

# Mediating Effects of Graduate Faculty Habits of Mind on the Relationship Between Core-Self Evaluations and Adult Learning Practices

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**Abstract** - The intricacies of teaching-learning situations in graduate education are complex and unpredictable owing to the dynamics of adult learners pursuing graduate studies. Most of the graduate students are full-time professionals who come for classes on weekends and who are into juggling their jobs, family responsibilities with the demands of school. Adult learning literatures suggest that adult learners in graduate schools need teachers who could both address the diversity of students' multi-faceted roles and maximize the richness of their life experiences as learning resources. This paper discusses the influence of the graduate faculty's habits of mind on their core self-evaluations and adult learning practices. The study sampled forty-one graduate professors from three non-sectarian universities in Northern Philippines. Using Baron and Kenny's (1986) Mediating Model, the study reveals that *habits of mind* mediated the relationship between how the faculty regard self (core self-evaluations) and how they view their adult learning practices. The study concludes that habits of mind play a central role in the instructional decisions of the graduate school faculty in facilitating learning. Theoretical and practical implications of the study are drawn for the non-sectarian universities involved in the study.

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*Keywords* - habits of mind, adult learning, core self-evaluations

## INTRODUCTION

In recent years, learning and the attributes of successful learners have re-emerged as key issues in educational research. Many educators believed that this interest is reinforced with the prevailing beliefs that a good teacher makes good students. However, the intricacies of teaching-learning situations, together with the unpredictability of classroom learning environment, often hinder good teaching (Bustos-Orosa, 2008). The intricacies of teaching-learning situations in graduate education are complex and unpredictable owing to the nature of adult learners pursuing graduate studies. Most of the graduate students are full-time professionals who come for classes on weekends and who are into juggling their jobs, family responsibilities, and the demands of school (Cooks et al., 2002). The richness of their life experiences could either enrich their learning or distract them from learning if these intricacies are not managed well.

Basically, adults give attention to learning activities where they could personally find more profound sense in addressing problems. Knowles's (1980) andragogy explained that adults enter education with the hope of seeking improvement in their ability to cope with life's problems. It is, therefore, fundamental for the faculty to be aware that graduate classes are conducted differently from the usual pedagogical point of reference. It is crucial for teachers to be conscious that adult learning is "more than just cognitive processing and that it is a multidimensional phenomenon that takes place in various contexts" (Merriam, 2008). There are significant patterns in research and theory building that distinguish adult education to be more than just individual, cognitive understanding of learning. Merriam (2008) further reported that recent scientific inquiries into adult learning disclose that the mind, body, spirit, emotions, and society are not themselves merely locations of learning. It is said that learning also happens in the intersections of these components.

It is in the multidimensional phenomenon intersections that uncertainties emerge in the classroom dynamics and can spawn dilemma for the teacher, restraining good teaching. Costa and Kallick

(2000) emphasized that when people are confronted with uncertainties, the most effective probable actions to address such would need the use of certain patterns of intellectual behavior called *habits of mind*. Habits of mind provide a set of behaviors that discipline intellectual processes.

However, Facione, Facione, & Giancarlo (1997) as cited by Neo and Cheung (2005) said that even if a person possesses the necessary skills or knowledge to act, he or she may not be disposed to do so. It is, therefore, assumed that without the habits of mind, people may not even use their skills or abilities extensively. Habits of mind represent dearth of study in the academe according to Cheung & Hew (2008). While their study involved graduate students as facilitators, there is little attention and very little is known about habits of mind within the context of graduate educators.

Certainly, graduate school teachers exercise thinking behaviors not only as a person but also as a professional in practice of adult learning principles. Thus, this study investigated how graduate faculty-respondents assessed their habits of mind in relation to core self-evaluations and their views of teaching adults.

## FRAMEWORK

This study is hinged on the proposition that adult educators in graduate schools' habits of mind can explain to a certain extent the manner that instructional decisions are generated especially in adult learning practices. This paper argues that the practice of habits of mind bear on their classroom dynamics and is also influenced by the teachers' sense of self.

