to-peer encounter were more likely those who were socially rejected and withdrawn, and who exhibited rebellious behaviour in school (Hamre, & Allen, 2012).However, other studies suggested that peers can also play a negative impact on student's academic engagement (Altermatt&Pomerantz, 2003). On the one hand, peers may contribute to students' academic engagement by establishing an atmosphere of belongingness and promoting relationship with classmates and teachers in class (Woolley, Kol& Bowen, 2009). On the other hand, peers can cause adverse influences by encouraging each other to engage in rebellious behaviors (Burk, Kerr &Stattin, 2000). These negative influences can adversely affect students' academic outcomes and performance in the classroom as well as their motivation and interest.

Motivation and Interest.

Engaged students become intrinsically motivated by curiosity, interest enjoyment, and a desire to achieve personal goals (Jefferson-Williams, 2014). Numerous researches and models have set significant interconnection between students' motivation and engagement (Roeser, Strobel & Quihuis, 2002). They all agreed that the more students are motivated in the class, the better they are engaged in doing the tasks and activities.

Ju Lin (2012) proposed a model that gave a distinction between motivation and engagement. The model defined motivation as a general perception of content, discipline area, or an activity that influences attitudes toward task involvement, while engagement is a person's involvement in a task. The model also suggested relationships between motivation and engagement. Meanwhile, a study on the correlation among variables on students' motivation, engagement, and learning outcomes was conducted and revealed significant relationship between engagement and motivation (Madoxx, 2010).

According to Krause, Bochner, and Duchesne (2006) as cited by Saeed and Zyngier (2012), teachers frequently use extrinsic motivation like rewards, praise, free time, food, rules and routines, and even punishment to encourage and stimulate their students towards learning. The researchers cited in Saeed et. al., (2012) study believed that motivation is not exclusively intrinsic or extrinsic in orientation but a mixture of both intrinsic and extrinsic(Williams, & Williams, 2011).

Given the above discussions, four constructs appear to be pivotal in ensuring engagement in work teams. These are the activities and how they are used (Jack, 2015; Dol, 2014; Sampsel, 2013; Heath, 2010), the experiences of students measured in terms of motivation (Jefferson-Williams, 2014; Ling Hsieh, 2013; Saeed&Zyngier, 2012), peer to peer interaction (Woolley, Kol, & Bowen, 2009) and teacher-student relationship (Ayon, 2013; Chang, 2012).

Teacher's Use of Work Teams.

The effectiveness of work teams has long been studied by researchers. They strongly subscribed to the idea that students learn more when they are given a chance to work together in groups much more as teams. Numerous activities in work teams have been proven to be effective as they promote students' cooperative and interpersonal skills which in turn increase their performance and achievement. For instance, in the study of Jack (2015), he discussed and described how jigsaw, think-pair and share as well as group investigation and other work team-based activities yielded positive effects in students' performance and in learning concepts in Algebra 1.

Lyman in 1981 developed the think-pair-share cooperative learning strategy to help students improve their thinking and share their thoughts with others in the group (Jack, 2015). The think-pair-share cooperative learning strategy is known to have many beneficial effects in the classroom. On the other hand, Tarhan et al. (2013) investigated the effectiveness of jigsaw cooperative learning activities in improving sixth-grade students' understanding of physical and chemical changes. The study made use of a quasi-experimental research design in which an experimental group was provided jigsaw activity, while the control group received teacher-centered activity. The results revealed that the jigsaw was significantly better than the traditional method. Described in the study of Heath (2010), is another work team approach, the group investigation. This refers to the cooperative learning method that uses cooperative inquiry, group discussion, and cooperative planning and projects. Furthermore, this activity was found to be one of the cooperative learning strategies that positively yielded positive results on students' achievement among others namely: Academic Controversy, Student-Team-Achievement Divisions, Teams-Games-Tournaments and Jigsaw (Jack, 2015; Parchment, 2009).

The preceding literatures and studies were reviewed to explain the factors that might impact on students' engagement. Figure 1 below highlights the interplay of the variables of the study.

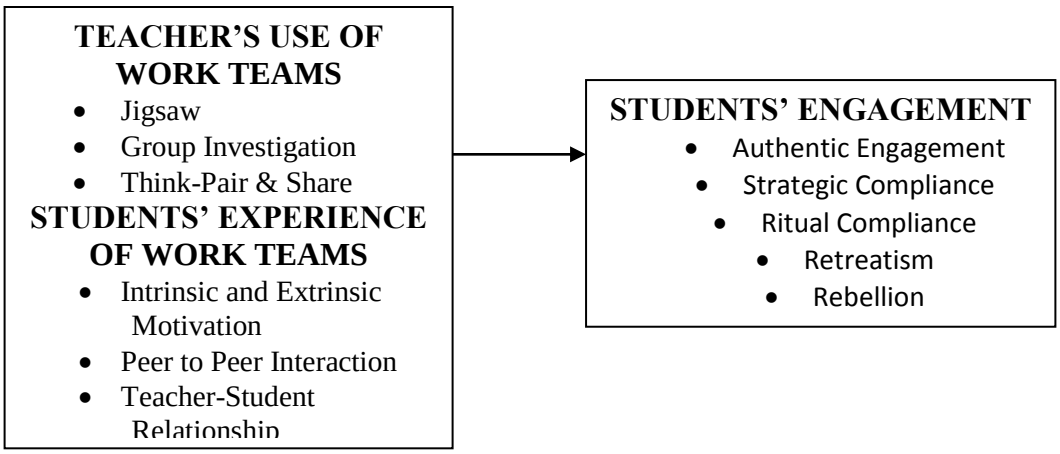

Figure 1 - Schematic Presentation Showing the Interplay of Variables in the Study

Objective of the Study

This study investigated the impact of teacher's use and students' experience of work teams on the distinct levels of students' engagement.

Methods

An exploratory mixed method approach was used in the study where the process of inquiry involved a mix of qualitative and quantitative data using survey questionnaires, focus group discussions and observation. A researcher-made scale for student engagement using Schlechty's constructs was used in this study. Similarly, instruments for *teacher's use of work teams, motivation and peer-to-peer interaction* were also researcher-made. A modified questionnaire from the study of Madike (2015) entitled "Student Perceptions of Biology Teachers' Interpersonal Teaching Behaviors and Student Achievement" was used in gathering the data for teacher-student relationship.

All survey questionnaires used in this study, whether researcher-made or modified, have undergone rigid construct validation and reliability tests. The scales were presented to five experts known for their expertise in educational administration and pedagogy. The instruments were thoroughly reviewed, and appropriate, comments and suggestions were integrated thereafter. Moreover, the questionnaires' vocabulary was subjected to scrutiny on its difficulty level by ten (10) Grade nine students. This ensured that the questionnaires could be clearly understood by the student-respondents. This was further piloted for readability before the questionnaires were piloted and subjected to a reliability test. Using Cronbach's Alpha, the reliability coefficient resulted to 0.789 for the students' engagement; 0.922 for students' perception on the activity; 0.823 for intrinsic motivation; 0.872 for extrinsic motivation; 0.750 for peer to peer relationship and 0.627 for the modified questionnaire of Madike, 2015.

A total of 164 Grade 11 student-respondents of a government senior high school in a city of Southern Philippines (Gingoog City) were the units of analysis of the study, constituting the academic tracks, namely, Humanities and Social Sciences (HUMSS) strand, Accountancy, Business and Management (ABM) strand, and the Science, Technology, Engineering and Mathematics Strand (STEM). Pearson product moment correlation and multiple linear regressions were used to organize the data to attain the objectives of the study.

Results and Discussions

Table 1shows the relationships between and among the variables of the study.

Table 1: Pearson r values Showing the Relationship of Students' Engagement Level with Teacher's Use of Work Teams and Work Team Experience (N=164)

Students Engagement Level	Teacher's Use of Work Teams		Work Team Experience							
			Intrinsic Motivation		Extrinsic Motivation		Peer-to-Peer Interaction		Teacher-Student Relationship	
	Pearson r	p-values	Pearson r	p-values	Pearson r	p-values	Pearson r	p-values	Pearson r	p-values
Authentic Engagement	.517**	.000	.458**	.000	.317**	.000	.356**	.000	.359**	.000
Strategic Compliance	.279**	.000	.241**	.002	.473**	.000	.190*	.015	.017	.828
Ritual Compliance	.383**	.000	.262**	.001	.388**	.000	.178*	.023	.136	.081
Retreatism	.082	.294	.128	.102	.189*	.016	.202**	.009	.374**	.000
Rebellion	.226**	.004	227**	.003	.160*	.041	.290**	.000	.426**	.000

** Correlation is significant at the 0.01 level (2-tailed). * Correlation is significant at the 0.05 level (2-tailed).

The data revealed that the levels of student engagement were found to be significantly related to extrinsic motivation and peer-to-peer interaction. However, both strategic compliance and ritual compliance levels had no significant relationship with teacher-student relationship. Likewise, ritual compliance was significantly associated with both teacher's use of work teams and intrinsic motivation. For the variables which were found to be significantly linked, multiple linear regression analysis was conducted to determine the impact of the independent variables on the various levels of engagement.

Table 2 presents the multiple linear regression analysis showing the influence of the independent variables on Authentic Engagement Level. According to Schlechty (2002), students who are *authentically engaged have the desire to do the task because they see the activity personally meaningful*.

Table 2 - Multiple Linear Regression Analysis between the Independent Variables and Authentic Engagement (AE)

Independent Variables	Regression Coefficients	T	P-Value
Teacher's Use of Work Teams (TU)	.374	4.123	.000 **S**
Intrinsic Motivation (IM)	.355	3.182	.002 **S**
Extrinsic Motivation (EM)	.017	.175	.861 **NS**
Peer-to-Peer Interaction (PP)	.019	.197	.844 **NS**
Teacher-Student Relationship (TSR)	.237	2.838	.005 **S**

Constant : .086; R^2 Adjusted : .346; F-value : 18.27; Sig. Level : .000

As shown in Table 2, the R^2adjusted value indicates that 34.6% of the students' *authentic engagement* can be explained by all the variables considered. However, taken singly, there were 3 predictors of *authentic engagement* (AE)in the model. Accounting for 37.4 % impact is *the teacher's use of the activities* (TU) which surfaced as the best factor to increase students' desire to persist through the activities given to them. Not too far behind is *intrinsic motivation* (IM)which influences 35.5 % of the students' *authentic engagement*. Lastly, *teacher-student relationship* (TSP) influences authentic engagement at 23.7 %. *Extrinsic motivation* (EM)

influences 1.7% while *peer to peer interaction* (PP) can only explain 1.9% of the changes in authentic engagement. The model is however, significant given P(0.000). Thus, AE = 0.86+.374TU+.355IM+.017EM+.019PP+.237TSR.

The way the teachers use the activities done with competence as perceived by the students contributes to authentic engagement. This is a challenge posed before educators to not only give varied strategies but also to employ them with sufficient and quality instructional support (Chang, 2012; Strahan, 2008). Likewise, the model above supports the interpretations of Saeed and Zyngier (2012) in their study on motivation and student engagement which indicated that students who were intrinsically motivated demonstrated authentic engagement in the activities. Moreover, as students feel they are connected to the teacher, authentic engagement can be established (Jefferson-Williams, 2014).

Table 3, on the other hand, shows the degree of impact of the independent variables on Strategic Compliance Level. Students in this level *do the activity mainly because of extrinsic factors, such as grades, recognition and approval* (Schlechty, 2002).

Table 3 - Multiple Linear Regression Analysis between the Independent Variables and Strategic Compliance (SC) Level

Independent Variables	Regression Coefficients	T	P-Value
Teacher's Use of Work Teams (TU)	.237	1.853	.066 **NS**
Intrinsic Motivation (IM)	-.126	-.783	.435 **NS**
Extrinsic Motivation (EM)	.767	5.519	.000 **S**
Peer-to-Peer Interaction (PP)	-.072	-.533	.595 **NS**

Constant :.747; R^2 Adjusted : .222; F-value : 12.629; Sig. Level : .000

The model's R^2 adjusted value indicates that 22.2 % of the variation of strategic compliance level can be explained by the variables collectively as one. However, taking the variables individually, data reveals that only *extrinsic motivation* influences the level at 76.7 %; other variables in the model do not. Given this equation, SC = .747+.237TU+-.126IM+.767EM+-.072PP, the model is significant given P (0.000).

In the subsequent focus group discussion, after identifying students who were in this level, when asked for what encouraged them to do the activities, one student said, *"I am a grade-conscious person, so I am after of the grades given by the teacher."*Another said, *"I like to be recognized by the teacher."*These responses indicate that extrinsic motivation is a component of student engagement which corroborates the quantitative findings of the regression analysis.

Table 4 determines which among the independent variables impact ritual compliance level. Schlechty (2002) described *ritually compliant students as those who do the task at the minimum level and only for the sake of compliance.*

Looking at the model, the R^2 adjusted value indicates that 20.0 % of the *ritual compliance level* can be explained by all variables. Singly, *extrinsic motivation* accounts for 49.3 % impact on students' tendency to perform at a low level during group activities while *teacher's use of the*

activities can explain 45.9 % of the changes in ritual compliance. The equation: RC = .462+.459TU+-.032IM+.493EM -.118PP, summarizes the findings.

Table 4 - Multiple Linear Regression Analysis between the Independent Variables and Ritual Compliance (RC) Level

Independent Variables	Regression Coefficients	T	P-Value
Teacher's Use of Work Teams (TU)	.459	3.673	.000 **S**
Intrinsic Motivation (IM)	-.032	-.202	.840 **NS**
Extrinsic Motivation (EM)	.493	3.627	.000 **S**
Peer-to-Peer Interaction (PP)	-.118	-.893	.373 **NS**

Constant: .462; R^2 Adjusted : .200; F-value : 11.218; Sig. Level : .000

As revealed in the model, how the students perceive teacher's competence in using the activities can set them to manifest low performance; thus, cultivating a culture of mediocrity and simplism in the context of collaborative learning. On the other hand, extrinsic motivation does make ritually compliant students. Zyngier (2011) suggested that extrinsic motivation developed ritual engagement in students.

Table 5 shows the regression analysis between the independent variables and retreatism. In this level, *the students do not participate in the tasks and are withdrawn because they think they are incapacitated and find the activity irrelevant* (Schlechty, 2012).

Table 5 - Multiple Linear Regression Analysis between the Independent Variables and Retreatism (RT)

Independent Variables	Regression Coefficients	T	P-Value
Extrinsic Motivation (EM)	.214	1.675	.096 **NS**
Peer-to-Peer Interaction (PP)	-.001	-.008	.994 **NS**
Teacher-Student Relationship (TS)	.537	4.450	.000 **S**

Constant :1.189; R^2 Adjusted: .142; F-value: 9.991; Sig. Level: .000

The R^2 adjusted value means that all variables when taken explain 14.2 % of students' retreatism tendency or their withdrawal in participating in the group activities. Looking at the individual variable, *teacher-student relationship* holds 53.7 % of the variation of retreatism level. Given the equation: RT = 1.189+.214EM+-.001PP+.537TS, the model is statistically significant given the P (0.000).

Since students need sustained interpersonal communication with their teachers to help them be successful in classroom tasks (Aydogan 2008; Corrigan & Chapman 2008), teachers need to exude an atmosphere where students feel safe and supported. Otherwise, students who experience low quality teacher-student relationship tend to have a decreased level of cognitive and psychological engagement (Murray-Harvey, 2010).

Table 6 presents the multiple linear regression analysis showing the influence of the independent variables on the Rebellion level. According to Schlechty (2002), students in this level *refuse to do the work and sometimes disrupt the working group and shows negative attitude.*

Table 6 - Multiple Linear Regression Analysis between the Independent Variables and Rebellion Level (RB)

Independent Variables	Regression Coefficients	T	P-Value
Teacher's Use of Work Teams (TU)	.017	.145	.885 **NS**
Intrinsic Motivation (IM)	.199	1.409	.161 **NS**
Extrinsic Motivation (EM)	-.008	-.069	.945 **NS**
Peer-to-Peer Interaction (PP)	.105	.842	.401 **NS**
Teacher-Student Relationship (TS)	.490	4.657	.000 **S**

Constant :.332; R^2 Adjusted: .186; F-value : 8.453; Sig. Level : .000

The R^2 adjusted value indicates that the regression model taking all the variables as one can explain 18.6 % of the students' rebellious behaviors in group activities. However, taking the variables singly, teacher-student relationship influences rebellion level at 49 %. The model is statistically significant given the P (0.000).The model is summarized with this equation: RB = .332+.017TU+.199IM-.008EM+.105PP+.490TS

It confirms how essential teachers are in the degree by which students engage themselves in the tasks. To avoid rebellious behaviors among students, it is critical to increase teacher-student positive interaction as it results to an increase of the students' engagement. Dunleavy and Milton (2009) supported this. They maintained that students achieve engagement when they get the emotional support from the teacher in their learning. Furthermore, teachers ensure interpersonal relationship and social support when they scaffold and support the students as they go along making the tasks at hand (Jacobsen et al. (n.d) as cited by Jefferson-Williams (2014).

In the Focus Group Discussions (n=12) conducted after the quantitative data were gathered, the following were the common responses:*"the teacher was systematic; "he managed well the activities"; "the teacher was prepared; everything was organized"; "the teacher was approachable and friendly"; "the activities were interesting"; "I liked the jigsaw activity; it was the first time I participated in it"; "they were enjoyable" "I am a grade-conscious person, so I am after of the grades"; "I participated because it was required of me"; "I liked the activities; they were enjoyable"; "I like to be recognized by the teacher";" I did not feel intimidated, but my group mates did"; "some group mates hesitated to share their ideas to the group"; "Maybe, they felt their ideas were conflicting with ours"; "they must be thinking of other things"*;*"few did not participate"; "Some made other things that were unnoticed by the teacher"; perhaps, they did not know what to do"; "good thing all my group mates participated".*

The responses showed congruence and others conflicting. While students responded uniformly with all positive statements on questions about teacher's way of using the activities and the relationship between students and the teacher, some students remarked that grades primarily motivated them while others gave answers indicative of intrinsically motivated manifestations. These results show that students do have different modes of motivation as well as levels of engagement. Others might be motivated with intrinsic motivation and others with extrinsic means depending on the learning and teaching context (Schlechty, 2001; Ryan &Deci, 2000).