### *Habits of Mind*

There have been myriad of frameworks that attempt to explain some marked traits of successful learners and or peak performers. There are common threads running through these frameworks, and among these stood prominently habits of mind defined as an intelligent thinking behavior that the 21<sup>st</sup> century learners need to remain relevant in a constantly changing world according to Campbell (2005) citing Marzano's, (1992) and Costa & Kallick's (2000) models

Costa and Kallick (2003) defined “habits of mind” as having a disposition toward behaving intelligently when confronted with problems, the answers to which are not immediately known. Similar to the view of Costa et al., Marzano, Pickering and McTighe (1993) call mind behavior as habits of mind and identified this construct as the final aspect of learning and “perhaps the most important.” This construct includes critical, creative and self-regulated thinking.

The study of Cheung and Hew (2008) of National University of Singapore as reported in *Ascilite Melbourne (2008)* emphasized that there is a dearth of information about how facilitators’ thinking dispositions or habits of mind may affect *adult* learners’ participation in an asynchronous online discussion environment. Cheung and Hew (2008) believed that habits of mind play an important role in influencing the degree of learners participation vis-à-vis meaningful learning.

Situations with uncertainties are common in graduate schools, brought by the interplay and diversity of student-professionals’ rich experiences. Graduate school educators are often confronted with dilemmas when designing appropriate learning activities with adult learners especially in their conscious efforts to meet individual adult learners’ diverse needs without sacrificing the collective needs of the class. Studies also show that intellectual behaviors could inform teachers well in their decisions during these uncertainties when the habits of mind are often employed and exercised to a great extent. Costa et al. (2000) said that “when we draw upon these intellectual resources, the results that are produced through are more powerful, of higher quality, and of greater significance than if we fail to employ those patterns of intellectual behaviors.”

Marzano et al. (1997) emphasized that teachers need to possess these intellectual behaviors to be able to empower students to develop mental habits. In their *Dimensions of Learning*, they underscored the need to have positive attitudes and perceptions before learning could take place. The adult educator in graduate education continues to learn even in situations where he or she makes learning possible for the graduate students. Having healthy sense of self and sensitivity of adult learners’ idiosyncrasies allows the graduate faculty to generate healthy learning climate for authentic exchange with the

students. Possessing positive attitudes and perceptions can always send a subliminal message to students making them feel at ease and encouraging them to maximize learning opportunities. It is presumed that adult learners' participation could be maximized using decisions brought about by intelligent thinking.

In this study, Marzano's et al. (1997) model was used to determine the habits of mind of the graduate faculty-respondents that included critical thinking, creative thinking, and self-regulated thinking.

### *Core Self-Evaluations*

Many educators agree that the salient portions of the teacher's dispositional traits are functions of good teaching. Marzano et al. (1997) also argued that a necessary backdrop of learning is positive attitudes and perceptions. Murphy et al. (2004) as quoted by Bustos-Orosa (2008) likewise mentioned that good teaching emphasizes the value of the interpersonal aspects first before the academic goals of teaching; facilitating good teaching are predictive of what one knows and what one is.

The dispositional traits in this study refer to core self-evaluations, which were derived from the conceptual paper of Judge, Locke, and Durham (1997) as cited by Bono and Judge (2003). Diverse researchers have treated self-evaluations along dimensions of efficacy, esteem, locus of control, and emotional stability. After going through a series of studies, they consistently found that *self-esteem, locus of control, emotional stability and generalized self-efficacy* are highly interrelated traits. They also noted that there is a common thread to all these dimensions that can be termed *core self-evaluations*. After more than five years of series of studies, Judge and Bono (2003) noted that these dimensions load on a single, higher order factor, but they also show convergent validity with other personality traits. They concluded that core self-evaluations appear to be an important concept for researchers who seek to explain and predict job-related attitudes and behaviors.

Individuals in all walks of life are likely to accomplish more if they feel competent in what they do, are self-confident, and feel positively about themselves. There is a need to think and feel positively about oneself considering the profound benefits of these positive cognitions

on choice, planning, and subsequent accomplishments according to Bandura, (1986, 1997) as cited by Möller, Pohlmann, Köller & Marsh (2009). Thus, teachers who feel positively about themselves that they could competently deliver the call for graduate school teaching could accomplish more. This is also similar to Marzano's et al. Dimensions of Learning where a crucial requisite element for effective learning is positive attitudes and perceptions.

Thus, for this present study, it is presumed that core self-evaluations influence graduate school professors' practice of adult learning activities in the context of their field of discipline. The teachers' skillful decisions to carry on instructional activities facilitative of adult learning could be influenced by their assessment of themselves, the world and others. Bono et al. (2003) said that core self-evaluations are valid predictors of both affective and objective work outcomes.

With this premise, this study further assumed that the faculty's core self-evaluations can influence their cognitive processes manifested in their adult learning practices and their intellectual behaviors or habits of mind.

### *Adult Learning Perspectives*

Considered as a template for designing adult learners' instruction, *andragogy* was used as the major theme for adult learning practices in this current study. This present investigation recognizes that there are more recent developments that attempts to explain adult learning. These include transformative learning, spirituality and adult learning, embodied knowing, the neuroscience of adult learning, and narrative learning (Merriam et al., 2009). However, these new adult learning proponents collectively agree that andragogy is still at the center of the heart of adult learning theory (Taylor, 2009).

Literatures in the adult learning invite graduate school professors to examine their practices of adult learning. Oftentimes, many of the adult educators assume that methods used in the classroom are based on the pedagogical underpinnings in education. However, andragogy has its own principles of facilitating adult learning that are different from pedagogy - the art and science of teaching children.

The idea that teachers of adults should use a different style of teaching is based on the widely espoused theory of andragogy, which

suggests that “adults expect learner-centered settings where they can set their own goals and organize their own learning around their present life needs” (Donaldson, Flannery, and Ross-Gordon 1993, as cited by Donaldson [2004]).

Knowles (1980) suggested that when dealing with adult learners, the graduate faculty need to be aware of the key assumptions of andragogy: *self-concept of the adult*, *role of experience*, *readiness to learn*, and *their orientation to learning* as well as their *motivation to learn*. The succeeding paragraphs are brief descriptions of these assumptions.

*Adults’ self-concept* as it relates to learning would involve a sense of personal freedom to learn, choice of learning, and the relevance of experiences during learning. In other words, adults are assumed to prefer self-direction in determining the goals and outcomes of their learning. Graduate school professors need to recognize seriously the *role of adults’ experience in learning*. Adult learners value learning through direct experience. Knowles (1980) asserted, “if adults’ experience is not being used, or its worth is minimized, it is not just experience that is being rejected, adults, also feel rejected as persons.” Activities that relate to the adult learners’ experiences could be potentially appealing to them.

On their *readiness to learn*, adults are presumed to become ready to learn when they experience a need to know or do something to perform more effectively. Having professors as facilitators and co inquirers during the learning process will help graduate students to become more cognizant of their own thinking and that of others (Drago-Severson, 2000). According to the andragogical model, understanding the difference between children and adults in their readiness to learn is important because the concept of a developmental task for adults is connected to their own choice of time and learning content.

*Adults’ orientation to learning* consists more of typically entering learning situations after they experience the need in their life; they are presumed to bring a task- or problem-centered orientation to learning. This is in contrast to the subject-centered approach associated with traditional, pedagogical approaches to education. The andragogical model presumes that *adults’ motivation to learn* may be motivated externally such as job promotions. However, the most potent motivators are internal in nature.