This study is grounded on the constructs of Schlechty's (2002) Student Engagement Continuum. Teacher factor impacts on whatever level of engagement the student decides. Teacher's use of the activities influences students to manifest behaviors in the authentic engagement and ritual compliancewhile teacher-student relationship affects students' tendency to engage in the authentic engagement, retreatism and rebellion levels. In sum, the extent of teacher's support both instructional and emotional can be the basis of students' engagement in group context (Chang, 2012; Strahan, 2008); teachers and students need an interacting disposition to cultivate in the students a passionate sense to engage (Shawyun&Wattanasap, 2016).

Theoretically, the Schlechty's (2002) Student Engagement Continuum was verified in this study and may be used by future researchers to validate the scale in their own contexts. Moreover, the 4 T "Takes Two to Tango" Framework of teacher-Student Engagement (Shawyun, et al., 2016)was likewise confirmed to have a bearing on Schlechty's engagement levels. This further implies that for students to engage, the "emotive factors" which aid "connection chemistry" between teacher and students need to be established. Hence, teachers should not only choose relevant activities that motivate students to engage, but also see to it that positive mutual relationship is established (Shawyun&Wattanasap, 2016).

Conclusion

Teacher factor pervaded and has a significant impact in all the levels of student engagement using the Continuum. Students engaged in group activities because of the affective disposition. It is believed that students engage because the teachers have sustained the interpersonal communication to help students perform in the activities (Aydogan, 2008; Corrigan & Chapman, 2008; Elias, 2006). In the five levels of student engagement, students' level of engagement in group activities may be affected by several factors positively or otherwise. Some of them are decisive of the activities facilitated in the class by the teacher, and how students view and experience them. Teachers therefore need to be conscious on the need to provide students with holistic support, specifically the emotional and psychological, to operate in a more positive and well-directed path. This further emphasizes the teachers' crucial role to keep students' interest and involvement in classroom activities, in support of meaningful learning experience.

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SURVEY OF ETHICAL REASONING AT CHIANG MAI UNIVERSITY FACULTY OF BUSINESS ADMINISTRATION: SUPPORT FOR INTERNATIONAL ETHICS EDUCATION STANDARDS

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Abstract

The Chiang Mai University (CMU) Faculty of Business Administration recently initiated research to assess levels of moral reasoning in its graduate and senior-level undergraduate students with the objective to gauge the areas of needed improvement in its ethics education curriculum. This objective also supports the Faculty's recent application for AACSB International accreditation and the Thai government's current emphasis on ethics education to combat workplace and public institution corruption. The instrument used to assess moral reasoning is the revised version of the Defining Issues Test. The instrument was translated into the Thai language. Regression analysis was used for these analyses. While the predominant level of moral reasoning for all sample sub-groups in the study was at the maintaining-norms level of moral reasoning, the results also revealed that the undergraduate Finance majors demonstrated statistically and significant higher levels of post conventional

moral reasoning than the other undergraduate business majors. Comparing these current findings with the previous measurements of moral reasoning of sample groups of US students, significant overall differences in levels of moral reasoning between The CMU and sample groups of US students were detected. The CMU students tend to make ethical decisions based on status-quo moral reasoning (maintaining norms), while sample groups of US students tend to utilize to a greater degree higher level principled (post-conventional) moral reasoning. These findings signal the need for more research into the potential causes of the higher levels of moral reasoning among the CMU undergraduate finance majors compared to other CMU business administration students.

Keywords: *Ethical Reasoning, Chiang Mai University, Faculty of Business Administration, International Ethics Education Standards, The Defining Issues Test*

Introduction

Transparency International's Corruption Perceptions Index (CPI) measures perceived levels of corruption among politicians and public officials. In the most recent CPI (2016) Thailand ranked 101st out of 176 nations in the index; below other Southeast and East Asian nations such as the Sri Lanka (95), India (79), China (79), Taiwan (31), Japan (20), and Singapore (7). By contrast, in the 2009 CPI Thailand was ranked 84th in a list of 180 countries; demonstrably a worsening situation over a short seven-year period. Because many economic forces are converging to invest significant amounts of foreign capital into developing countries that are transparent in their public and private dealings, the reduction of public and private sector corrupt practices should be a top priority for these nations.

Recent events in Thailand have re-emphasized the need for and focus on anti-corruption strategies. The military coup d'état that resulted in the overthrow of the caretaker government of Prime Minister Yingluck Sinawatra was justified by the coup leader, General Prayuth Chan-ocha, Commander of the Royal Thai Army, based on irreconcilable negotiations to reform the government to satisfy demands for the elimination of corrupt governmental practices allegedly by her predecessor and brother, Thaksin Shinawatra. Established under the current regime, the National Council for Peace and Order (NCPO) is charged with the duties to write the new constitution. As articulated in the charges given to the NCPO in regard to the new constitution, urgent issues of national administration articulated under the category of Law and Judicial Process explicitly state the objective to amend the laws "to facilitate measures to uproot corruption in the public sector as well as to crack down on narcotics and human trafficking…" ("Three-Month Progress Report," 2014).

Corruption Research

Payments of bribes in Thailand to government officials range from petty payments to major financial dealings. Petty payments are called gifts of good will (sin namjai), implying that the payer has a willingness to pay out of gratitude (Ariyabuddhiphongs&Hongladarom, 2014). Large payments for more significant returns are termed bribery (sin bon), and very large payments

demanded through political pressure are called corruption. According to Ariyabuddhiphongs and Hongladarom (2014), "Sin namjai is similar to Transparency International's petty corruption whereas sin bon is similar to its grand corruption. The boundaries among the three types of payment are not clearly marked and businessmen are likely to regard bribe-payments as gifts of good will to facilitate their transactions through government offices (Phongpaichit&Piriyarangsan, 1994).

The level of acceptability of bribe payment among 385 Thai organizational employees was investigated by Ariyabuddhiphongs and Hongladarom (2014). Their study confirmed that the participants tended to see bribe-taking as being slightly acceptable and agreed with the idea that bribery is a reciprocal obligation. Gender differences in this perception were not found, although stronger agreement was found among less well educated respondents. Younger people also seemed to regard bribe-taking as being more acceptable than older people and those with higher income levels (Ariyabuddhiphongs&Hongladarom, 2014). The practical implications of their findings indicate that corruption practices in Thailand are perpetuated by a perspective of bribery as an exchange. And while more educated and higher income Thais are less prone to accept the notion of bribery as an exchange, the indictments of high-ranking government officials suggest that even these better educated individuals "may be as likely as the less educated to pay bribes" (Ariyabuddhiphongs&Hongladarom, 2014, p. 192).

Singhapakdi, Gopinath, Marta, and Carter (2008) surveyed managers enrolled in executive MBA programs (non-degree graduate programs) from eight public and five private universities in Thailand. Of the 605 returned surveys used in their study, 65% were from the capital city of Bangkok or a Bangkok suburb; 65% of the respondents were male. Singhapakdi et al.'s focus was on the respondent's ability to perceive the existence of an ethical problem in everyday business situations. They postulated that moral sensitivity was indirectly related to the influence of moral relativism on the respondent. Their research confirmed that relativism (the belief that the context of a situation dictates the ethicality of the action(s) taken) significantly influence the ability of people to perceive an ethical problem. On the other hand, their findings confirmed that idealism (the belief that certain immutable moral principles should apply in all situations regardless of context) positively influences perceived importance of ethics and one's ability to perceive an ethical problem. James Rest (Rest & Narvaez, 1979) characterized moral behavior as a four-dimension model, the first dimension of which is moral sensitivity. If one is not sensitive (perceptive) that a moral problem exists, they will not utilize cognitive processes to judge the rightness or wrongness of potential alternative actions to resolve the situation. They are more likely to make a wrong decision based on self-serving motives.

The seeds that have germinated in Thai society to allow corruption to flourish in its many forms have been traced by development economist and anthropologist Edward Van Roy to the unique institutional configuration which marks indigenous Thai economy and society (Van Roy, 1970). Van Roy identifies the importance of "connections" in a hierarchical society based on the principal of reciprocity as an underlying tenet of the social order in Thailand.

The individual's place in the Thai social order is defined in terms of his relative "rank" (an indissoluble compound of the economic, social, and political factors of class, status, and power). The individual invariably relates to those with whom he comes into contact as superior or

inferior, as determined by relative rank, and his behavior toward them is set accordingly. Incentives are oriented not to the maximization of factor returns but to overall rank enhancement. Thus, in traditional Thailand the economy is "embedded" in society. In this milieu economic transactions are not segmented or separated from social or political; reciprocal acts are not functionally distinguishable. Though reciprocal categories are unspecified, rough equivalences (i.e., "prices") are by social convention established, normalizing the flow of reciprocities.

In other words, traditional hierarchical reciprocal relationships with individuals in positions of power and authority that still pervade Thai social sensibilities today play a role in Thai perceptions about the rightness or wrongness of seeking and paying bribes.

Corruption Mitigation in Thailand

Despite anti-corruption laws, the government bureaucracy is ineffective in enforcing them (GAN Integrity, 2015). In a survey conducted by the University of the Thai Chamber of Commerce, among businessmen who deal with bureaucrats who determine contract awards, they reported that25 percent plus is the average for under-the-table fees paid in order to secure a contract from government agencies. The survey showed that 78 percent of the businessmen polled admitted that they had to pay "fees", which they said appeared to have been increasing in recent years. Some businessmen claimed that the rate charged by the greedier gatekeepers for contracts run as high as 40 percent (Prateepchaikul, 2013).

Tactics to reduce public and private sector corruption in Thailand need to be executed not only within the governmental bureaucracy, but also at the training levels of those planning on entering business and public service. This directly implicates institutions of higher education, such as Chiang Mai University (CMU).

To that end, and at the same time that the CMU Faculty of Business Administration is seeking accreditation as an AACSB International business school which mandates ethics education in all AACSB accredited schools of business, the Thai government is also emphasizing ethics education in its fight against corruption. The CMU Faculty of Business Administration recently undertook an assessment of student ethical reasoning to gauge the areas of needed improvement through ethics curriculum development to support both the ethics education accreditation standards established by AACSB and the Thai government focus on anti-corruption education.

Statement of the Problem

In order to maintain its educational leadership role in northern Thailand, the Faculty of Business Administration at CMU recently initiated research to assess levels of moral reasoning in its graduate and senior-level undergraduate students with the objective to gauge the areas of needed improvement in its ethics education curriculum. This objective also supports the Faculty's recent application for AACSB International accreditation and the Thai government's current emphasis on ethics education to combat workplace and public institution corruption.

Theoretical Framework for the Study

First, the AACSB standards are discussed followed by a brief introduction to Kohlberg's moral development research and The Defining Issues Test.

While ethics education in AACSB International accredited schools of business is clearly articulated in its values and standards (see below), AACSB International has resisted requiring any specific courses in ethics and/or corporate social responsibility. Basing its argument on the notion that each business school knows best how to structure ethics training for its business students, faculty and staff, AACSB simply offers values and standards to be met.

AACSB core values and guiding principles stipulate under section "A" that "the school must encourage and support ethical behavior by students, faculty, administrators, and professional staff and specifies that systems, policies and procedures for attaining this core principle must be in place and that all students, staff and faculty be educated in such matters. (AACSB, 2013, p. 6). AACSB Standard 9, addressing curriculum content specifies that accredited schools are required to ensure that their learning and teaching methods and content facilitate "ethical understanding and reasoning (able to identify ethical issues and address the issues in a socially responsible manner)" and "analytical thinking (able to analyze and frame problems)" (AACSB, 2013, p. 31). Additionally, the general business and management knowledge areas include the explicit focus on "social responsibility, including sustainability, and ethical behavior and approaches to management" and information technology ethical issues (AACSB, 2013, p. 32).

By purposely leaving the delivery structure, content, and credit-hour requirements to be decided by each school of business, this broad-based AACSB stance on ethics education allows a great deal of latitude in how to develop and implement ethics education.

Lawrence Kohlberg became famous for his moral reasoning research in the early 1970s. He was particularly well-known for his theory of moral development through research studies conducted at Harvard's Center for Moral Education. His theory of moral development was dependent on the thinking of the Swiss psychologist Jean Piaget and the American philosopher John Dewey. He was also inspired by James Mark Baldwin. Kohlberg demonstrate through studies that people progressed in their moral reasoning through a series of stages. He believed that there were six identifiable stages which could be more generally classified into three levels (Barger, 2000).

Level 1 Pre-conventional,

Stage 1 Obedience and Punishment, people behave according to socially acceptable norms because they are told to do so by some authority figure (e.g., parent or teacher). This obedience is compelled by the threat or application of punishment.

Stage 2 Individualism, Instrumentalism, and Exchange is characterized by a view that right behavior means acting in one's own best interests. (Personal Interest)

Level 2 Conventional,

Stage 3, Stage "Good boy/girl"is characterized by an attitude which seeks to do what will gain the approval of others.

Stage 4 Law and Order is one oriented to abiding by the law and responding to the obligations of duty. (Maintain Norms**)**

Level 3 Post-conventional,

Stage 5 Social Contract is an understanding of social mutuality and a genuine interest in the welfare of others.

Stage 6 Principled Conscience is based on respect for universal principle and the demands of individual conscience.

Kohlberg believed that individuals could only progress through these stages one stage at a time (Barger, 2000). James Rest's (Rest & Narvaez, 1979) theory of cognitive moral development is based on Kohlberg's stages but recognizes developmental levels as more akin to schemata than progressive stages. Given the right set of circumstances, an individual may utilize a previous schema to process a dilemma. In other words, a prior schema can be activated (or triggered or elicited) from long-term memory in the perceiver and thus be utilized to make a decision; that is, schema are content and context related (Rest et al., 1999). Rest devised a paper-and-pencil instrument to measure moral reasoning, the Defining Issues Test (DIT). The DIT is the most widely used instrument for this purpose and the best documented in terms of reliability and validity (Rest, 1986).

The newer version of the DIT, known as the DIT2 (Rest et al., 1999), reflects several improvements. The DIT2 contains moral dilemmas that are more up to date. The new N2 index score has a slightly better Cronbach alpha internal reliability than the P score, and the DIT2 is slightly more powerful on validity criteria. Based on a 1995 composite sample (n = 932), the Cronbach alpha for the P index was 0.78, whereas for the N2 Index it was 0.83 (Rest et al., 1999).The DIT2 was successfully translated into the Thai language in a series of research studies beginning in 201l (Wilhelm & Gunawong, 2016), and culminating with its use in a study of Thai moral reasoning in relation to cultural dimensions measured by the Thai translation Values Survey Module (VSM) in 2013 (Hofstede and Minkov, 2013).

Objective of the Study

This study was designed to identify extant levels of moral reasoning in CMU Faculty of Business Administration undergraduate and graduate students. It is therefore a descriptive study that is intended to serve as baseline data about student moral reasoning from which trends could be identified and further research investigation initiated. Also, comparisons could be made between current findings about CMU student moral reasoning with other sample groups from other studies using the DIT2, beginning with the study conducted by Wilhelm and Gunawong(2016) among CMU students and American students.

Research Methods

The most widely used instrument to measure moral reasoning is the Defining Issues Test and its revised version, the DIT2. The DIT2 was translated from English into Thai in previous research at Chiang Mai University by Wilhelm and Gunawong (2016) and was utilized in the present research study as the measurement of moral reasoning.

The samples for this study were drawn from the entire population of MBA students and senior undergraduate majors in accounting, finance, management and marketing at the CMU Faculty of Business Administration. The sample for this study consisted of a total of 402CMU Faculty of Business Administration undergraduate and MBA students as follows:

- undergraduate seniors in accounting $n = 134$
- undergraduate seniors in finance $n = 28$
- undergraduate seniors in management $n = 66$
- undergraduate seniors in marketing $n = 76$
- MBAs $n = 98$

Results

Descriptive statistics were calculated utilizing Statistical Package for the Social Sciences software (SPSS). Table 1 presents the mean moral reasoning scores for each sub-sample in the study. Two measures of the principled moral reasoning are presented using the DIT2: P score and the newer N2 score. The P score is the original principled reasoning score generated by the original DIT. The more robust N2 score (Rest et al, 1999) is also presented as suggested in the *Guide for DIT-2* (Bebeau&Thoma, 2003).

It can be seen from the mean scores in Table 1 that the prevailing level of moral reasoning for each sample group is at the maintaining norms level. This finding of predominant maintaining norms moral reasoning is corroborated by previous research with public administration students at Chiang Mai University (Wilhelm & Gunawong, 2016). A discussion of this status-quo level of moral reasoning will be presented below, but also noteworthy in these scores is a surprising occurrence of high levels of principled moral reasoning among undergraduate finance majors in comparison to other undergraduates and especially to MBA students. Rest et al (1999) pointed out that in study after study higher levels of formal education yielded higher principled moral reasoning scores. That does not seem to be the case with the MBA scores in these results. More striking with this observation is the finance majors' mean post-conventional score in comparison to the other undergraduate majors' post-conventional scores. For this reason, a one-way between subjects ANOVA was conducted to compare the differences between post-conventional and maintaining norms moral reasoning scores among the five sample groups. There was a significant difference between the groups in P-scores for post-conventional moral reasoning at the $p < .05$ level [$F(4, 397) = 2.994$, $p = .019$] and in the N2 scores for post-conventional moral reasoning at the $p < .05$ level [$F(4, 397) = 6.084$, $p = .000$]. *T*-tests were then conducted to establish where significant differences in post-conventional moral reasoning scores (N2 scores

Table 1 - Mean Moral Reasoning Scores for CMU Business Administration Students

Major		Post Conventional (P score)	N2 Score (N2 Score)	Maintain Norms (Stage 4)	Personal Interest (Stage 2/3)
MBA *n* = 98	Mean	28.1224	21.6306	36.5102	24.8776
	Std Dev	11.64356	10.21745	10.34383	12.68514
Accounting *n* = 134	Mean	25.3431	18.7920	37.3984	28.1063
	Std Dev	13.06782	11.14604	10.94537	13.00092
Finance *n* = 28	Mean	33.0714	28.2182	37.5714	20.5000
	Std Dev	12.03060	10.84580	9.65105	9.53162
Management *n* = 66	Mean	28.1528	23.5796	34.7706	27.3476
	Std Dev	13.08349	10.49515	10.94550	11.92191
Marketing *n* = 76	Mean	24.7028	18.8606	34.1376	32.3904
	Std Dev	14.45763	12.06759	9.74942	12.35661
Total	Mean	26.8992	20.9395	36.1460	27.4748
	Std Dev	13.07774	11.26023	10.52896	12.74592

were used because the N2 is a more robust measurement – see Rest et al. reference above) occurred between the undergraduate finance majors and the other sample groups.