The key themes of andragogy suggest that in the graduate school, professors need to facilitate activities that would allow them to evaluate their work goals and objectives in their academic life. Allowing them to evaluate their own work is just among the numerous learner-centered activities that recognize the adult learners' self-worth which in turn can entrench intrinsic motivation to learn as suggested by Conti (1998) and cited by Gailbraith (2004).

Adult learning in the graduate school requires professors to be more open-minded to the diversity of their professional students. Sensitivity to the adult learners' needs can only happen when the teachers have a clear sense of self and are aware of their own thinking. Unless students see the relevance of the classroom activities in terms of their own needs and personal experiences, they may find these activities less important. In creating varieties of instructional processes, graduate school faculty need to be ready to get out of the mold and, with the graduate students, discover new insights and possibilities.

### The Research Model

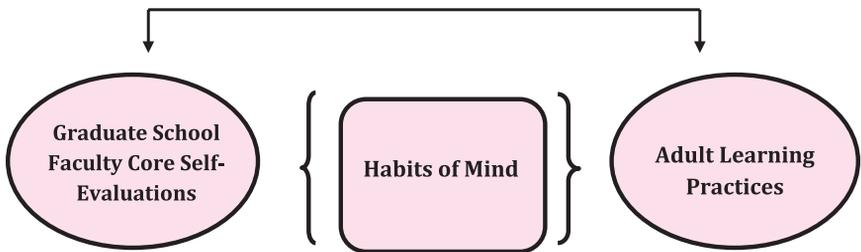


Figure 1. Schematic presentation of the study

Figure 1 presents the research model showing the interaction of the variables of the study: habits of mind, core self-evaluations, and adult learning practices. From the previous discussions, it is construed that core self-evaluations influence the graduate faculty's adult learning perspectives measured in terms of practices. Supporting this assumption is the argument that "core self-evaluations are fundamental, bottom-line evaluations that individuals have of themselves, the world and others", where these could show how people unconsciously assess

themselves, the world and others (Bono et al., 2003). Thus the so called 'situation specific appraisals', such as evaluation of what one does are affected by these deeper and more fundamental self-appraisals. Core self-evaluations are valid predictors of both affective and objective work outcomes.

*Hypothesis 1: Core self-evaluations is significantly related to adult learning perspectives.*

*Hypothesis 2: Core self-evaluations is significantly related to habits of mind.*

The figure also shows that habits of mind could mediate the influence of the faculty's core self-evaluations on their views of adult learning practices. Even if a person possess the necessary skills or knowledge to act, he or she may not be disposed to do so. It is, therefore, assumed that without the habits of mind, people may not even use their skills or abilities extensively. Costa and Kallick (2000) referred to habits of mind as the *characteristics of what intelligent people do and think when they face an issue or a problem, and thus may play an important role in influencing the degree of learner participation*. This means that the graduate faculty as adult educator (Costa and Kallick, 2000) "need to have the disposition of behaving intelligently when dealing with the adult learner most especially when confronted with uncertainties."

*Hypothesis 3: Habits of mind is significantly related to adult learning perspectives.*

*Hypothesis 4: Habits of mind mediate between core self-evaluations and adult learning practices.*

The hypothesized model of the study is presented in Figure 2 below.

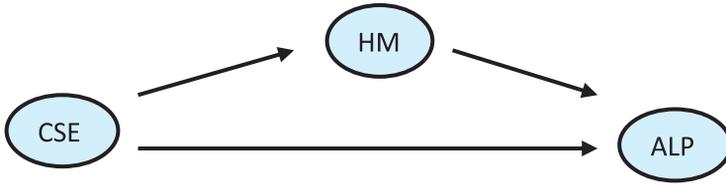


Figure 2. The hypothesized model

## OBJECTIVES OF THE STUDY

This study aimed at establishing a model showing the mediating effects of the graduate faculty's habits of mind on core self-evaluations and their adult learning perspectives. Thus, it ascertained the faculty's self-regard through their core self evaluations and associated this with their self-report of their habits of mind and their adult learning perspectives. The main hypothesis of the study is as follows: "The habits of mind of the graduate faculty mediate in the relationships between their core self-evaluations and their adult learning practices."

## MATERIALS AND METHODS

### *Research Design*

This study used the descriptive research design utilizing both quantitative and qualitative methods of data collection. Key informant interview complemented the quantitative data gathered through the survey instruments. Based on the gathered data a model for adult learning in graduate education was constructed.

### *Participants*

Three graduate schools of non-sectarian universities in Northern Mindanao, Philippines, were identified as research settings. Forty-one respondents were chosen purposively based on the two criteria. First, they are currently teaching social science, business and education

subjects in the master's or doctoral level. Second, they have been teaching in the graduate school for at least three years. It is assumed that by then, the graduate faculty has been inducted to graduate school teaching and has more or less gained a kind of paradigm in dealing with adult learners in the graduate school.

### *Instruments*

Three instruments were used to data gathering and these included the following:

*The Core Self-Evaluation Scale.* This scale was adapted from Judge, Erez, Bono, and Thoresen (2002) who completed a meta-analysis of the relationship between the traits and validly established conclusions regarding core self-evaluations: self-esteem, locus of control, emotional stability and generalized self-efficacy share many conceptual similarities; the empirical relations among these traits are strong; and consistently, the four traits indicated a higher order factor. Because of these studies, the core self-evaluations instrument was used rather than the individual instruments of the different traits. This present study, however, used the four-point scale: 4 for "strongly disagree", 3 for "disagree", 2 for "agree" and 1 for strongly "agree." Thus, a low score suggests a high level of self-esteem, internal locus of control, emotional stability, and general self efficacy.

*A Self-Report on Mind Behaviors.* This instrument was generated by the researcher based on the paper of Cheung and Hew (2008) as well as that of Marzano's et al. (1993) who culled their paradigm from cognitive psychologists. It consists of the following dimensions critical thinking, creative thinking, and self-regulation. The responses reflected the frequency of practice as always (4), very often (3), sometimes (2) and rarely or not at all (1).

*Adult Learning Perspectives.* The Principles of Adult Learning Scale (PALS) of Gary Conti (1990) was used in this study. The higher the score, the greater is the tendency towards being learner-centered. Thus, scores between 0-145 are indicative a "teacher-centered" teaching style while scores between 146 to 220 are indicative of "learner-centered" teaching style.

All the instruments were validated and tested for reliability using the Cronbach's Alpha Reliability Coefficient.

### *Data Analysis and Test of Mediation*

This study was patterned after the statistical model of Baron and Kenny (1986) and studies that used Baron and Kenny's statistical model.

To support the research hypothesis, three strategies were employed. First, an analysis of zero-order correlation was done to examine internal relationships among the research variables. Second, a standard multiple regression analysis was done to test for the effect of core-self evaluations on the faculty's habits of mind and adult learning practices. The adult learning practices variable was also regressed against habits of mind. Finally, an additional standard of multiple regression analysis was used to examine the effect of core self-evaluations on the adult learning practices.

## **RESULTS AND DISCUSSION**

Table 1 shows the descriptive statistics in terms of core self-evaluations, habits of mind, and adult learning practices. Generally, the graduate faculty-respondents had high core self evaluations, meaning that the extent of their self-esteem, locus of control, emotional stability, and general self-efficacy was high. They practiced habits of mind *very often*. More than 56% of them were teacher-centered while 44% were learner-centered.

In the series of interviews with a significant number of students sampled from the three universities, non-interactive approaches, such as long lectures, reporting, and non-response to online requirements, were found to be the least preferred approach used in the graduate classes. However, there was a pattern of student responses that gave credence to classroom activities that could engage them to their great advantage. Such activities included group work or discussion and other activities that engaged them to ask and answer their own questions. Small group assignment for task that needs collection of information outside class schedule was also preferred. Those activities are learner-centered and facilitate critical thinking and gave opportunities for the social component of learning. Interview results also reveal that their teachers used a mixture of these classroom activities in combinations including the least preferred ones.