There was a significant difference in the N2 scores between the undergraduate finance majors ($\bar{x}$ =28.2182) and the MBA students ($\bar{x}$ =21.6306) at the $p < .05$ level $t(124) = -2.968$, $p = .004$. There was a significant difference in the N2 scores between the undergraduate finance majors ($\bar{x}$ =28.2182) and the undergraduate management students ($\bar{x}$ = 23.5796) at the $p < .05$ level $t(160) = -4.088$, $p = .000$. There was a significant difference in the N2 scores between the undergraduate finance majors ($\bar{x}$ =28.2182) and the undergraduate marketing students ($\bar{x}$ =18.8606) at the $p < .05$ level $t(102) = -3.600$, $p = .000$. There were no significant differences in post-conventional moral reasoning scores between the undergraduate finance majors and the undergraduate management majors.

The question remains unanswered at this point as to why there are these significant differences in post-conventional moral reasoning scores that seem to single out the CMU undergraduate

finance majors from the other sample groups of business administration students, but some discussion of possibilities is presented in the discussion section.

Next, a series of regression analyses were undertaken to assess the influence of five other variables measured by the DIT2 on moral reasoning. In addition to reporting levels of moral reasoning pre-conventional (personal interest), maintaining norms and post-conventional (principled) reasoning, the DIT2 also reports demographic data such as age, sex, education level, USA citizenship and English as primary language. Several other psychological constructs are also reported: political liberalism (a measure of liberalism or conservatism), religious orthodoxy (a proxy measure of adherence to the strictures of religious dogma), and humanitarian liberalism (a measure of the consistency with which humanitarian decisions are selected in response to DIT questions). For the purposes of this study, USA citizenship and English language were irrelevant and education level was already factored into the sample groups. Therefore the five additional variables included in the regression analyses were age, sex, political liberalism, religious orthodoxy, and humanitarian liberalism (Rest et al, 1999).

The assumptions of linearity, independence of errors, homoscedasticity, unusual points and normality of residuals were met. These variables did not statistically and significant predict post-conventional (principled) moral reasoning (N2), $F(5, 396) = .465$, $p < .0005$. None of the five variables added statistically and significantly to the prediction, $p < .05$. Regression coefficients and standard errors can be found in Table 2.

Table 2 - Summary of Multiple Regression Analysis –Post-Conventional (Principled) Moral Reasoning (N2)

Variable	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
N2 (Constant)	23.285	4.298		5.418	.000
Age	.005	.108	.003	.050	.960
Sex	-.081	1.285	-.003	-.063	.949
Political Liberalism	-.590	.574	-.052	-1.028	.305
Religious Orthodoxy	-.051	.397	-.007	-.129	.897
Humanitarian Liberalism	-.661	.607	-.057	-1.089	.277

$p < .05$

A multiple regression was also run to predict maintaining norms moral reasoning from humanitarian liberalism, political liberalism, religious orthodoxy, age and sex. The assumptions of linearity, independence of errors, homoscedasticity, unusual points and normality of residuals were met. While these variables statistically and significantly predicted maintaining norms moral reasoning ($F[5, 396] = 2.396$, $p < .05$), an Adjusted R^2 of 0.017 (1.7%) is indicative of a very small effect size according to Cohen's (1988) classification. The independent variable humanitarian liberalism added statistically and significantly to the prediction ($p < .05$) with a

minor correlation coefficient of 0.172, the largest correlation among the independent variables tested. Regression coefficients and standard errors can be found in Table 3.

Table 3 - Summary of Multiple Regression Analysis - Conventional Moral Reasoning (Maintaining Norms)

Variables	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
Maintaining Norms (Constant)	43.644	3.971		10.991	.000
Political Liberalism	.052	.530	.005	.098	.922
Religious Orthodoxy	-.019	.366	-.003	-.053	.958
Humanitarian Liberalism	-1.868	.561	-.172	-3.331	.001
Age	-.065	.099	-.033	-.652	.515
Sex	-1.948	1.187	-.085	-1.640	.102

$p < .05$

Additionally, a multiple regression was run to predict pre-conventional (personal interest) moral reasoning humanitarian liberalism, political liberalism, religious orthodoxy, age and sex. The assumptions of linearity, independence of errors, homoscedasticity, unusual points and normality of residuals were met. While these variables statistically and significantly predicted maintaining norms moral reasoning ($F[5, 396] = 2.959$, $p < .05$), an Adjusted R^2 of 0.024 (2.4%) is indicative of a very small effect size according to Cohen's (1988)classification. The independent variable humanitarian liberalism added statistically and significantly to the prediction ($p < .05$) with a minor correlation coefficient of 0.182, the largest correlation among the independent variables tested. Regression coefficients and standard errors can be found in Table 4.

Table 4 - Summary of Multiple Regression Analysis - Pre-Conventional (Personal Interest)

Variables	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Personal Interest (Constant)	23.716	4.790		4.951	.000
Political Liberalism	.561	.640	.044	.877	.381
Religious Orthodoxy	.013	.442	.001	.029	.977
Humanitarian Liberalism	2.389	.676	.182	3.533	.000
Age	-.066	.120	-.028	-.553	.581
Sex	.411	1.432	.015	.287	.774

$p < .05$

Conclusions, Discussion, and Recommendations

All sampled CMU business administration students use predominantly a status-quo approach to moral reasoning (maintaining norms) versus principled moral reasoning. Formal education does not advance Thais beyond the maintaining norms level as has been demonstrated in DIT research in other Western cultures. James Rest and his collaborators have documented thousands of studies over several decades using the Defining Issues Test that confirm the positive affect of formal education on the development of higher levels of moral reasoning in Western cultures (see Rest & Narvaez 1979, 1994, 1998; Rest et al.1999).According to Wilhelm and Gunawong (2016) cultural dimensions such as the Thai long-term orientation and restraint orientation support decision making based on maintaining the social order, and higher power-distance perspectives support attitudes about respecting established authority and not disrupting the status quo.

Undergraduate finance majors, however, while still reasoning predominantly at the maintaining-norms level of moral reasoning, did demonstrate a tendency to reason more than their peers at the post-conventional (principled) moral reasoning level. Further research into the potential educational influences present in the finance program are warranted so as to possibly identify education and/or demographic variables that may have a direct effect on this tendency to reason beyond the status-quo mentality.

Humanitarian liberalism plays somewhat of a significant role in moral reasoning at higher levels. This direct correlation with higher post-conventional (principled) levels of moral reasoning and indirect correlation with lower pre-conventional (self-interest) levels of moral reasoning suggests the need to additional investigation into this variable and how it may influence students at CMU.

These findings serve as a starting point for the faculty and administration of the CMU Faculty of Business Administration to launch more in-depth and focused review of the various education curricula in business administration programs. One recommendation to the Faculty of Business Administration is to make training in ethical decision making mandatory for all students enrolled in all majors in the institution and to monitor the success of such training with additional research using the Defining Issues Test. Additionally, with the availability of the Thai language DIT2 and the expertise to employ its use in country, other research studies, both collaborative and within CMU, can now be brainstormed, constructed, and undertaken. To that end, Thai civic engagement and fair and responsible transactional engagement can be improved along with ethics education in Thai institutions of higher learning in support of the national objective to reduce both commercial and civil service corruption in Thailand.

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INITIALIZING RESPONSIBILITY: A GROUNDED THEORY OF BECOMING A SCHOOL ADMINISTRATOR

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Abstract

The research under study was an attempt to explore the main concern of school administrators and how they continually resolve it during the transition period. The researcher developed a grounded theory of becoming a school administrator during the transition period. The Classic Grounded Theory Methodology was utilized in the process of generating concepts which enabled the researcher to get closer to the phenomenon under study through constant comparison analysis in each coding process - open, selective and theoretical coding. Seventeen participants representing different higher educational institutions were purposively selected to provide a substantial response to the substantive area of interest. Hence, initializing responsibility emerged as the main concern of the school administrators during the transition period; thereby, resolving the main concern of the school administrators. The emerging substantive theory Initializing Responsibility is explained by four significant stages or processes, namely: embracing responsibility, bridging transition, changing mindset and rewarding experience. The main concern of the school administrators and how it is continually resolved provide a new insight and a deeper understanding relative to educational leadership and management particularly the transition period.

Keywords: Initializing responsibility, Coping with change, Grounded theory on school administrator

Introduction

In educational settings, school leaders are associated with school administrators. School administrators play significant roles in the implementation of the policies and regulations of the educational institution. Marishane (2016) claimed that one of the core functions of school leadership is to set direction and to motivate people to accompany (rather than follow) the leader in following directions. Furthermore, contemporary school administrators play a daunting array of roles. They must be educational visionaries and change agents, instructional leaders, curriculum and assessment experts, budget analysts, facility managers, special program administrators and community builders (Darling-Hammond, LaPointe, Meyerson & Orr, 2007). The research under study was an attempt to explore the main concern of the school administrators during the transition period, which is, from being a faculty/staff member to school administrators. In this study, the researcher purposely selected new administrators - College Deans, Academic Heads, Directors and those with supervisory functions on the basis of their duties and responsibilities in the institution. Correspondingly, becoming a school administrator was a good reference to identify what is their main concern and how such concern was continually resolved during the transition period. Accordingly, three research objective drove the study namely: to determine the basic social psychological process reflecting the transition period, to generate a theory explaining the phenomenon among the school administrators during the transition period and to better understand the process operating during the transition period among the school administrators. Thus, it sought to answer the following questions: (a) what is actually happening among school administrators during the transition period? (b) what is the main concern of the school administrator during the transition period? And (c) how is this concern continually resolved during the transition period? Notably, the study offers a new insight relative to educational leadership and management in reference with understanding the process of becoming a school administrator.

Method

The Classic Grounded Theory Methodology is utilized for two reasons: first, to find the core variable by systematic treatment of data; and second, to suspend the preconceptions and prior knowledge and trust the emergence of concepts from the data (Glaser, 2014). Although sampling cannot be predetermined at the beginning of the research, it is customary to start somewhere. In Classical Grounded Theory, sampling is regulated by the emerging theory, directing the researcher to follow leads in the data concerning where to go next and according to emerging theoretical criteria, the *"snowball sampling"*. Glaser (1978) suggested the use of purposive sampling, hence, seventeen administrators were selected from seven higher educational institutions based on the following criteria: (a) preferably new in the administrative position; (b) supervises faculty/staff members in the department/office. In the Grounded Theory Training Seminar at Mill Valley, CA, USA, Dr. Barney Glaser (2015) emphasized the need to set the tone, "atmosphering" which aims at creating a conducive atmosphere for the continuous and free flow of sharing in the substantive area of interest; thereby, establishing a good rapport with the participants. Interview begins with an open-ended question: "Could you tell me about your work history since entering the institution?" As the participants feel comfortable with the dialogue, the researcher avoids questions that might lead to preconception. Then, the researcher raises the

grand tour question: *"Could you tell me about the transition period from your being a faculty member to a school administrator?"* It is a broad open-ended question about the general topic area for the interviewee to discuss what is relevant to them on their terms (Glaser, 2014). In the process of the Classic Grounded Theory Methodology, constant comparison plays a significant role in building and substantiating the emergence of categories by defining their properties and dimensions. Accordingly, it is imperative that the researcher when analyzing data through constant comparison of incidents asks the following questions: What category does this incident indicate? What property of what category does this incident indicate? And what is the participant's main concern? (Glaser, 1998). The following questions enable the researcher to transcend the descriptive detail of the data and abstract the incidents within as indicators of the latent patterns of social behavior that would eventually emerge as a conceptual theory (Holton, 2010). The process of constant comparison allows the formation of the category to be more provisional. Glaser (2014) highlighted three types of comparison as the following: first, incidents are compared to incidents to establish underlying uniformity and its varying conditions; second, concepts are compared to more incidents to generate new theoretical properties of the concept and/or hypotheses; and third, concepts are compared to concepts for the purpose of establishing the best fit of many choices of concepts to a set of indicators, the conceptual levels between the concepts that refer to the same set of indicators, and the integration into hypotheses between the concepts, which becomes the theory.

Findings

In this research under study, seventeen participants from different Higher Educational Institutions participated actively and freely in the conduct of semi-structured interviews. There were two hundred thirty one initial codes from data. These codes were integrated and clustered, thus, reducing to fifty-two lower order categories. Through the process of constant comparison, these concepts were subsumed into higher order categories. The first set of higher order categories was generated from the interview with Participant 1, concepts like: adjustment, accountability, alignment, changing mindset, commitment, connectedness, continuous learning, growth, leadership strategy, ownership and shifts. The second set was developed from the interview with Participant 2 where the following concepts emerged: communication, emotional reaction and management strategy. The third set was generated from Participant 3 where the following concepts emerged: issues and concerns and relationship. The last concept generated from the interview was from Participant 5 that is the welfare of the students. Table 1 on the next page shows the development of these categories.

Classic Grounded Theory Methodology involved three processes - Open, Selected and Theoretical Coding. The Open Coding process generated concepts that were classified as the lower order categories. While in the early stage of the data analysis, the line by line coding was largely descriptive in nature. Incidents were conceptually labeled thereby generating concepts characterized by lower order categories. Saturation of the lower order categories was achieved approximately halfway through the study. As the coding process progressed, Selective Coding process generated higher order categories through integrating and subsuming the low order categories through the process of constant comparison method. Correspondingly, the emergence of sub- categories - bridging transition, changing mindset, coping with change, embracing responsibility and rewarding experience were generated out of fifty-two (52) lower order categories and eighteen (18) higher order categories.

Table 1- Development of categories

Lower Order Categories	Higher Order Categories	Sub-Categories	Core Categories
Mision-mission, dedication, continuity of the program, shared values, shared governance, shared culture, service oriented, people oriented, clear direction, alignment, commitment, shared mission	Alignment, Commitment, Shared Mission	Bridging Transition	Coping with Change
continuous learning, gaining experiences, building confidence, leading with firmness, personal conviction, high competition, status in the institution, trust of the top admin, welfare	Changing mindset, Continuous Learning, Welfare of the Community	Changing Mindset	
adjustment, communication, culture shock, expertise, relationship with colleagues, shift of environment, shift of responsibility, workload, impact of work	Communication, Coping with Change, Emotional Reaction, Issues and Concerns , Relationship, Shifts	Coping with Change	
governance, autonomy, familiarization, time management, leading by example, working with others, servant leadership, involving people, succession plan, immersion ,delegation of task, carrying out the task	Accountability, Leadership Strategy, Management Strategy, Ownership	Embracing Responsibility	

Lower Order Categories	Higher Order Categories	Sub-Categories	Core Categories
personal growth, professional growth, collaboration, support, confidence, future well-being, impact to family, sense of unity, sense of family, law abiding personnel, sense of belongingness	Connectedness Growth	Rewarding Experience	

The emergence of sub-categories generated the possible core category that addressed the main concern of the school administrator during the transition period. Through the process of constant comparison, the concept of coping with change was identified as the core category. It captured the concepts of how administrator resolved the main concern during the transition period. In the third process, Theoretical Coding, the coding families were utilized to identify the relationship between/ among the emergent concepts - the core category and the five sub-categories. Through coding families the relationship between the core category and sub-categories illustrates a certain process which addressed the main concern of the school administrator during the transition period that is coping with change; and resolving its concern went through certain stages/processes that is: embracing responsibility, bridging transition and changing mindset; thereby, resulting to rewarding experience as the effect or consequence of this process/stages.

In Classic Grounded Theory, extant literatures provided a substantial data, which strengthened the emergent concepts. During the transition period, the new administrators faced many challenges; consequently, they coped with change, drove change, and nurtured change through their leadership as they are expected to contribute to the welfare of the school community. The comparison among these three categories led to the concept of initializing responsibility, which explains the emergent core category and sub-categories. The point of reference of the three emerging concepts: coping with change, driving change and nurturing change is grounded on the main substantive area, i.e., becoming a school administrator. Through constant comparison, the relationships generated the concept of initializing responsibility. The emergent theory of initializing responsibility was identified as the main concern of the school administrators during the transition period. It extended to the concern of the school administrators in terms of nurturing, driving and coping with change in the institution. Therefore, Initializing Responsibility is relevant during the transition period primarily because it captures the pattern of behavior among the school administrators in the performance of the required administrative tasks. It summarizes the Basic Social Process as experienced by the school administrator during the transition period. Figure 1 shows the integrative conceptual framework of the Theory of Initializing Responsibility.