Table 1. Frequency and percentage distribution of graduate faculty-respondents' core self-evaluations, habits of mind and adult learning practices (n=41)

Core-self Evaluations Mean = 21.71 (High)	Scale	Frequency	Percent
	very high	17	41.5
	high	16	39.0
	moderate	8	19.5
	Total	41	100.0
Habits of Mind Mean = 50.4 (very often)	Scale	Frequency	Percent
	always	7	17.1
	very often	20	48.8
	sometimes	14	34.1
	Total	41	100.0
Adult learning perspectives Mean = 135.51 (teacher centered)	Categories	Frequency	Percent
	learner centered	17	43.9
	teacher centered	24	56.1
	Total	41	100.0

Table 2 presents the mean and standard deviations, zero-order correlations and reliabilities of the research variables. As revealed, the habits of mind evinced significant relationships with core self-evaluations and adult learning practices.

Table 2. Means, standard deviations, reliabilities and intercorrelations of the variables

Variables	Mean	Sd	<i>Cronbach's <math>\alpha</math></i>	<i>Core-Self Evaluations</i>	<i>Habits of Mind</i>
<i>Adult Learning Perspectives (alp)</i>	135.51	14.14	0.80	- 0.71**	0.60**
<i>Habits of Mind (hm)</i>	54.10	4.24	0.68	- 0.59**	

Continuation of Table 2

Core-Self-Evaluations (cse)	21.10	5.14	0.84		
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\*\* Significant at the 0.01 level (2-tailed). The negative core self-evaluations *r*-values imply that the lower the score means is, the higher the core self-evaluations score is also.

Correlational analysis reveals that *habits of mind* was significantly related with *core self-evaluations* (-0.59;  $p < .01$ ) and *adult learning practices* (0.60;  $p < .01$ ). *Adult learning practices* variable was positively related with core self-evaluations (-.71;  $p < .01$ ). These findings supported the first three hypotheses of the study and were very much in line with the expected direction of relationships as suggested by H1 and H2. The results show that “very often” practices of the *habits of mind* led to higher core self-evaluations and an increase in the adult learning practices scores. The scales used in this study had good psychometric properties in terms of reliabilities since the values ranged from 0.68 to 0.84.

Table 3 presents the results after a series of regression analyses on the habits of mind as mediator in the relationship between core self-evaluations and adult learning practices. *Model 1* shows the unmediated effect of *core self-evaluations* on *adult learning practices* ( $\beta = - 0.76$ ,  $p < .001$ ). As revealed, *core self-evaluations* could directly increase *adult learning practices* scores towards being learner centered. *Model 2* shows that *habits of mind* could likewise directly influence *adult learning practices* ( $\beta = 0.60$ ,  $p < .001$ ). In *Model 3*, core self-evaluations could also directly affect habits of mind ( $\beta = - 0.59$ ,  $p < .001$ ).

Table 3. Results of tests of mediation

Model Dependent Variable	Predictor Variable	Beta ( $\beta$ )	Adj. R <sup>2</sup>	F-value
1. Adult Learning Practices	Core Self Evaluations	-0.71	0.486	38.75**
2. Adult Learning Practices	Habits of Mind	0.60	0.349	22.35**

Continuation of Table 3

3. Habits of Mind	Core Self-Evaluations	-0.59	0.326	20.38**
4. Adult Learning Practices	Habits of Mind	0.30	0.530	23.58**
	Core Self-Evaluations	-0.54		

Note: \*\* Significant at the 0.001 level (2-tailed). The negative core self-evaluations  $r$ -values imply that the lower the score means is, the higher the core self-evaluations score is also.

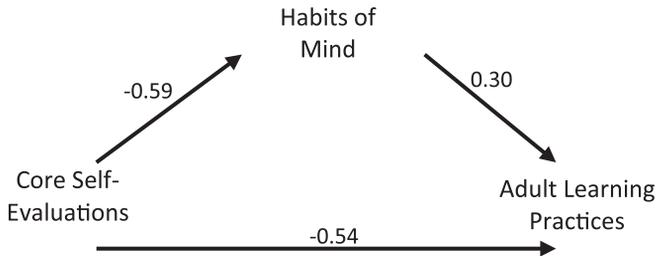


Figure 3. Results of multiple regression analyses on habits of mind as a mediator in the relationships between core self-evaluations and adult learning practices

Finally, Model 4 shows that *habits of mind* mediate the relationship between *core self-evaluations* and *adult learning practices*. When unmediated, the impact of *core self-evaluations* on *adult learning practices* was  $\beta = -0.71$ . However, this was reduced to  $\beta = -0.54$  after the dependent variable was regressed on habits of mind, controlling for the core self-evaluations, the independent variable. The results show that *habits of mind* partially mediates the relationship between *core self-evaluations* and *adult learning practices* since the independent variable affected the dependent variable upon regressing the dependent variable on both the independent variable and the mediator.

Figure 3 presents the summary of Model 4. The results indicate that while core self-evaluations could directly influence the graduate faculty's manner of facilitating adult learning experiences, they could

also affect the practice of habits of mind, which in turn could help increase the faculty's disposition towards becoming more learner-centered.

The study focused on habits of mind as natural dispositions or tendencies to employ one's skills or knowledge in deciding what to do in any circumstance. The findings established that habits of mind have mediating effect on the relationship between core self-evaluation and adult learning practices. Graduate faculty with high regard of self (high core self-evaluations) tended to practice habits of mind more frequently, consequently, tending them to be more learner-centered in facilitating adult learning activities and in dealing with the adult learners in graduate education. Facilitating good teaching is certainly a function of what one knows and what one is.

Faculty-respondents with high core self-evaluations or having high emotional stability, self-esteem, locus of control, and general self-efficacy practice habits of mind more often and they are more likely to espouse learner-centered approaches in their classes. These interrelated traits find support in Dirkx's (2008) emphasis in his article "The Meaning and Role of Emotions in Adult Learning" that there is an increasing recognition of the powerful role which emotions and affect play in adult learning process among adult educators. He also cited treatment of the interrelationship of emotions and learning that suggested "emotions can have a considerable effect on the way we think, on motivation and on beliefs, attitudes and values" (Jarvis [2006] as cited by Dirkx, 2008)

Viewing a more holistic paradigm of adult learning and seeing the person's interconnectedness in mind, heart and spirit, the teacher as facilitator of adult learning should practice the habits of mind (critical thinking, creative thinking and self-regulation). The more frequent the practice of habits of minds, the more the teacher becomes learner-centered. Generally, the findings reveal that habits of mind as a core variable have prominent effects on the adult learning perspectives and the core self-evaluations of graduate faculty. Clarified as the affective aspects of thinking, these mind behaviors occur with emotional dimensions and these could naturally be influenced further by their personal regard of self (Marzano, Pickering and McTighe [1993], Neo & Cheung, [2005]). This is supported by the findings that *core self-evaluations* significantly influenced *habits of mind*.

What are the implications of these findings? Theoretically, the most prominent finding is the mediating role of habits of mind in the relationship between how a person regard self and his/her view of adult learning. So far, there is a dearth of studies about habits of mind and personality constructs in the adult learning discipline. The support found for all the hypotheses raises the questions regarding the *type* of relationship that exists between and among core self-evaluations, habits of mind, and adult learning practices. Could the adult learning philosophy of the teacher be a significant influencing variable in the dynamics of teaching-learning situations in the graduate education? Is it the habits of mind that command “what to do when faced with uncertainties” (Costa et al.)? If it has reduced only the direct effect from -0.71 to -0.54, what other variables could mediate between core self-evaluations and adult learning practices?