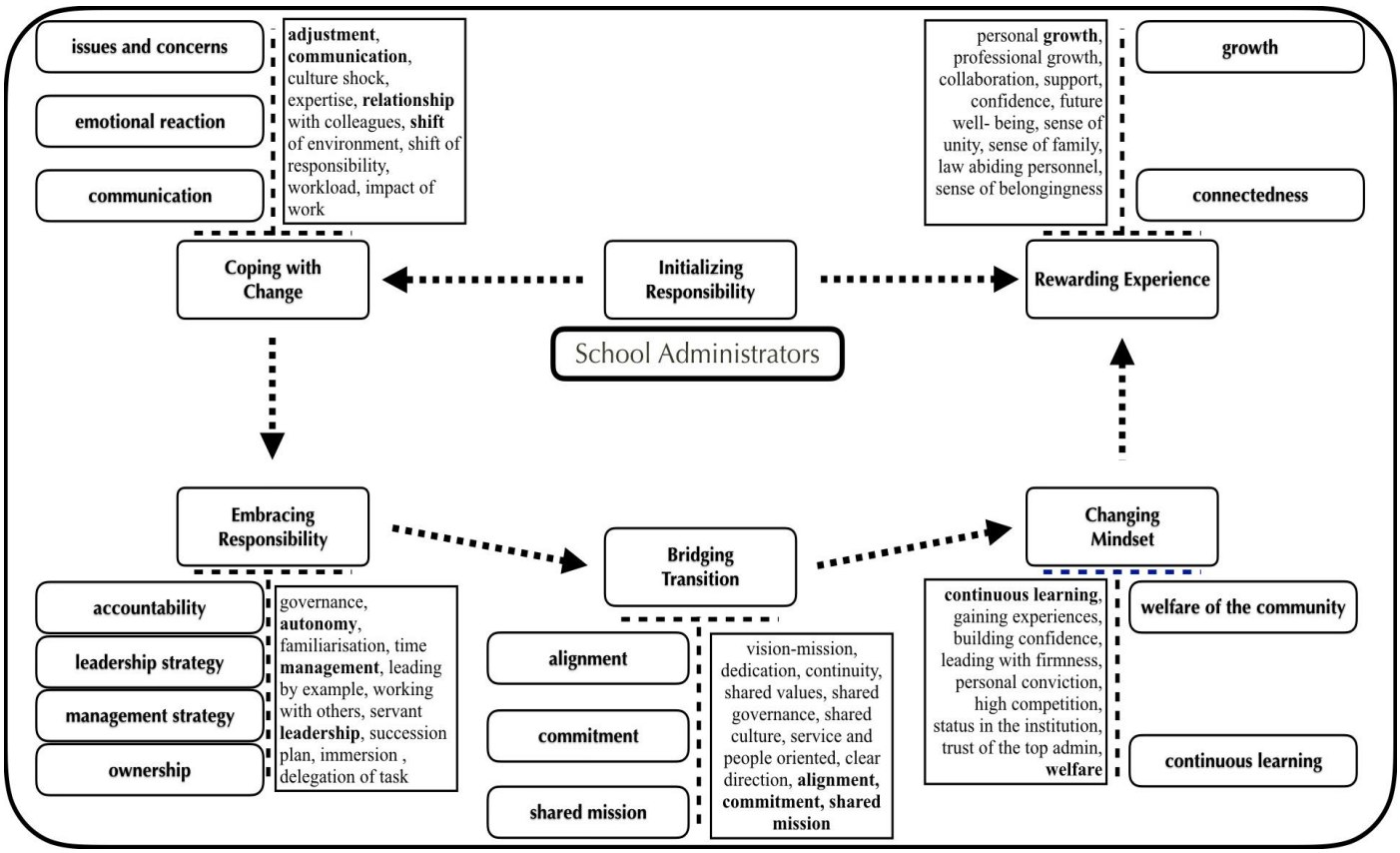

Fig. 1. Emergent Integrative Conceptual Framework of the Theory of Initializing Responsibility

Discussion

The concept of embracing responsibility was defined as the manner of responding to the given duties and responsibilities which the administrative position required. It was a positive response on the part of school administrators given the several factors such as working environment, workload and people in the workplace that might affect the performance of the duties and responsibilities. Bennis (2009) illustrated a clear picture of how a person adopts through a certain situation relative to a new working environment. It was important, then, that in the new environment the school administrators know how to play a little of politics in order to cope with change especially in dealing with the people in the work place. In the aspect of workload, the school administrators in their acceptance of the duties and responsibilities of the administrative position, exhibited a sense of ownership by making the workload part of their DNA, that is, feeling good about the workload and making others - the subordinates felt better also in the performance of their duties and responsibilities. Furthermore, school administrator needs to be more active in building good relationship with others so as to develop a friendship that in a sense could be a big factor in the implementation of the programs and activities of the department. Notably, the concept of embracing responsibility in the context of transition period was recognized as the first stage of the core category - coping with change.

The concept of bridging transition is considered as a process whereby school administrators align their personal capabilities with the duties and responsibilities of the administrative position. Hence, to respond to the challenge of the administrative tasks is to assess one's personal values. Borromeo (2003) emphasized that the new challenge for all managers is to adopt a new paradigm that enables them to look inward for a deeper source of wisdom instead of looking constantly outside themselves for specific answer. It matches the school administrators' skills and knowledge with the duties and responsibilities in line with the administrative task. It brings people to the core of the institution which is the vision-mission; thereby, making themselves feel better in the performance of the task - aligned, committed and sharing the mission of the institution. Accordingly, Tichy (2007) spoke of the significant role of leaders in bringing others to the core of the institution. According to him, leaders must have ideas about the purpose of their organization and how to organize its resources. They must have values that prescribe how it will operate and behave as a member of society. They must have energy and the ability to energize others. They must have the 'edge', the courage to make hard choices and take tough actions. The purpose of an organization including an educational institution was basically planted on its vision and mission. The process of bridging transition provided opportunity for school administrators to ignite the passion of the members of the community towards alignment to the core values of the institution. Russo (2010) clarified that to cultivate truly engaged employees, organizations need to build 'linking opportunities' between an organization's wants, needs and culture and the issues that drive employees and garner their attention, passion and care. The experience itself brought a kind of energy that was manifested in trying to align the personal values to the values of the institution. Collins and Porras (2002) expressed that to pursue the vision means to create organizational and strategic alignment to keep the core ideology and stimulate progress toward the envisioned future. Alignment takes the vision to life, translating it from good intentions to concrete reality. Thus, school administrators play a significant role in translating the purpose of the institution to concrete reality; so, they must promote collaboration, ownership, and commitment. A huge part of a leadership role is to drive the culture of the company and to reinforce it, i.e., bridging transition. According to Robinson (2011), it was changing leadership style from command and control to collaboration and teamwork. It provides then an avenue for the member of the community to be more engaged. Russo (2010) posited that a culture of engagement inculcates and socializes your employees with a sense of - and reason for - genuine commitment to the organization.

Changing mindset is the process of changing perspective when adapting to the change of environment and workload through the pursuit of learning and drive for excellence so as to contribute for the welfare of the community. The administrative task offers opportunity for school administrators to venture to the world of challenges and opportunities. According to Bennis (2009), managers viewed learning as intimately connected with self. Somehow, they had reached a point in life when they knew they had to learn new things. In the context of an educational institution, a change of mindset among school administrators ignites their passion to learn new things for a greater cost yet the nature of work of the school administrators entails formation of intellectual skills to give something worthwhile for the institution in general. The school administrators being at the frontline of the institution need to be equipped with skills necessary to become relevant leaders in the 21st century education. Walker and Dimmock (2000) spoke of the need to reflect on the globalizing and internationalizing policy and practice in the context of educational management and leadership. Thus, the process of changing mindset demands active engagement and involvement of the members of a community. Meanwhile,

Tichy (2007) commented that leadership is the capacity to get things done through others by changing people's mindset and energizing then into action. As a result, when schools learn to see the value of other groups that affect children's lives, and other groups learn to see the values and connections of schools, then new possibilities emerge (Senge et al., 2012). In the same manner, Robinson (2011) highlighted that schools can no longer be academic ghettoes. One of the principles for transforming education is partnership. Everyone had a stake in the future of education and in many ways; parts of the world there are formal alliances between schools and the businesses, philanthropic and cultural sectors.

The outcome of bridging transition, changing mindset, coping with change and embracing responsibility is the Rewarding Experience. The school administrators gained a favorable reward despite struggles and challenges. Education in the new paradigm is a process that encourages continual progress through the improvement of one's abilities, the expansion of one's interest and the growth of one's character (Bonstingl, 2001). Indeed, Russell (2008) argued that work can be an avenue of growth. It can take you to new places, introduce you to new ideas and place you in contact with new people. In organizations like schools, learning happens not only in one's engagement with the books or projects but more so learning happens in the relationship with other people in the work place. In the context of leadership, Bennis (2009) stated that leaders are self-directed, but learning and understanding are the keys to self-direction, and it is in our relationship with others that we learn about ourselves. In the end, the transition period opens up a door of opportunities for school administrators to learn from the process, learning which is geared towards personal, emotional, social and physical development in the context of coping with change in the working environment, workload and people working in the work place. Reynolds and Warfield (2010) summarized that today's educational leaders must recognize and assume shared responsibility not only for the intellectual and educational development of the students but also for their personal, social, emotional and physical development.

The emergent theory of Initializing Responsibility is generated relative to the extant literature. According to Glaser (2014), the conceptual comparison of the core category to extant literature may substantiate the theory; hence, the comparison may lead to corrections or modifications of the theory. The analysis of concepts - coping with change, nurturing change and driving change generates the concept of Initializing Responsibility. The emergent theory captures and explains the core category and subcategories. It implies an active engagement, empowerment, ownership and transformative development that define the significant roles of the school administrators. Leithwood and Riehl (2003) stated that school leadership is manifested in the lives of school leaders as they occupy various roles in the school in such a manner that provide direction and exert influence in order to achieve the school's goals. The success of an educational institution is primarily attributed to the school administrators. The theory can serve as a framework that develops educational leadership and management paradigm especially on the aspect of professional development of the faculty, staff and administrators. The theory of Initializing Responsibility, in itself, is an action-based theory relative to the performance of the school administrators of their duties and responsibilities. Furthermore, the theory is the foundation of different programs, engagement and way of life towards the realization of the vision-mission of the institution.

Finally, the theory of Initializing Responsibility leads toward the welfare of the community. Thus, it transpires beyond the boarders of educational institution and captures the operational

system of other organizations relative to leadership and management. Consequently, the point of connection between Initializing Responsibility and the welfare of the community is at the level of social responsibility, community development and transformative action. Agoncillo and Borromeo (2013) speak of the Guiding Principles of the Philippine Lasallian Family which highlighted the awareness and deeper understanding of the social realities; and the effect of the liberating action to be in solidarity with the progressive elements of the larger community to bring forth a society that is in keeping with God's plan of salvation. In the spiritual aspect, the theory of Initializing Responsibility is indeed a response to God's plan of salvation to bring forth the community closer to Him through active engagement in the performance of the administrative task. To sum up, the theory of Initializing Responsibility provides opportunities for personal and professional development of the school administrators and other practitioners as well. Urquhart, Lehmann and Myers (2009) agreed that the use of Grounded Theory is not just a coding technique, but offers a comprehensive method of theory generation. The implication of Classic Grounded Theory to the development of theory is that it gives the sense of comprehensiveness to the emergent theory. Initializing Responsibility is comprehensive by virtue of its being well-grounded in the data and well represented by many instances in the data (Urquhart, 2013). By many instances, it means that it covers all aspects of what is going on in the substantive area - Becoming a School Administrator; thus continually resolving the main concern through different stages of the Classic Grounded Theory Process. Another implication of the Classic Grounded Theory to the development of theory is on the level of analytical step where concepts are generated through the process of abstraction. Abstraction is an essential element of the process of Grounded Theory because by its very nature Grounded Theory is a conceptualized pattern; it is an abstract of time, place and people (Glaser, 2001). According to Glaser (2002), the product of such process is a transcending abstraction, not an accurate description. He further explained: the product, a grounded theory, will be an abstraction of time, place and people that frees the researcher from data worry and data doubts, and puts the focus on concepts that fit and are relevant. It gives then, a transcending picture that helps practitioners' access, evaluate and develop goals in a substantive area (Glaser, 2014). Moreover, accuracy is not an issue in Grounded Theory since it deals with the abstract patterns that vary as applied. The theory of Initializing Responsibility is significantly accurate because it follows the Classic Grounded Theory methodology. It is identified as the pattern of behavior among school administrators during the transition period.

Conclusion

Based on the results of the study, the following conclusions are drawn:

(a) During the transition period, the pattern of behavior generated from the question, "what happens during the transition period among school administrators?" was Initializing Responsibility. Therefore, Initializing Responsibility is the emergent theory which accounts for the pattern of behavior among the school administrators during the transition period;

(b) During the transition period, the main concern of the school administrators emerged from the question, "what is the main concern of the school administrators during the transition period?" which was identified as Coping with Change; and

(c) During the transition period, Coping with Change which was the main concern of the school administrators was continually resolved by Embracing Responsibility, Bridging Transition, Changing Mindset and Rewarding Experience. Hence, Embracing Responsibility is the manner of responding to the given duties and responsibilities of the administrative position; Bridging Transition is recognized as the strategy to align the personal values of the school administrator to the values of the institution; and Changing Mindset is the process of adapting to the change of environment and workload through the pursuit of academic formation and drive for excellence so as to contribute for the welfare of the community; and Rewarding Experience is considered as the consequence or the outcome of embracing responsibility, bridging transition and changing mindset.

Since the Classic Grounded Theory accounts for the pattern of behavior in the substantive area the following are recommended:

a. that the integrative framework may possibly account for the understanding of the tasks and responsibilities of school administrators on school leadership and management for potential candidates,

b. that the program development and activities may cultivate to the deeper understanding of duties and responsibilities for the administrative position.

c. that the future researches may possibly explore on the impact of the transition period to the school administrators in the performance of their duties and responsibilities.

d. that the future researchers may possibly develop a grounded theory on nurturing and driving change in the educational institution

e. that the integrative conceptual framework of the theory Initializing Responsibility may be applied to resolve the main concern of school administrators in educational insitution.

Acknowledgement

With so much gratitude, I am taking this opportunity to recognize Private Education Assistance Committee (PEAC) under the Dissemination Assistance for Research in Education (DARE) Program and the Office of the Vice Chancellor for Research and Innovation, De La Salle University - Manila for making this paper presentation and publication possible through their financial and moral support.

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THE DEVELOPMENT OF A THAI-INTERNET DEPENDENCY SCALE (T-IDS) AND ITS PSYCHOMETRIC PROPERTIES

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Abstract

This study aimed to develop and evaluate the psychometric properties of the Thai-Internet Dependency Scale (T-IDS). *Internet Dependency* was defined conceptually using the Diagnostic and Statistical Manual of Mental Disorder, 5th Edition (DSM-5) as the *persistent and recurrent use of the Internet to engage in varieties of online contents and activities, resulting in significant impairment or distress* (American Psychiatric Association, 2013). Data were collected from 422 Thai undergraduate students (76 males and 346 females of an average age of 18.96 years and SD of 1.75 years). An exploratory factor analysis (EFA) with extraction method of principal component analysis was performed to develop the T-IDS. Convergent validity and internal consistency were examined to identify the psychometric properties of the T-IDS. The result of the EFA identified a six-factor structure for the T-IDS with 32 items. The six factors namely *(1) Excessive and uncontrollable use, (2) Withdrawal and tolerance, (3) Loss of function and relationship, (4) Relieving negative mood, (5) Physical symptoms*, and *(6) Other relevant behaviors* together explained 57.89% of the total variance. The T-IDS and its factors shown relatively good convergent validity and good internal consistency (Cronbach alpha for the full T-IDS = .931, and ranged from .540 - .881 for the six factors). Thus, the T-IDS appears to possess adequate psychometric properties; therefore, it can be used to identify adolescents with Internet dependency or used in future research in the country later on.

Keywords: *Internet Dependency, Thai-Internet Dependency Scale (T-IDS), Exploratory Factor Analysis (EFA), Principal Component Analysis*

Introduction

In recent years, the advances in modern technology and Internet have revolutionized our daily lives. The ease of Internet access through mobile phones and other devices has brought about significant changes in society, especially in the way we communicate with others. People access varieties of online-base contents such as games, shopping, chatting, entertainment and more. As shown in the real-time record, there are enormous things happen within a single second online. The statistic shows that there are 60,784 Google searches submitted, 69,577 YouTube video viewed, 7,644 tweets sent, 786 Instagram photos uploaded and more than 2 million emails sent per second (Internet Live Stats, 2017).These varieties of online contents and activities are mutually related to the growth of Internet users worldwide. From this widespread use arises a big problem regarding *Internet dependency* or *Internet addiction*, especially among high-risk group of adolescents and university students (Kuss, et. al., 2013; Li, et. al., 2015). Empirical studies have revealed that addictive use of the Internet has an adverse effect on many aspects of a person's life, including academic/work performance, relationship with others, and physical and mental health, as well as a deteriorating impact on overall quality of life (Pontes, et. al., 2015; Singh &Barmola, 2015; Spada, 2014; Wisessathorn, M., 2016).

In 1996, Goldberg (as cited in Cho, et. al., 2014) firstly introduced the term *Internet addiction* and suggested the diagnostic criteria for *Internet Addiction Disorder or IAD* based on the criteria for Substance Abuse Disorder in the Diagnostic and Statistical Manual of Mental Disorder, Fourth Edition (DSM-IV: American Psychiatric Association, 2013). IAD, at that time, included criteria of tolerance, withdrawal, and giving up or reduction of social and/or occupational activities. Similarly, some researchers have based their definitions of Internet addiction on established conceptual frameworks for non-ingestive addictions, such as pathological gambling (Evren, et. al., 2014; Greenfield, 1999; Ko, et. al., 2006; Young, 1996, 1998), and technology addiction (Griffiths, 1995; Pontes, et. al., 2015). In 2013, the American Psychiatric Association (APA) introduced the diagnostic criteria for *Internet Gaming Disorder or IGD* added in the DSM-5- the newest version of the psychiatric manual currently used for mental disorder diagnosis in many countries. The diagnosis of IGD includes nine benchmarks: (1) preoccupation with internet games, (2) withdrawal symptoms, (3) tolerance, (4) unsuccessful attempts to control, (5) loss of interests in previous hobbies and entertainment, (6) continuing excessive use of Internet game, (7) deception regarding amount of time spent on Internet gaming, (8) using Internet games to relieve negative moods, and (9) loss of a significant relationship, job, education or career opportunity because of participation in Internet games (APA, 2013). A study in Korea applied concepts of the diagnostic criteria for IGD suggested in theDSM-5 to develop a standardized self-diagnostic Internet addiction scale (Cho, et. al., 2014).

Since global consensus regarding the definition and diagnostic criteria for Internet dependency or Internet addiction remain controversial, there is an ongoing debate about how to select

appropriate concepts and apply them to develop valid instruments(Cho, et. al., 2014; Wanajak, K., 2011).This ambiguity topic also extents to how to apply those instruments to assess risks and symptoms of Internet dependency. Some researchers develop a new instrument by using the various conceptual foundations underlying Internet addiction and testing the item with statistical method such as exploratory factor analysis or confirmatory factor analysis (Cho, et. al., 2014;Vilca&Vallejos, 2015),while some of researches translate an existing instrument, such as the Internet Addiction Test (IAT) by Young (1996, 1998), into their language and assess its psychometric properties in their culture (Karim & Nigar, 2014).Nevertheless, few of these measures fit well with socio-cultural context of Thailand.

This study fills a gap in previous literature by developing the Thai-Internet Dependency Scale (T-IDS) which is conceptually based on the diagnostic criteria of IGD in the DSM-5 and evaluating its psychometric properties to identify the quality of the scale. The T-IDS is designed to be a Thai culture-based instrument for screening signs of Internet dependency in university students who are at the greatest risk of developing an addictive behavior. University students have easy access to the Internet through their own mobile phones and/or via other computer devices (e.g. laptop, tablets, desktop). They are able to access a variety of online activities and this access can feasibly lead to over-reliance and lack of control over their online behavior. Use of the new T-IDS will advance our understanding of the characteristic and behavior underlying Internet dependency among university students and help design effective recovery program for them later on, representing important benefits of a reliable and valid T-IDS scale.

Methods

Participants

A total of 454 first-year students who were enrolled in the course *Introduction to Psychology* during the second semester of academic year 2016 at the Ramkhamhaeng University participated in the study. Thirty-two of them provided incomplete data and were excluded, while 422 (76 males and 346 females with an average ages of 18.96, SD = 1.75 years) remained for the analysis. Theoretically, minimally adequate sample size for conducting Exploratory Factor Analysis (EFA) should be at least five times as many observations as the number of variables to be analyzed, and a more acceptable sample size would have a 10:1 ratio (10 observations per variable: Hair, et. al., 2006). Therefore, adequate sample size for this study which initially consisted of 40 variables should be at least 400 or greater. The study met this assumption regarding sample size adequacy. Prior to data collection, all participants received a full explanation of the study's purpose and procedure. Doubts were resolved under the author's explanation in order to maximize the validity of the information obtained. Then the participants were informed and assured of their anonymity and confidentiality. The average time of protocol compliance was approximately 15 minutes.

Procedure and data analysis

The development of the Thai Internet Dependency Scale (T-IDS) consisted of five stages: (1) conceptual definition of the construct, (2) development of the items, (3) testing the assumptions, (4) development of the T-IDS scale and (5) confirmation of psychometric properties.

Stage 1: Conceptual definition of the construct

Defining the construct was the first step to develop the instrument and was based on a model or theoretical reference that identified the relationships among the construct and its components (Hair, et. al., 2006). For this study, *Internet Dependency* was defined based on theDSM-5 which is used for mental disorder diagnosis in many countries, including Thailand. Within the DSM-5, the criteria for *Internet Gaming Disorder (IGD)* were added to diagnose an individual who experiences persistent and recurrent used of the Internet to engage in games, resulting in clinically significant impairment or distress (APA, 2013). However online activities were not limited to Internet gaming for this measure, Because many people spend a large amount of time on several varieties of online activities such as recreation or online-chatting purposes. For this study, *Internet Dependency* was defined as*a persistent and recurrent use of the Internet to engage in varieties of online contents and activities, resulting in significant impairment or distress*.The components of Internet Dependency are describe in more details in Table 1.

Table 1 - Components of Internet Dependency

Component	Definition
1. Preoccupation	Preoccupation with Internet activities; Internet activities become the dominant activity in daily life
2. Withdrawal	Withdrawal symptoms when Internet activities are taken away (e.g. irritability, anxiety or sadness)
3. Tolerance	The need to spend an increasing amount of time engaged in Internet activities
4. Uncontrolled	Unsuccessful attempts to control the participation in Internet activities
5. Loss of interests	Loss of interests in previous hobbies and entertainment as a result of, and with the exception of, Internet activities
6. Excessive use	Continued excessive use of Internet activities despite knowledge of psychosocial problems
7. Deception	Deceiving family members, therapists, or others regarding the amount of time spent onInternet activities
8. Relieving negative mood	Use of Internet activities to escape or relieve negative mood (e.g. feelings of helplessness, guilt, anxiety)
9. Loss of function	Loss of significant relationship, job, educational or career opportunity because of participation in Internet activities

Stage 2: Development of the items

For this study, items were generated from the Internet Dependency definition and its components, together with previous Internet addiction scales (APA, 2013; Cho, et. al., 2014: Vilca&Vallejos, 2015; Young, 1996, 1998). A total of 40 items were selected after excluding duplicate or unrelated items. Then, five professionals (among them were three clinical psychologists, a developmental psychologist and an academic professor) were asked to select items and scored on the Index of Item-Objective Congruence (IOC). Three items that showed IOC < .06 were excluded. Finally, 37 items remained for further analysis. The developed

instrument utilized Likert-type response categories assessing frequency on a four-point scale, ranging from never to always, to evaluate the frequency of cognitive, affective and behavioral indicators of Internet dependency.

Stage 3: Testing the assumptions of the Exploratory Factor Analysis (EFA)

Testing assumptions of EFA required both conceptual and statistical consideration. A strong conceptual foundation supported the assumption that a factor structure existed before the EFA was performed. Test of statistical assumption ensured that the variables were sufficiently intercorrelated to produce representative factors and possessed 'factorability'. Several empirical measure were calculated to aid in assessing the factorability of the correlation matrix, including the anti-image correlation matrix, Bartletts test of sphericity, and the measure of sampling adequacy. The *Anti-image correlation matrix* is the negative value of the partial correlation matrix; in each case, smaller anti-image correlation coefficients (less than .70) are indicative of a data matrix suited to factor analysis. *Bartletts test of sphericity* is a statistical test for the presence of correlations among the variables. A statistically significant Bartletts test of sphericity (p-value < .05) indicates that sufficient correlations existed among the variables to proceed. Lastly, *Measure of sampling adequacy (MSA)* requires that MSA values must exceed .50 for both the overall test, as indicated by a value of Kaiser-Meyer-Olkin (KMO), and each individual variable. Variables with values less than .50 should be omitted from the factor analysis(Hair, et. al., 2006; Yong & Pearce, 2013). For this study, all of the conceptual and statistical assumptions were met. The conceptual assumption was conceptually based on the DSM-5 criteria. Testing the statistical assumptions confirmed that: (1) the anti-image correlation coefficients were not greater than .70, indicating that the factors structure can be explained by the variables loading on the factors, (2) a statistically significant Bartletts test of sphericity (chi-square = 5895.62, df = 666; p-value <.001), indicated that sufficient correlations existed among the variables, and (3) The KMO values was .924 and the MSA values for each individual variable were .7 and above, indicating that each variable was able to predict without error by the other variables. Taken all of this together supported the factorability of the correlation matrix.

Stage 4: Development of the T-IDS scale by using an EFA

The primary purpose of EFA is to condense data by regrouping a large number of variables into a limited set of factors based on shared variance, so that relationships and patterns can be easily interpreted (Hair, et. al., 2006; Yong & Pearce, 2013).Therefore, for this study, an EFA was used to develop the T-IDS, by the extraction method of principle component analysis and the rotation method of Promax with Kaiser Normalization. The outcome of the EFA is reported in the results section.

Stage 5: Confirmation of psychometric properties

Psychometric properties of the developed T-IDS were assessed in terms of convergent validity and internal consistency reliability. Convergent validity was examined by estimating the inter-factor correlations and the factor-total correlation. Internal consistency examined by the Cronbach alpha coefficient, which reflects test reliability based on the number of items and proportion of total variance in the test due to covariance between items. The more covariance

between items, the greater the test reliability (Hair, et. al., 2006).The evaluation of the T-IDS psychometric properties is presented in the results section.

Results

Results of the EFA

The purpose of the EFA was to find a way to organize the information contained in a larger number of original variables into a smaller set of new, composite dimensions or factors with a minimum loss of information (Hair, et. al., 2006). In meeting this purpose, four steps were introduced: (1) selecting the variables (items), (2) specifying the number of factors, (3) examining extraction methods and factor loadings, and (4) examining rotation methods and interpretations.

Selecting the variables (items)

First, items were selected based on consensus among professionals and scores on the IOC. Three items (from an original pool of 40 items) that showed IOC < .06 were excluded, and 37 items remained for further analysis. Second, in the EFA, it was important to determine *Communality* or the variance accounted for by the common factors. Items with low communalities (e.g. less than .20 so that 80% is unique variance) were eliminated from the analysis since the aim of factor analysis was to try and to explain the variance through the common factors (Yong & Pearce, 2013). In this study, all of the 37 items shown communality larger than .20; therefore, all of them were retained for the analysis, as shown in Table 2.

Table 2 - Communalities for all the 37 items of the T-IDS

Items	Initial	Extraction		Items	Initial	Extraction
1	1.0000	.530		20	1.0000	.808
2	1.0000	.556		21	1.0000	.554
3	1.0000	.620		22	1.0000	.734
4	1.0000	.439		23	1.0000	.597
5	1.0000	.636		24	1.0000	.502
6	1.0000	.598		25	1.0000	.583
7	1.0000	.436		26	1.0000	.601
8	1.0000	.656		27	1.0000	.588
9	1.0000	.536		28	1.0000	.685
10	1.0000	.558		29	1.0000	.554
11	1.0000	.589		30	1.0000	.614
12	1.0000	.588		31	1.0000	.607
13	1.0000	.718		32	1.0000	.530
14	1.0000	.658		33	1.0000	.566
15	1.0000	.683		34	1.0000	.514
16	1.0000	.635		35	1.0000	.530
17	1.0000	.616		36	1.0000	.707
18	1.0000	.525		37	1.0000	.418
19	1.0000	.745				

Specifying the number of factors

In consideration of the number of factors to extract, eigenvalues and the scree plot are commonly used to guide decisions. Kaiser's criterion suggests retaining all factors that are above the eigenvalue of 1. The scree plot consists of eigenvalues (X-axis) and number of factors (Y-axis). The number of factors to be retained is represented by the data points that are above the break, revealed by drawing a horizontal line and a vertical line starting from each end of the curve (Yong & Pearce, 2013).In this study, determining eigenvalues (greater than 1 per Kaiser's criterion) together with the scree plot (shown in Figure 1) lead us to extract 6 factors accounting for 57.89% of the total variance. These six-factors were sufficient to meet a specified percentage of variance explained.

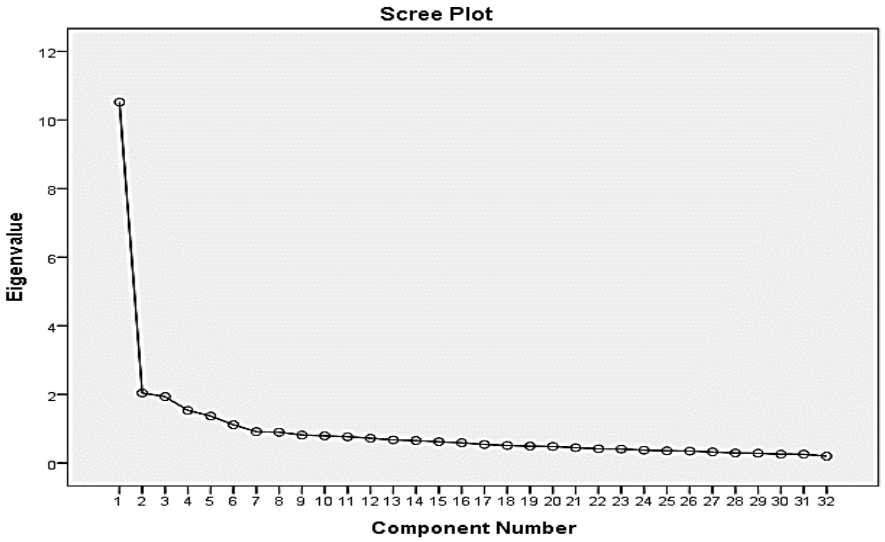

Figure 1 The scree plot generated in EFA for 37 items

Examining extraction methods and factor loadings

The extraction method of *principal component analysis* is used to extract the maximum variance from the data set with each component thus reducing a large number of variables into smaller number of components (Tabachnick&Fidell, 2007 as cited in Yong & Pearce, 2013).The results from our *principal component analysis* revealed that five items(item1, 2, 22, 23 and 32) had factor loadings < .30. These low factor loadings indicated that perhaps the items did not represent a sign of Internet dependency in Thai culture and should be excluded from the analysis. After discarding these five items, data were subjected to a final EFA with all factor loadings <.30 suppressed. Though the final EFA run, a six-factor structure of the T-IDS with 32 items was identified.

Examining rotation methods and interpretations

Factors are rotated for better interpretation since unrotated factors are ambiguous. The goal of rotation is to attain an optimal simple structure which attempts to have each variable load on as few factors as possible, but maximizes the number of high loadings on each variable (Rummel,

1970 as cited in Yong &Pearce, 2013).In this study, an oblique rotation method -*Promax with Kaiser Normalization*- was employed in eight iterations, explaining together 57.89% of the total variance. Factor 1 consisted of nine items and accounted for 32.88% of the total variance; factor 2 consisted of seven items and accounted for 6.39% of the total variance; factor 3 consisted of eight items and accounted for 6.05% of the total variance; factor 4 consisted of three items and accounted for 4.80% of the total variance; factor 5 consisted of two items and accounted for 4.29% of the total variance; and factor 6 consisted of three items and accounted for 3.48% of the total variance**,** as shown in Table 3.

Table 3- Rotated factor matrix for a reduced set of T-IDS items (discarded item 1, 2, 22, 23 and 32)

Item No.	Items in brief	Factors					
		1	2	3	4	5	6
Item 12	I cannot control the numbers of hours to use the Internet	.825					
Item 13	I keep going online even if I've told myself to stop	.819					
Item 3	I lose track of time when I an online	.813					
Item 11	I often find myself staying online longer than I intended	.756					
Item 14	I tend to go online even I have lots of other things to get done	.708					
Item 28	I fail to keep my plan to limit my time on the Internet	.690					
Item 16	I cannot control myself even if I am aware of negative effect of the internet on my dairy activities	.605					
Item 15	I want to go online even if I am scolded	.565					
Item 27	I sometimes stay up all night or lose sleep due to Internet	.490				.317	
Item 8	I feel disappointed when I am not online but those feelings go away when I am able to go online		.801				
Item 6	I feel bored and joyless when I cannot be online		.758				
Item 5	I feel anxious and nervous when I cannot be online		.748				
Item 9	I want to be online more when I doing more		.586				
Item 7	I get upset or annoy if someone bothers me while going online		.533				
Item 10	I have to be online for a longer time to feel greater excitement than before		.531				
Item 4	I cannot focus on other things while waiting to know what is happening if I cannot be online		.472				
Item 30	I have skipped classes to stay online			.914			
Item 34	I have had troubles with family members due to my Internet use			.684			
Item 33	I stopped my daily routine due to my Internet use			.669			

Item No.	Items in brief	Factors					
		1	2	3	4	5	6
Item 18	I don't do many other activities except on the Internet			.653			
Item 17	I don't want and can't be bothered to think of things other than the Internet			.624			
Item 24	I missed going out with people because I was so immersed in the Internet			.559			
Item 29	My school marks suffer due to my Internet use			.495			
Item 26	I often skip meals to stay online			.387		.357	
Item 20	I go online to forget something that made me feel annoy or frustrate				.881		
Item 19	I forget my problems when I am online				.852		
Item 21	I prefer going online to reduce my stress than doing other things				.580		
Item 36	I have a headache when I spend too much time online					.860	
Item 25	I think, my health has deteriorated since I started surfing the Internet					.703	
Item 31	I often attend classes and go online at the same time						.711
Item 35	I spend more and more money to go online						.503
Item 37	My friends point out that I have an Internet dependency						.394
Eigenvalue		**10.52**	**2.04**	**1.94**	**1.54**	**1.37**	**1.12**
% of variance explained		**32.88**	**6.39**	**6.05**	**4.80**	**4.29**	**3.48**
% of cumulative variance explained		**32.88**	**39.27**	**45.32**	**50.12**	**54.41**	**57.89**
Cronbach Alpha (for the full T-IDS = .931)		**.881**	**.843**	**.820**	**.768**	**.696**	**.540**

N = 422; Factor loadings < .30 were suppressed
Extraction Method: *Principal Component Analysis*/ Rotation Method: *Promax with Kaiser Normalization*

Before interpretation and naming of the factors, two items cross-loading between the factors (item 27 and 26) needed to be identified. Specifically, item27 *(I sometimes stay up all night or lose sleep due to Internet use)* was cross-loaded on both Factor 1 and Factor 5 with loadings of .490 and .317 respectively. Item26 *(I often skip meals to stay online)* was cross-loaded on both Factor 3 and Factor 5 with loadings of .387 and .357 respectively. We regrouped item 27 and item 26 to be under Factor 5 for the best conceptual fit, even though the factor loadings were slightly smaller. Thus, the resulting interpretation and naming of the factors in the final T-IDS is shown in Table 4.

Table 4 - Interpretation and naming of the factors in the final T-IDS

Factor	Naming	Definition	No.	Item in brief
1	Excessive and uncontrollable use (α = .881)	Continuing excessive use of Internet activities and unsuccessful attempts to control	3	I lose track of time when I an online
			11	I often find myself staying online longer than I intended
			12	I cannot control the numbers of hours to use the Internet
			13	I keep going online even if I've told myself to stop
			14	I tend to go online even I have lots of other things to get done
			15	I want to go online even if I am warned
			16	I cannot control myself even if I am aware of negative effect of the internet on my dairy activities
			28	I fail to keep my plan to limit my time on the Internet
2	Withdrawal and Tolerance (α = .843)	Withdrawal symptoms when Internet activities are taken away and the need to spend increasing amount of time engaged in Internet activities	4	I cannot focus on other things while waiting to know what is happening if I cannot be online
			5	I feel anxious and nervous when I cannot be online
			6	I feel bored and joyless when I cannot be online
			7	I get upset or annoy if someone bothers me while going online
			8	I feel disappointed when I am not online but those feelings go away when I am able to go online
			9	I want to be online more when I doing more
			10	I have to be online for a longer time to feel greater excitement than before
3	Loss of Function and Relationship (α = .820)	Loss of interests in previous hobbies, and entertainment, as well as the loss of relationship or educational/ occupational opportunity because of participation in	17	I don't want and can't be bothered to think of things other than the Internet
			18	I don't do many other activities except on the Internet
			24	I missed going out with people because I was so immersed in the Internet
			29	My school marks suffer due to my Internet use
			30	I have skipped classes to stay online
			33	I stopped my daily routine due to my Internet use
			34	I got troubles with family members due to my Internet use

Factor	Naming	Definition	No.	Item in brief
		Internet activities		
4	Relieving Negative Mood (α = .768)	Use of Internet activities to escape or relieve negative mood	19	I forget my problems when I am online
			20	I go online to forget something that made me feel annoy or frustrate
			21	I prefer going online to reduce my stress than doing other things
5	Physical Symptoms (α = .696)	Physical impact as a result of participation in Internet activities	25	I think, my health has deteriorated since I started surfing the Internet
			26	I often skip meals to stay online
			27	I sometimes stay up all night or lose sleep due to Internet use
			36	I have a headache when I spend too much time online
6	Other Relevant Behaviors (α = .540)	Other covert behaviors as a result of participation in Internet activities	31	I often attend classes and go online at the same time
			35	I spend more and more money to go online
			37	My friends point out that I am an Internet dependency

Confirmation of psychometric properties

Convergent validity

Convergent validity was examined by the *Factor Correlation Matrix*. The inter-factor correlation was positive between all the factor pairings. Although these were small-to-moderate in magnitude, they were all significant (p-value < .01). The strongest correlation was found between *Factor1 (Excessive and uncontrollable use)* and Factor 2 *(withdrawal and tolerance)* and the weakest was found between Factor 4*(relieving negative mood)* and Factor 6 *(other relevant behaviors)*. In addition, ease of the six factors also correlated significantly with the full T-IDS, with coefficient ranging from .565 to .868. The full T-IDS had the strongest correlation with Factor 1 *(Excessive and uncontrollable use)* and the weakest correlation with Factor 4 *(relieving negative mood)*, as displayed in Table 5.

Table 5 - Factor correlation matrix: inter-factor correlation and the factor-total correlation

Factors	1	2	3	4	5	6	T-IDS
1	1						
2	.623**	1					
3	.591**	.578**	1				
4	.383**	.440**	.372**	1			
5	.575**	.430**	.564**	.267**	1		
6	.467**	.449**	.497**	.232**	.495**	1	

Factors	1	2	3	4	5	6	T-IDS
T-IDS	.868**	.823**	.805**	.565**	.719**	.651**	1

** p-value< .01; N = 422

Internal consistency

The reliability of the T-IDS was examined by estimating internal consistency by calculating the coefficient of Cronbach Alpha. The internal consistency for the full T-IDS was .931, indicating very high reliability. For each factor, five of the six factors showed moderate to high internal consistency reliability (α = .696 - .881), with only the factor of *other relevant behavior* falling below the desired level (α = .540). The alpha coefficient for factor 1 *(Excessive and uncontrollable use)* was .881; factor 2 *(withdrawal and tolerance)* was .843; factor 3 *(loss of function and relationship)* was .820; factor 4 *(relieving negative mood)* was .768; factor 5 *(physical symptoms)* was .696; and factor 6 *(other relevant behaviors)* was .540**,** as described in Table 3 and 4.

Discussion

This study aimed to develop and evaluate the psychometric properties of the Thai-Internet Dependency Scale (T-IDS) which was designed to be a Thai culture-based instrument for screening signs of Internet dependency among university students. Analyzing the data by EFA with extraction method of principal component analysis, a six-factor structure (comprising 32 items) of the T-IDS was identified (Table 4). Factor 1 (eight items) measured *Excessive and uncontrollable use* (e.g. staying online longer than intended, keep going online even if told to stop, tend to go online even when having lots of things to get done). Factor 2 (seven items) measured *withdrawal and tolerance* symptoms (e.g. feeling anxious and nervous when cannot be online, want to be online more when doing more). Factor 3 (seven items) measured *loss of function and relationship* (e.g. not doing other activities except on the Internet, missed going out with people because so immersed in the Internet, stop daily routine due to Internet). Factor 4 (three items) measured *relieving negative mood* (e.g. going online to forget something that made them feel annoyed or frustrated, forget problems when going online). Factor 5 (four items) measured *physical symptoms* (e.g. health has deteriorated since started surfing the Internet, often skip meals to stay online, stay up all night or lose sleep due to Internet use). Lastly, factor 6 (three items) measured *other relevant behaviors* (e.g. spend more and more money to go online, often attend classes and go online at the same time). Those six factors together accounted for 57.89% of the total variance; their individual contribution ranged from 3.48% to 32.88% of the total variance (Table 3). The internal consistency reliability of five factors showed moderate to high coefficients (α = .696 - .881), with only the factor of *other relevant behavior* falling below the desired level (α = .540); however, the internal consistency for the full T-IDS was .931, indicating very high reliability (Table 3). The T-IDS also showed relatively good convergent validity, with significant inter-factor correlation for all the factors (p-value < .01). The six factors also correlated significantly with the full T-IDS, with the coefficient ranging from .565 to .868 (Table 5).

Results of this study recommended some incongruence between theoretically-based criteria suggested in the DSM-5 and empirically-based criteria emerging from factor extraction,

indicating that theoretical and empirical should be considered together with socio-cultural context when developing a consensus definition and construct a tool. For this reason, some criteria from DSM-5 seem inappropriate when applied to Thai adolescents and probably need to be refined into fewer dimensions or factors, such as refining the DSM-5 based criteria of *Excessive use* and *Uncontrolled use* into a single dimension of *Excessive and uncontrollable use (Factor 1)*; combining *Withdrawal* and *Tolerance* into a single dimension of *Withdrawal and tolerance (Factor 2)*; and combining *Loss of interests* and *Loss of function* into a single dimension of *Loss of function and relationship(Factor 3)*. Furthermore, the criteria of *Deceiving* from the DSM-5 was removed from our study, since the DSM-5 was strongly concerned with online gaming while our study extended online activities to include a variety of online behaviors.

When comparing this T-IDS with previous Internet addiction scales, the six-factor structure with 32 items of the T-IDS was relatively similar to previous instruments, such as the original Internet Addiction Test (IAT) developed by Young (1996, 1998). The IAT was a 20-item questionnaire measuring psychological dependency, compulsive use and withdrawal, as well as related problems of school, sleep, family and time management regarding participation in the Internet (Young, 1996, 1998). The Korea-Internet Addiction Scale (K-Scale) consisted of 26 items assessing seven factors: withdrawal, tolerance, unsuccessful attempt to control Internet use, continued excessive Internet use, escape dysphoric mood, deceive amount of time on Internet use, and jeopardize personal function and relationship (Cho, et. al., 2014). The Peruvian instrument, the Addiction to Social Network Scale (C.A.R.S.), consisted of 43 items assessing seven factors of addiction to social networks: loss of control, abstinence syndrome, decreased academic performance, mood modification, dependency, loss of interest in other activities and conflict in the social sphere (Vilca&Vallejos, 2015).

This study has limitations. First, selection biases occurred since participants were limited to first year university students and the majority was female. The bias also included the dissimilarity of online activities among students; male mostly preferred online chatting (78.95%), entertainment (61.84%) and online gaming (43.42%) while female mostly preferred online chatting (95.37%), entertainment (79.48%) and searching information (40.46%).This unbalance ratio may be considered to have an effect on generalization, therefore using the T-IDS to diverse socio-cultural contexts needs deliberation. Future studies should address this issue by testing the T-IDS with more diverse and bigger samples in order to increase a generalization. Second, the construct validity of the T-IDS has been supported, but this scale has limits related to its use for diagnostic purposes. To use this scale in practice, future studies may widen the definition of internet dependency by integrating theoretical with more empirical evidences. Third, the DSM-5 proposed diagnostic criteria for Internet-based dependency are limited to *Internet Gaming Disorder or IGD*, but this study was conducted to measure Internet dependency with respect to a wider variety of online contents and activities, such as online-chatting, entertainment, searching information and more. With respect that these Internet-related addiction criteria are expected to be similar, future studies should be given to the precise definition of *Internet dependency* that can be applied as a standard. Lastly, future research should take a consideration on the cutoff score of the T-IDS that distinguishes between someone who uses the Internet a lot but is not dependent and someone who has Internet dependency. This would require administration of the T-IDS with a group of people with confirmed Internet dependency and a group of people confirmed to be without Internet dependency to compare scores. It would also likely require

testing of sensitivity and specificity of the T-IDS. Therefore, this new T-IDS will advantages to use for both clinical and non-clinical practice.

Implication

As suggested in the literature, it is very important to identify individual who are in the early stage of Internet dependency problems so they can receive an early treatment and intervention (Cho, et. al., 2014). This new T-IDS will advantage for (1) early detection of students/adolescents who are at the high risk of developing an online addictive behavior and (2) advance our understanding of the characteristic and behavior underlying Internet dependency in order to design effective recovery programs - both within and outside classroom- for them. Although Internet dependency is examined as undesirable behavior, the suggestion in the literature revealed educational advantages of using Internet to improve student learning and achievement. Internet and technologies provide access to vast array of information, including digital libraries, data for analysis, and other people who provide information, feedback, and inspiration. They can enhance the learning of teachers and administrators, as well as that of students, and increase connections between schools and the communities, including homes. Internet can also be used in (1) bringing exciting curricula based on real-world problems into the classroom, (2) providing scaffolds and tools to enhance learning, (3) giving students and teachers more opportunities for feedback, reflection, and revision, (4) building local and global communities that include teachers, administrators, students, parents, practitioners, and other interested people, and (5) expanding opportunities for teacher learning (National Research Council, 2000). Therefore, the educational advantages from Internet will guide to improve intervention and policy in the University later on.

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TEACHING STANDARDS COMPETENCE AND EFFICIENCY PERFORMANCE OF BASIC EDUCATION TEACHERS

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Abstract

Using the sequential explanatory mixed-method, this paper investigated the levels of teaching standards competence and efficiency performance of basic education teachers of a comprehensive Catholic university, and their lived experiences on teaching competence and efficiency. The data were generated using the self-administered questionnaires of the National Competency-Based Teaching Standards (NCBTS) and Efficiency Performance Rating (EPR). Further, the qualitative data were collected using an unstructured interview. The major findings of the study revealed that teachers have an experienced teaching standards competence and satisfactory efficiency performance. Results further showed no significant relationship between teaching standards competence and efficiency performance. The narratives of the participants revealed that teacher's competence and efficiency are indicators of the quality of instruction. The findings provide baseline data for designing a faculty development program for basic education teachers.

Keywords: *Basic education teachers, Efficiency performance, Faculty development program, Quality standards, Teaching standards competence*

Introduction

Standards drive the critical elements of the educational system- the curricula that schools follow, the textbooks students read, and the tests they take. Similarly, teaching standard establishes the level of performance that students, teachers, and schools are expected to meet. If the 21st century standards are to be effective, they should reflect a realistic practice of today's world (Partnership for the 21st Century Learning, 2016).

Moreover, it is accepted universally that the quality of the teachers determines the quality of education. As we raise the quality standards for our children, our teachers will also need the right values, skills, and knowledge to be competent and effective practitioners who will serve as frontrunners in achieving the desired outcomes of education (Singapore National Institute of Education, 2010).

In line with the call for enhancement of teachers' competencies, the Philippine Education for All (EFA) Plan 2016, through the Basic Education Sector Reform Agenda (BESRA), provided a framework that defines effective teaching in all aspects of teacher's personal life and in all phases of teacher development through the National Competency-Based Teachers Standards (NCBTS) which is patterned on educational theories and empirical researches on characteristics of the learning environment and detaching practices that lead to effective student learning. Further, it is anchored from documented successful practices and programs of schools, divisions, regions, and educational reform projects in the different parts of the Philippines. As an integrated theoretical framework, it standardizes the definition of what effective teaching is (NCBTS, 2013).

Furthermore, teachers' professional standard can guide teachers in assessing their professional skills and competence (Kukk, A., & Talts, L., 2007). Also, professional development of every teacher must be seen as a lifelong task for the teachers to be more effective and efficient (Alston et al., 2003).

In line with this goal, a comprehensive Augustinian Recollect university as an academic institution that molds human beings holistically by providing them support and learning experiences permeated by the Gospel values for the service of humanity and praise to the One God, commits itself to uphold the standard of quality Christian education (University of Negros Occidental-Recoletos Vision- Mission, 2016).

In this context, the researcher is driven to investigate on the levels of teachers' teaching standards competence in the seven domains and efficiency performance in the six areas and ascertain if there exists a relationship between the two variables in relation to quality standards implemented by the school. Lastly, it also seeks to determine the insights that can be culled out from the lived experiences of teachers in the practice of teaching standards competence and in terms of their efficiency performance.

Theoretical Framework

Basically, constructivism is a theory grounded on observation and scientific study about how people learn (Hooyer, 1996). Thus, this study is anchored on this theory because its purpose is

not to implement standards but to look into the possible aspects for the development of teachers based on their learning experiences on their strengths and weaknesses concerning their competence and efficiency. Moreover, constructivism has become the reigning paradigm in education (Hausfather, 2001). Today, constructivism has become the 'in' foundational theory for curriculum and instruction (Bently, 2003). The constructivist theory has inspired reform at all levels of the educational system (Simpson, 2002).

The theory of growth and development is seen very significant to this study because teachers' personal growth and professional development is one factor that supplements teachers' competence and efficiency. Comparatively, professional growth and development are considered to be one of the ways to improve the teaching and learning process. Improved learning for all students is the decisive objective of professional development, which is fulfilled via quality teaching (Darling- Hammond, 2000). In defining professional development, Guskey (2002) emphasized this goal by equating professional growth and development with those processes and activities designed to develop the knowledge, skills, and attitudes of professional educators so that they will support the learning of students. Furthermore, successful professional development programs build on teacher's beliefs and knowledge but push teachers to examine their knowledge of content and their beliefs and practices. They offer support to teachers that take into account the realities of their school situations. They help build collaboration among teachers (Cohen et al., 1990).

It is seen that there is also a link between quality teaching and learning productivity since productivity is drawn on the commonly used economic model of output over input (Hopkins et al., 1991). It is focused on learning and learning outcomes regarding effectiveness, efficiency, competence, high performance, and better achievement. To increase education productivity and efficiency, educational implementation goals, as well as achievement goals, must be deliberated (Walberg et al., 1996). He added that the psychological model of productivity has a multifactor structure that includes quality of learning environment and quality of instructions.

In response to the call for quality teachers, the Philippine Republic Act No. 7784, an Act Strengthening Teacher Education in the Philippines, mandates the powers and functions of the Department of Education to formulate policies and standards to enhance and improve the system of education in all existing public and private schools (Republic Act No. 7784, 1994). The Department of Education established the *NCBTS*, a framework that identifies the competency standards for the teacher so that the learners and stakeholders can understand the set of behaviors, attitudes, and skills that teachers have to carry out to satisfactorily perform their roles and responsibilities. The set of competencies is included in a Teacher Performance and Development Framework (TPDF) that is based on the fundamental morals and ethics of Filipino educators and the ideologies of operative teaching and learning. This framework is divided into seven (7) domains that represent the desired features of the teaching and learning process (NCBTS, 2013).

Correspondingly, this study is anchored in the vision- mission of a comprehensive Catholic university committed to the 'integral formation of the human person with the passion for excellence and service to the Church and society'. To achieve this aspiration, an Augustinian Recollect University dedicated itself 'to educate the mind and the heart by providing the climate, the structure, and the means to develop the vocation, knowledge, skills, talents, and attitude of

the community as permeated by the Gospel values for the service of humanity, love and praise to one God' (UNO-R Vision- Mission, 2016).

Research Design

This study utilized the sequential explanatory mixed method. This design refers to the collection and analysis of quantitative and qualitative data respectively (Creswell et al., 2003). The main objective of mixed methods is to obtain a comprehensive understanding of the behavior and experience of a human being by using more than one method within a research study (Morse, 1991). This sequential design is used in which quantitative data are collected first to determine which findings to augment in the next phase (Driscoll, 2007).

Quantitatively, the researcher used the descriptive analysis method which involves the collection of data that give the picture of events and then organizes, tabulates, depicts, and describes the data collection (Glass & Hopkins, 1984). It often uses visual presentations such as graphs and charts to aid the reader in understanding the data distribution. This descriptive analysis method was used to describe the level of teaching standards competence of teachers using the NCBTS and their efficiency performance using the Efficiency Performance Rating (EPR). Thus, the descriptive survey was utilized because this design uses a questionnaire to systematically and accurately describe the attitudes, beliefs, feelings, and behaviors of a particular population (Leary, 2010). Qualitatively, the researcher used the phenomenological research design to investigate on the participants' description of their life experiences based on the NCBTS and EPR.

Participants

Seventy-seven teachers and 17 academic heads of the basic education department of a comprehensive university were the participants of this study. Quantitatively, it covered the whole population of participants. Qualitatively, the researcher used the maximal variation purposeful sampling to develop many perspectives of information-rich cases for an in-depth investigation of the lived experiences of the teachers based on the teaching standards and efficiency performance. For the phenomenological process, Creswell et al. (2005) suggested conducting an in-depth interview with 3to 10 individuals and explained that the relevant point is the description of the meaning of a small number of individuals who have experienced the phenomenon.

Table 1- Distribution of the Participants

Level	Teachers	Academic Heads	Total	%
Pre-Elementary	5	1	6	6
Elementary	21	6	27	29
Junior High School	25	7	32	34
Senior High School	26	3	29	31
TOTAL	**77**	**17**	**94**	**100**

Measures

This study uses quantitative data collected through a standardized survey questionnaire to identify the teaching standards competence of teachers using the NCBTS to be accomplished by both teachers and academic heads. This tool was created by the Department of Education for the use of all teachers who would want to assess their strengths and weaknesses in the practice of competency- based teaching standards. Based on the standards set by the Department of Education, the overall result was interpreted as follows: Expert, Experienced, Developing, and Beginning. On the other hand, the EPR was used to quantify the level of efficiency performance among teachers which was interpreted as follows: excellent, very satisfactory, satisfactory, needs improvement and poor. The existence of bias from both groups of respondents, teachers and academic heads, is considered the limitation of this study. Qualitative data were gathered through a semi-structured individual in-depth face-to-face interview.

Data Analysis

Quantitatively, descriptive and inferential statistics were employed in treating and analyzing data. To determine the teaching standards competence and efficiency performance of teachers, mean scores were used. However, to determine the significant relationship between teaching standards competence and efficiency performance of teachers, the Pearson Product Moment of Correlation Coefficient or PPM was used after testing for the normality of data distribution using Kolmogorov- Smirnov Test. Qualitatively, the process involved recursive textual data analysis throughout the investigation to organize, classify, categorize, search for patterns and synthesize to cull out and formulate themes from the insights of the participants.

Results

Level of teaching standards competence.

Table 2 and Table 3 show that the level of teaching standards competence among basic education teachers as assessed by teachers themselves and their academic heads obtained experienced level (M= 3.10, SD=0.43). Generally, the result revealed that teachers have the majority of the competencies at a high level for teaching effectiveness. Strengths have to be enhanced, and teachers' needs have to be addressed (NCBTS, 2013). Comparatively, the self-assessment of teachers (M=3.20, SD= 0.32) is higher than the assessment of the academic heads (M= 3.00, SD= 0.50) in terms of teaching standards competence. However, both assessments are descriptively ‘experienced’. Also, as shown in the result, Social Regard for Learning was the prevailing domain (M= 3.25, SD= 0.44) affecting the teaching standards competence of teachers. Community Linkages, on the other hand, is the least domain (M= 2.93, SD= 0.60).

Table 2- Level of Teaching Standards Competence among Basic Education Teachers as Assessed by Teachers Themselves and the Academic Heads

Respondents	Social Regard for Learning			Learning Environment			Diversity of Learners			Curriculum		
	M	**SD**	**INT**	**M**	**SD**	**INT**	**M**	**SD**	**INT**	**M**	**SD**	**INT**
Teachers	3.28	0.37	EXD	3.23	0.37	EXD	3.12	0.37	EXD	3.22	0.36	EXD
Academic Heads	3.21	0.49	EXD	3.07	0.54	EXD	2.87	0.60	EXD	3.02	0.57	EXD
As a Whole	***3.25***	***0.44***	***EXD***	***3.15***	***0.47***	***EXD***	***2.99***	***0.51***	***EXD***	***3.12***	***0.48***	***EXD***

Note: INT = Interpretation, BEG= Beginning, DEV=Developing, EXD = Experienced, EXT = Expert.

Table 3 - Level of Teaching Standards Competence among the Basic Education Teachers as Assessed by Teachers Themselves and the Academic Heads

Respondents	Planning, Assessment, and Reporting			Community Linkages			Personal and Professional Growth			Teaching Standards Competence as a Whole		
	M	**SD**	**INT**	**M**	**SD**	**INT**	**M**	**SD**	**INT**	**M**	**SD**	**INT**
Teachers	3.14	0.40	EXD	3.11	0.49	EXD	3.28	0.40	EXD	3.20	0.32	EXD
Academic Heads	2.92	0.57	EXD	2.76	0.65	EXD	3.12	0.50	EXD	3.00	0.50	EXD
As a Whole	***3.03***	***0.50***	***EXD***	***2.93***	***0.60***	***EXD***	***3.20***	***0.46***	***EXD***	***3.10***	***0.43***	***EXD***

Note: INT = Interpretation, BEG= Beginning, DEV=Developing, EXD = Experienced, EXT = Expert.

Level of efficiency performance.

Table 4 and Table 5 show that the level of efficiency performance among the basic education teachers as assessed by teachers themselves and their academic heads when taken as a whole obtained satisfactory level (M= 88.46, SD=6.00). Generally, the result revealed that teachers, as assessed by themselves and their academic heads, have the efficiency performance at an average level. Among the six areas, teaching performance has the biggest weight of 50 % in the efficiency performance of the teachers. Thus, teaching performance is considered to be the most significant determinant of the level of efficiency. Also, as seen in the result of the efficiency performance of teachers, the assessment of the academic heads (M= 89.89, SD= 5.11) is higher than the assessment of teachers themselves (M=87.03, SD= 6.51).

Table 4 - Level of Efficiency Performance of Teachers as Assessed by Teachers Themselves and their Academic Heads

Respondents	Teaching Performance			Physical Punctuality			Physical Attendance			Punctuality in Submission of Reports and Requirements		
	M	**SD**	**INT**	**M**	**SD**	**INT**	**M**	**SD**	**INT**	**M**	**SD**	**INT**
Teachers	44.23	3.88	S	8.40	1.15	VS	8.96	0.88	E	8.26	1.26	VS
Academic Heads	44.84	2.74	VS	9.21	0.91	E	9.25	0.77	E	8.66	0.80	VS
As a Whole	***44.54***	***3.36***	***S***	***8.81***	***1.11***	***E***	***9.11***	***0.84***	***E***	***8.46***	***1.07***	***VS***

Note: INT = Interpretation, P= Poor, NI = Needs Improvement, S = Satisfactory, VS = Very Satisfactory, E = Excellent.

Table 5 - Level of Efficiency Performance of Teachers as Assessed by Teachers Themselves and their Academic Heads

Respondents	Accuracy of Reports and Requirements			Involvement in Extracurricular Activities			Efficiency Performance		
	M	**SD**	**INT**	**M**	**SD**	**INT**	**M**	**SD**	**INT**
Teachers	8.65	0.84	VS	8.53	1.29	VS	87.03	6.51	S
Academic Heads	8.72	0.76	VS	9.21	0.93	E	89.89	5.11	VS
As a Whole	***8.69***	***0.80***	***VS***	***8.87***	***1.17***	***E***	***88.46***	***6.00***	***S***

Note: INT = Interpretation, P= Poor, NI = Needs Improvement, S = Satisfactory, VS = Very Satisfactory, E = Excellent.

Relationship between teaching standards competence and efficiency performance.

Pearson Product Moment Correlation was utilized to determine the significant relationship between the teaching standards competence and the efficiency performance of teachers. The result in Table 6 shows no significant relationship between the teaching standards competence and the efficiency performance of teachers [r(152)=-0.098, p=0.226]. This would mean that teaching standards competence of teachers is not a determinant of their efficiency performance.

Table 6 - Significant Relationship between the Teaching Standards Competence and the Efficiency Performance of Teachers

Variables	**r**	**df**	**P**
Teaching Standards and Efficiency Performance	-0.098	152	0.226

Note: the correlation is significant when $p \leq 0.05$.

Lived experiences of teachers in terms of teaching standards competence and efficiency performance.

The narratives of the participants on their lived experiences unveiled eight themes on their strengths and weaknesses regarding teaching standards competence and efficiency performance. These themes covered the following:

Teaching Experience Works as a Teacher.

The accounts of the participants revealed their insights on their strengths and weaknesses which are rooted from their past and continuous experiences. Like a teacher, experience also works for attitude formation, confidence and readiness, discipline, and mastery.

Management Deals with Time.

The narratives of the participants demonstrated their insights on their strengths and weaknesses which depend on proper time management that deals with conflict, preparation, priorities, time consciousness and personal obligations.

Implementation of Rules Strengthens Standards.

Involvement, excellence, and responsibilities are strengthened through continued implementation of rules. Through these rules, teachers can uphold the standards of the school. Thus, weaknesses and needs of teachers are strengthened, and strengths are enhanced.

Technology Aids Teaching.

The narratives of the participants articulated their insights on the importance of available technology as support in their strengths and weaknesses. Evidently, the existence of technology in the classroom aids accuracy and ease regarding reports and requirements, aids pupils' interest through the use of appropriate teaching styles and aids in facilitating learning through the preparation of instructional materials.

*Training and Development Programs Enhance Capabilities***.**

The participants' background on training and personal growth and professional development enhances their strengths and overcome their weaknesses. Seminars, training, workshops, graduate studies and other activities related to teachers' development enhance their knowledge and innovative ideas, their skills and their classroom practices.

Classroom Management Leads toward Learning.

Discipline and proper behavior of the students mirror the kind of classroom management the teachers have. This is revealed in the narratives of the participants in expressing their insights on their strengths and weaknesses in their practice of teaching. It is showed in their articulation that good practices of classroom management lead toward focus and concentration in the lesson, preparedness for learning and formation of good habits.

Mastery of the Subject Matter Guides the Transfer of Learning.

The participants' mastery of the subject is the strong determinant of their strengths and weaknesses. Gained from experiences and training, mastery of the subject matter enables teachers to guide communication to understanding, experiences to skills and knowledge to learning.

As a whole, it was revealed from the narratives of the participants their insights that teachers' strengths and weaknesses are indicators of their teaching standards competence and efficiency performance. Teaching standards competence and efficiency performance, however, are apparent indicators of the quality of instruction. Further, teachers' strengths and weaknesses are revolving around three aspects: knowledge, skills, and attitudes.

Discussion

The quality of instruction is always paired with teacher's competence. But how can a teacher be competent? As cited by Jackson et al., (2001), research findings show that teachers' competence develops when schools, families, and communities work together. Being the weakest domain, community linkages must be given importance. As identified by Lin, et al., (2015) in her study,

providing opportunities for teachers to link with the community in their classroom experiences supplements value to their learning experience and enhances qualities of understanding and commitment. Results also indicated that this learning experience makes teachers gain an appreciation for working with students of diverse backgrounds.

Teaching performance is the significant determinant of the level of efficiency of teachers. Thus, it must be given utmost attention. According to Khan (2015) in his study, teacher's performance can play an important role in identifying teachers' needs and building teachers' capacity. He added that teaching performance is affected by the professional development of teachers.

As shown in the result, teaching standards competence is not a determinant of ones' efficiency. As a support to this claim, Anitha et al., (2014) mentioned that teaching competence of educators focuses on their cognizant use of their knowledge, abilities, skills, and talents to encourage students to learn. In contrast to competence, efficiency concentrates on the open organizational climate in the school that brings forth positive results about the school supervision and management. This results in a higher efficiency of the teachers (Ahghar, 2008).

The narratives of the participants disclosed their claims that teaching experience works as a teacher. Thus, the experience helped them develop a positive attitude, confidence, and readiness, discipline and mastery. Barthuly (2011) stated in his study that experience decreases learning gaps while increasing effectiveness. Experience compliments reflection, practice, and learning acquisition by adding a new depth of knowledge. Moreover, it also revealed their claim that time management plays a significant role in their teaching competence and efficiency. According to Zampetakis et al., (2009), recent research has shown that effective time management has a positive correlation to the level of success in creative work. They stated that time management referred to the planning behaviors that facilitate productivity including prioritization of tasks and management of possible distractions.

As shown in the participants' accounts, they considered the implementation of rules as strengthening factor in upholding the standards of the school. According to Tamura (2004), school rules are utilized to prescribe the culturally appropriate demeanor and conduct. Rules are viewed as providing the teachers with an opportunity to learn the basic requirements of the workplace, such as punctuality, etiquette and group conformity. With this rules implemented, standards will surely be attained. As reflected in their narratives, they considered technology as an aid in teaching especially in preparation, presentation and assessment processes. Can (2010) cited in his study that with the existence of fast advance technology nowadays, the use of the technological resources in education has come to play an important role regarding drawing students attention to the subjects studied in the classroom so that success increases and the knowledge is better internalized.

Social background of students affect instruction was revealed in the participant's narratives. Their claim states that this affects planning and preparation processes in instruction. Diverse classrooms leverage the differences in life experiences that students bring to the classroom due to their different life experiences. Thus, an accurate understanding of the dynamics of diversity allows teachers to cultivate positive outcomes from racially diverse classrooms (Packard, 2013). As revealed in the thematic insights, teachers considered sufficient training and development programs important in enhancing capabilities. According to the study conducted by Sutrisno et

al., (2016), faculty development programs contribute positively to teachers' increased teaching enthusiasm.

Furthermore, teachers believe that good classroom management practices lead toward maximum learning. Classroom management involves the formation and preservation of the environment inside the classroom to reach the educational goals while teaching and learning. Sustaining the classroom management aims to provide a positive, social and physical environment to the learning process (Sahiner, 2015). As cited by Korb et al. (2016), classroom management is the responsibility of the teacher. Thus, a teacher must be loaded with the responsibility of being creative in employing ways if he desires successful learning that will help in bringing about a positive learning environment. Importantly, mastery of the subject matter guides the transfer of learning from the teachers to the students. As cited Lytle et al., (1997), there is a widespread belief by professionals and the public that mastery of the subject matter and related pedagogy is a critical competency of teachers.

Conclusions

The teaching standards competence of teachers is affected by the knowledge, skills or attitudes and personal characteristics that they have with teaching. However, the efficiency performance of teachers is commonly affected by the climate or the temperament of the environment they have based on the quality standards of the school. Further, attitude is the prevailing determinant of the strengths and weaknesses of teachers concerning competence and efficiency. Lastly, the efficiency performance of a teacher is not a determinant of his teaching standards competence.

To aid teachers in the development of their competence and efficiency, the following recommendations were suggested: (a) The school administrators have to strengthen their support concerning the opportunities and privileges when it comes to seminars, training and graduate studies in local, national and international levels, (b) the human resource management officers have to create a supporting and motivating climate for teachers in availing the teachers' development program for the attainment of quality teaching, (c) teachers must be enlightened of the ways on how they can develop themselves concerning teaching standards competence and efficiency performance by addressing their weaknesses and needs and enhancing their strengths, and (d) researchers must conduct a more comprehensive research on teaching standards competence and efficiency performance to find out what causes the insignificant relationship between the two variables.

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SELF-LEADERSHIP AND CORE SELF-EVALUATIONS: AN APPROACH TO A PERSONAL MANAGEMENT DEVELOPMENT PROGRAM

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Abstract

Universities provide quality services through its faculty members, who carry multiple roles and responsibilities that require them to be creative, motivated, and dedicated experts leading the university's missions. Two self-concepts that are important for faculty members: core self-evaluations and self-leadership. Healthy core self-evaluations give them self-worth and capacity to control their lives, and a strong self-leadership is the intuitive and strategic approach to self-development. Through a survey of 150 faculty members assessed their core self-evaluations through the Core Self-Evaluations Scale by Judge, Erez, Bono and Thoreson (2003); self-leadership strategies through the Abbreviated Self-Leadership Questionnaire by Houghton, Dawley and DiLiello (2012); and, self-leadership values (qualities of being) and perspectives (habits of mind) using the components of the self-leadership model of Napolitano and Henderson (1998). Core self-evaluations was found to have a significant positive influence on self-leadership strategies, qualities of being, and habits of mind - as proposed by this study.

Keywords: Self-leadership strategies, Qualities of being, Habits of mind, Core self-evaluations

Introduction

In higher education, effective faculty members are more than lecturers. They play many roles: information providers, role models, facilitators, assessors, planners, and resource developers (Harden and Crosby, 2000). Their behavior is also predictive of student quality and achievement (Shah, 2009). Yet they face higher education challenges like quality of learning and teaching, tenure, student retention, adopting emerging technology, research, and assessment (Sarker, Davis and Tiropanis, 2010). They need a continuing personal management development program to help them increase their consciousness and develop their potential.

When they are unable to cope with challenges, faculty members may lose their motivation to teach or they may lack the necessary skills and become ineffective (Chait, 2010). Lack of skills could also include the inability to innovate or enhance teaching capability because of demotivation. When faculty members are ineffective, they can weaken the University culture and learning environment. Ineffective teachers hamper the learning of large numbers of students over time. They can depress the achievement and inhibit the learning of many students during the course of their career or during the time period when they are performing poorly (Chait, 2010).

Faculty members can propel the institution forward or hold it back. Faculty leadership is vital, as it enables the combination of teaching, research, and community engagement of a competent and competitive university that develops its students to their fullest potential. It is then of paramount importance that universities take on extra effort and consciously put within their organizations structures that ensure the continuing development of their faculty and their increasing effectiveness. A university, through its human resource office, can create a faculty development program to enhance faculty members' competencies, teaching skills, and professional attitudes to positively influence student achievement.

Faculty members are always regarded as valuable assets of a university, and as such, are highly expected to mirror the university's core values in their multifarious tasks as educators. In their work roles, they draw from their attitudes and characteristics the possibility of improving their skills, productivity and performance, and ultimately job satisfaction. Self-leadership and core self-evaluations are two such factors that are important for studying faculty members. Self-leadership as a process influence themselves to control their own actions and thinking, providing the intrinsic approach to self-development which is important in the higher education milieu. On the other hand, core self-evaluations, the fundamental evaluations of individuals about themselves and their own abilities, define both the breadth and limits of opportunities for the faculty members.

Examining self-leadership and core self-evaluations of faculty members can be a springboard for higher learning institutions in redirecting their developmental efforts for teachers to become more reflective and pursue a personal management development program. This study looks at how faculty members assess their self-leadership in terms of strategies, qualities of being and habits of mind; and how they assess their core self-evaluations.

Statement of the Problem

This study creates and tests a model that looks at faculty member self-leadership in terms of strategies, values and perspectives. As it also examines their core self-evaluations, the study furthermore investigates how core self-evaluations relate to each of these factors of self-leadership - thus emphasizing the role of the individual self-concept as they develop themselves for leadership roles.

These constructs initiate the assumption of the study that core self-evaluations can be related to self-leadership strategies, self-leadership qualities of being, and self-leadership habits of mind, and even predict them. Establishing the faculty's core self-evaluations as an influencing factor of self-leadership, will enable the institution to offer more tracks for faculty development towards greater effectiveness. These are hypothesized and tested in the study.

Framework

The study was launched on the three spheres of leadership influence theory by Napolitano and Henderson (1998). According to the theory, the three spheres of leadership influence are self-leadership, people leadership, and organizational leadership. The principal sphere is self-leadership, where the leader influences the self. Self-leadership recognizes that effective leadership is not only accumulation of skills, but also examination of the self (Napolitano and Henderson, 1998).

Napolitano and Henderson (1998) posed the integral concepts of *self-leadership qualities of being* and *self-leadership habits of mind*. Qualities of being are the individual's values, where work is looked on as an extension of the self and habits of mind are a person's perspectives, the kind of thinking that guides the individual. It was important to explore the core values and deeply-held beliefs of faculty members. Through understanding and cultivating of their values, teachers can tap a source of energy for their choices and behavior. And by acknowledging their perspectives, they can deal with their experiences and respond to reality. Studying values and perspectives will enable the faculty members to determine how to perceive their environment (Napolitano and Henderson, 1998).

While this facilitates the exploration of their thought processes, there is still a need to consider the way faculty members approach situations. The self-leadership theory of Houghton and Neck (2002) looks at *self-leadership strategies*, through which men and women influence themselves to control their own actions and thinking. There are three components to self-leadership: behavior-focused strategies, natural reward strategies, and constructive thought pattern strategies.

Behavior-focused strategies are to increase self-awareness leading to the successful management of behaviors involving necessary but unpleasant tasks; natural reward strategies focus on the inherently enjoyable aspects of task or activity and are designed to create situations in which a person is motivated or rewarded by the task or activity itself; and constructive thought pattern strategies deal with the management of cognitive processes like mental imagery of successful

performance outcomes and positive self-talk (Manz and Neck, 2004, as cited by Houghton and Yoho, 2005).

Given the wider viewpoint of self-leadership with other authors, this study inferred that *self-leadership strategies* complement *self-leadership qualities of being* and *self-leadership habits of mind.* Thus, these three concepts were the means of collecting empirical evidences to confirm the proposition of this study on self-leadership. Behaviors of faculty members impact on their overall effectiveness. An important dimension of teacher effectiveness is the personal qualities they bring into the classroom. These qualities, while defined by self-leadership strategies, are also rooted on their fundamental evaluations about themselves and their own abilities. Therefore, core self-evaluations can also influence a faculty member's effectiveness.

The study highly considers the *core self-evaluations* theory since it has been linked to job performance and satisfaction. Core self-evaluations are the fundamental, bottom-line evaluations that individuals hold about themselves, the world, and others (Judge, Locke, and Durham, 1997, as cited by Bono and Judge, 2003). As a broad trait, is indicated by other four well established traits: self-esteem, generalized self-efficacy, locus of control, and neuroticism/emotional stability.

Self-esteem is the basic appraisal people make of themselves and is the most fundamental evaluation of the self, being the overall value that a person places on oneself. Generalized efficacy is one's estimate of one's capabilities to mobilize the motivation, cognitive resources, and courses of action needed to exercise control over events in one's life. Locus of control relates to the degree to which individuals believe that they control events in their lives, the confidence in being able to control outcomes. Emotional stability is the positive pole of neuroticism, and is therefore characterized by calm even when faced with stress (Judge et al., 1997, as cited by Judge, Bono and Thoresen, 2003).

The above discussion supported the assumption of the present study that core self-evaluations can be related to self-leadership strategies, self-leadership qualities of being, and self-leadership habits of mind, and even predict them. Establishing the faculty's core self-evaluations as an influencing factor of self-leadership, will enable the institution to offer more tracks for faculty development towards greater effectiveness.

Methodology

The descriptive research design was used. The sample constituted one hundred eighty faculty members of a non-sectarian, co-educational private higher education institution in Cagayan de Oro, a major city of Southern Philippines. They were drawn from the colleges and graduate school. A stratified sampling was employed for the study, dividing the population into the various tertiary educational units to enable an independent sample of each group. Thereafter, a quota sample of 75% was drawn from each subpopulation. Opportunity sampling was used when visiting the faculty rooms and inviting faculty members to take part of the survey. The study deemed that all faculty members were considered a representative sample of the population.

One hundred fifty faculty members (83% of population) participated in the study. Faculty members are young with age until 39 years old (53.33%), male (59.33%), and married (61.33%). They have full-time employment with the university (85.55%), less than three years in the university (44%), and have been in the teaching profession for three years and more (72.67%). They hold graduate degrees (54.67%), involved in research (75.33%), and pursuing some form of continuing education program (60%).

The study broadly relied on primary data gathered from the survey to answer the problem questions. The survey questionnaire contained the four main variables of the study: self-leadership strategies, self-leadership qualities of being, self-leadership habits of mind, and core self-evaluations. All were in Likert-type format. Self-leadership strategies were measured using the 9-item Abbreviated Self-Leadership Questionnaire (with no subscales) by Houghton, Dawley and DiLiello (2012). Napolitano and Henderson's (1998) ten values assessed Qualities of Being, while nine perspectives measured Habits of Mind of faculty members as they demonstrate these attributes while at work. Twelve items of the Core Self-Evaluations Scales (with no subscales) developed by Judge, et al (2003) measured the core self-evaluations of the participants. In the four measures, faculty members signified the extent of their level of agreement or disagreement on each item in the questionnaire.

The ASLQ (2012) and the CSES (2003) were originally designed by their authors to contain five response options. But to help the participants refrain from choosing the safe middle response or the "neither disagree nor agree" option, the study removed it and kept only four response options. The Abbreviated Self-Leadership Questionnaire or ASLQ (Houghton et al, 2012) showed an excellent reliability coefficient of 0.907, with all the nine original items. The Core Self-Evaluations Scale of CSES (Judge et al, 2003) showed a good internal consistency of 0.812 with the original 12 items. However, both questionnaires for qualities of being and habits of mind needed to improve their reliability coefficients, and removing one item from each set resulted to a higher reliability coefficient of 0.906 for qualities of being questionnaire and 0.865 for habits of mind questionnaire.

To measure the variables and test the hypothesis of the study, statistics were computed by using a trial version of IBM SPSS 22.0. The study made use of descriptive statistics, such as frequencies, means, %ages, and standard deviations. It made use of simple regression statistics for predictive analysis.

a. between core self-evaluations and self-leadership strategies:
   H_0: Core self-evaluations does not influence self-leadership strategies.
   H_1: Core self-evaluations influence self-leadership strategies.

b. between core self-evaluations and self-leadership qualities of being:
   H_0: Core self-evaluations does not influence self-leadership qualities of being.
   H_1: Core self-evaluations influence self-leadership qualities of being.

c. between core self-evaluations and self-leadership habits of mind:
   H_0: Core self-evaluations does not influence self-leadership habits of mind.

H_1: Core self-evaluations influence self-leadership habits of mind.

Results and Discussion

Faculty members have high self-leadership strategies (overall mean 3.20). Participants exhibited high levels in *self-goal setting*. They *work toward specific goals they have set for themselves* and related to this, they *establish specific goals for their own performance*. These characteristics can be very crucial being in a knowledge-based profession, and working in an environment of curriculum targets, paper requirements, and regular grade submissions. Faculty members must be able to manage their goals and impose self-direction and priorities to attain them (Table 1).

Table 1- Self-Leadership Strategies of Faculty Member-Participants

#	Item	Mean	Stdev
1	I establish specific goals for my own performance.	3.31	0.65
2	I make a point to keep track of how well I'm doing at work.	3.27	0.67
3	I work toward specific goals I have set for myself.	3.37	0.67
4	I visualize myself successfully performing a task before I do it.	3.36	0.66
5	Sometimes I picture in my mind a successful performance before I actually do a task.	3.20	0.75
6	When I have successfully completed a task, I often reward myself with something I like.	2.95	0.85
7	Sometimes I talk to myself (out loud or in my head) to work through difficult situations.	3.05	0.83
8	I try to mentally evaluate the accuracy of my own beliefs about situations I am having problems with.	3.16	0.71
9	I think about my own beliefs and assumptions whenever I encounter a difficult situation.	3.09	0.72
	Overall Mean: 3.20 Description: High self-leadership strategies		

Participants reported that at their core, they have very strong values or qualities of being (overall mean 3.56). Faculty members revealed very strong qualities of being and they give utmost importance to *humanity*. Humanity can be interpreted as the basic characteristics of teachers. In their jobs, faculty members cannot exclude what is deeply personal in order to bring out the highest performance from students. Embracing humanity enables faculty members to facilitate learning and believe in the potential of students (Table 2).

Table 2 - Self-Leadership Qualities of Being of Faculty Member-Participants

#	Item	Mean	Stdev
1	Vision: I possess a vivid, compelling view of the future or I am capable of imagining what the future..	3.45	0.56
2	Integrity: I adhere to high ethical standards; I have internalized a system of values and beliefs..	3.57	0.54
3	Passion and Courage: I am compelled by what I deem important; I am willing to accept consequences..	3.61	0.53
4	Optimism and Self-Confidence: I maintain a positive outlook based on a belief in my capabilities..	3.58	0.56
5	Focus and Discipline: I set appropriate priorities in the face of multiple competing demands..	3.51	0.56
6	Tenacity and Resourcefulness: I persist in pursuing desired outcomes; I "make do"..	3.37	0.54
7	Humanity: I genuinely care about, value, and respond to others; I believe in human potential..	3.70	0.51
8	Self-Renewal: I take time to develop, improve, and nurture myself in the interest of achieving..	3.61	0.53
9	Balance: I integrate and harmonize career, family, personal, and community responsibilities.	3.61	0.53
	Overall Mean: 3.56 Description: Very strong self-leadership qualities of being		

Table 3 shows that faculty members carry deep perspectives (overall mean 3.39). They scored highest in the component of *effectively seeking synergies*, meaning that they generally are collaborative, share the same mission, and accomplish things successfully in cooperation with others and the organization.

Table 3 - Self-Leadership Habits of Mind of Faculty Member-Participants

#	Item	Mean	Stdev
1	Tests Assumptions: I uncover and examine underlying premises and encourage others to do the same.	3.31	0.53
2	Shifts Paradigms: I am open to new ways of viewing things; I adapt my own thinking..	3.49	0.56
3	Thinks Holistically: I see the "big picture"; I use an interdisciplinary approach..	3.51	0.56
4	Tolerates Ambiguity and Paradox: I function effectively in "messy" situations..	3.13	0.68
5	Trusts Intuition: I rely on informed judgment and well-developed instincts in lieu of conclusive proof..	3.28	0.58
6	Takes Risks: I try things even when the possibility of failure exists; I make experiments..	3.29	0.62
7	Seeks Synergies: I encourage and practice collaboration; I work with others to achieve breakthrough..	3.55	0.57
8	Models Values: I communicate values and act accordingly; I demonstrate personal convictions..	3.54	0.54
	Overall Mean: 3.39 Description: Deep self-leadership habits of mind		

Table 4 shows that core self-evaluations of participants is high (overall mean 2.99). This signifies that the participants think confidently of themselves and in their own abilities, especially in terms of their *confidence in getting the success they deserve*. This may be attributed to their personal characteristics - they are professionals with high levels of education and who are involved in teaching students.

Table 4 - Core Self-Evaluations of Faculty Member-Participants

#	Item	Mean	Std Dev
1	I am confident I get the success I deserve.	3.55	0.53
2	Sometimes I feel depressed.	2.03	0.60
3	When I try, I generally succeed.	3.33	0.55
4	Sometimes when I fail, I feel worthless.	2.77	0.84
5	I complete tasks successfully.	3.31	0.52
6	Sometimes I do not feel in control of my work.	2.45	0.69
7	Overall, I am satisfied with myself.	3.48	0.64
8	I am filled with doubts about my competence.	2.90	0.83
9	I determine what will happen in my life.	3.15	0.62
10	I do not feel in control of my success in my career.	2.89	0.77
11	I am capable of coping with most of my problems.	3.38	0.60
12	There are times when things look pretty bleak and hopeless to me.	2.58	0.73
	Overall Mean: 2.99 Description: High core self-evaluations		

This study proposes that core self-evaluations has a bearing on self-leadership. It considered that separately, the two concepts are important to the leadership development of faculty members; and it therefore tried to establish if the two are related. Correlation statistics for core self-evaluations and self-leadership strategies (r=0.437), core self-evaluations and qualities of being (r=0.421), and core self-evaluations and habits of mind (r=0.397) illustrate that participants' core self-evaluations has a significant positive correlation with their self-leadership factors (all with 0.000 significance at the 0.01 level).

Tables 5, 6, and 7 reveal that core self-evaluations significantly influence self-leadership strategies (43.6%), self-leadership qualities of being (42.1%), and self-leadership habits of mind (39.7%). The statistics show that CSE has a predictive value on the three identified characteristics of self-leadership. Thus, the null hypothesis is rejected and the alternate hypothesis is accepted.

Table 5 - Regression Statistics for Core Self-Evaluations and Self-Leadership Strategies

Model		Unstandardized Coefficients		Standardized Coefficients	R^2	t	Sig.	Decision
		B	Std. Error	Beta				
a	(Constant)	1.402	.307		0.190	4.575	.000	Reject null hypothesis, accept alternate hypothesis
	CSE ► SLS	0.601	.102	.436		5.892	.000	

Table 6 - Regression Statistics for Core Self-Evaluations and Self-Leadership Qualities of Being

Model		Unstandardized Coefficients		Standardized Coefficients	R^2	t	Sig.	Decision
		B	Std. Error	Beta				
b	(Constant)	2.167	.248		0.177	8.739	.000	Reject null hypothesis, accept alternate hypothesis
	CSE ► SLQB	0.465	.082	.421		5.645	.000	

Table 7 - Regression Statistics for Core Self-Evaluations and Self-Leadership Habits of Mind

Model		Unstandardized Coefficients		Standardized Coefficients	R^2	t	Sig.	Decision
		B	Std. Error	Beta				
c	(Constant)	2.006	.265		0.157	7.571	.000	Reject null hypothesis, accept alternate hypothesis
	CSE ► SLHM	0.463	.088	.397		5.258	.000	

Tables 5, 6, and 7 show that self-leadership strategies, self-leadership qualities of being and self-leadership habits of mind can be explained by core self-evaluations. The moderate R^2 and the significance of the result will allow the following models:

a. self-leadership strategies = 1.402 + 0.601 (core self-evaluations)
b. self-leadership qualities of being = 2.167 + 0.465 (core self-evaluations)
c. self-leadership habits of mind = 2.006 + 0.463 (core self-evaluations)

Conclusions

The study sought to identify the university faculty members' self-leadership strategies, self-leadership qualities of being, and self-leadership habits of mind, and core self-evaluations. It consequently examines how core self-evaluations relate to these self-leadership components.

Findings show that faculty members have a high level of self-leadership strategies, signifying that they have a robust process perspective through which they influence themselves to control their own actions and thinking. Their overall self-leadership strategy also means that they strongly employ behavior-focused, natural reward, and constructive thought strategies.

Generally, faculty members manifested very strong qualities of being in terms of vision, integrity, passion and courage, optimism and confidence, focus and discipline, tenacity and resourcefulness, humanity, self-renewal, and balance. The overall assessment also indicated deep habits of mind or perspectives among the participants in terms of ability to test assumptions, shift paradigm, think holistically, tolerate ambiguity and paradox, trust intuition, take risk, seek synergies, and model values.

The high core self-evaluations of faculty members is the measure of their self-esteem, generalized self-efficacy, emotional stability, and locus of control. Faculty members have high core self-evaluations and high self-leadership. Therefore, with positive self-concepts and a strong innate enabling process, faculty members possess great aptitude to become effective in their jobs.

Results have verified the basic proposition of this study, that core self-evaluations can positively impact self-leadership strategies, self-leadership qualities of being, and self leadership habits of mind. This means that core self-evaluations can predict these constructs. Higher core self-evaluations in faculty members can lead to their greater levels of self-leadership strategies, stronger qualities of being (values), and deeper habits of mind (perspectives). These results also imply that interventions to boost core self-evaluations of faculty members will result to parallel improvements in their self-leadership.

In summary, the data gathered from the structured survey questionnaire indicated a professional teaching personnel with high fundamental evaluations about themselves and confidence in their abilities. The faculty members have high self-esteem, generalized self-efficacy, locus of control, and emotional stability. This means that faculty members have great potential to be effective in what they do, as core self-evaluations positively relate affective commitment (Kittinger, Walker, Cope, and Wuench, 2009); employment commitment and well-being (Creed, Lehmann, and Hood, 2009), 2009); and work success (Judge, 2009).

Faculty members also have high levels of empowerment and conscious knowledge of themselves, very strong values and foundations for their motivation, and deep and solid personal outlooks. Drawing on behavior-focused, natural reward, and constructive thought pattern strategies, this vigorous self-leadership gives them the capability to control their own actions and thinking, therefore enabling them to cope with and respond to situations (Lovelace, Manz, and

Alves, 2007), to be innovative (Curral and Marques-Quinteiro, 2009), and to develop and implement projects (Philips, Kern, Tewari, and Jones, 2011).

The study demonstrates the capability of the faculty members to demonstrate self-leadership and core self-evaluations. Healthy core self-evaluations give the faculty members self-worth and the capacity to control their lives, stimulating in them strong self-leadership strategies, values, and perspectives in their pursuit of development and fulfillment of their potential.

Recommendations

The workplace significantly contributes to the way employees behave; hence, the university must identify opportunities to further improve the core self-evaluations and self-leadership profile of faculty members.

While survey results are positive and the demographics of the participants show that they are highly educated and are therefore assumed to be well-prepared for their principal task of teaching and instruction, a Personal Management Development Program can be designed for the faculty members. This is an avenue for the university to provide for continuing development of faculty members.

Personal development, especially within the professional workplace, is a continuing process. It is a blend of self-assessment, planning, and monitoring. Career development and effectiveness is most achievable if it is from a personal initiative. When faculty members can manage their own personal development, they can identify the tasks needed to be performed, as well as monitor the outcomes of their efforts.

While the Program is affixed on the faculty member's personal goals, the University shall help pave the way for the planning and outlining of these goals. Through its Human Resources Office, the university can enhance work environments and structures that support individual creativity and achievement in the organizational level, thus enhancing core self-evaluations and strengthening self-leadership. The Personal Management Development Program will have three parts:

a. initiate personal development planning to faculty members through training and immersion;
b. strengthen the performance management capability of the faculty members; and,
c. establish a development program on professional and career growth for faculty members.

Indications of weak points in the self-assessment are items that need to be highlighted in the university development program for its faculty members. The self-leadership and core self-evaluations of faculty members are an important determinant of their effectiveness and in turn, the academe's ability to execute the strategy to achieve its mission and vision. The university can review its existing programs and activities that engage faculty members to foster their strengths and address their weaknesses.

The study, through the survey questionnaire, was able to collect quantifiable data from 83% of the total teaching staff through structured response format, but it could have expanded the inquiry through open-ended interviews to augment the data collected from the survey. The method of data gathering was limited to self-assessment. The research did not perform any observations, nor did it utilize secondary data about the participants' profile. The study only looked at personal and latent variables as assessed by the participants, and may therefore be expanded to include workplace factors like policies, compensation and benefits packages, activities within an academic year, and organizational structure.

The study may serve as a baseline data for future researchers who will look into spheres of leadership development, self-leadership strategies, qualities of being, habits of mind, and core self-evaluations. Future work to expand the findings from this study may examine core self-evaluations and self-leadership in the light of organizational culture, organizational commitment, and even work-related stress. Future studies may also study beyond the self-leadership sphere of the Napolitano and Henderson model of leadership influences, and explore the nature of people leadership and organizational leadership.

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