This study has established *only* the strength of relationships between and among the variables of the study and has opened more avenues for these relationships to be explored further. Adult learning continues to be a dynamic area of research and theory building. According to Merriam (2009), adult leaning is a complex phenomenon that can never be reduced to a single and simple explanation.

There are also practical implications of this study that are worth considering beyond the theoretical meaning as earlier explained. It appears that the universities involved in this study need to address the question of habits of mind considering that more than 56% of the faculty-respondents tended to be more teacher-centered and about 34% only practiced habits of mind “sometimes.” There is a strong implication that many of the graduate classes still experience non-interactive approaches that inhibit student participation in many aspects of the instructional decisions that directly affect them.

Several limitations of this study should be noted. First, a significant limitation of the present investigation was the small sample size. The results reported here may only be generalized to the graduate faculty teaching social sciences, education and business courses in the non-sectarian universities of the Region who are in the master’s and doctoral levels. Caution must therefore be exercised in generalizing this sample to other graduate faculty in other non-sectarian universities in other region. Second, the inferences of this study were drawn from self-

reported data. Although attempts were done to gather qualitative data from students, these were conducted to inquire about the students most and least preferred classroom practices.

## CONCLUSION

It is concluded that habits of mind play a central role in the instructional decisions of the graduate school faculty in facilitating adult learning. Considering the influence of thinking behavior on adult learning practices, perhaps, it would be good for graduate schools to generate opportunities where faculty's habits of mind could further be enhanced. These opportunities could include a more stringent and regular requirement for faculty research in service to their respective disciplines. Engaging in faculty research nurtures the faculty's critical thinking, promotes creative thinking, and makes for a strong foundation for self-regulated thinking. Conducting research cultivates intellectual mastery and lifelong learning, which mark the defining qualities of faculty in institutions of higher learning.

## LITERATURE CITED

- Baron, R. M., & D. A. Kenny  
1986 The moderator-mediator variable distinction in social psychological research: Conceptual, strategic and statistical considerations. *Journal of Personality and Social Psychology*, 51, 1173-1182.
- Bono, J.C. and T.A. Judge  
2003 Core self-evaluations: A review of the trait and its role in job satisfaction and job performance. *European Journal of Personality*. Eur. J. Pers. 17: S5-S18 (2003). Published online in Wiley InterScience ([www.interscience.wiley.com](http://www.interscience.wiley.com)). DOI: 10.1002/per.481
- Campbell, J.  
2006 Theorizing habits of mind as a framework for learning. AARE Conference

2006. Association for Active Educational Researchers. <http://www.aare.edu.au/06pap/cam06102.pdf>

Bustos-Orosa, A.

2008 Inquiring into Filipino teachers' conceptions of good teaching: A qualitative study. *The Asia-Pacific Education Researcher* 17:2 (2008), pp. 157-171

Cheung, W.S. and K.F. Hew

2008 Examining facilitators' habits of mind and learners' participation. *Proceedings of ascilite*. Melbourne, Australia <http://www.ascilite.org.au/conferences/melbourne08/procs/cheung.pdf>

Cooks, A., Hackney, D., Jackson, S., Stevens, C., Zumwalt, D.,

2008 A humanistic approach to adult education: Learning from the inside out. Midwest Research-to-Practice Conference in Adult, Continuing, and Community Education, Northern Illinois University, DeKalb, IL, October 9-11, 2002. <https://scholarworks.iupui.edu/bitstream/handle/1805/432/Cooks,+A..pdf?sequence=1>

Conti, G. J.

1990 Identifying your teaching style. In *Adult learning methods*, ed. M. Galbraith, 79-96. Malabar, FL: Kreiger.

Costa, A. & B. Kallick (Eds.)

2000 *Habits of mind . A Developmental Series*. Alexandria, VA: ASCD.

Dirkx, J.

2008 The meaning and role of emotions. *New Directions for Adult Continuing Education*, No. 120, Winter 2008, Wiley Periodicals, Inc. pp. 7-18. Published online in Wiley InterScience ([www.interscience.wiley.com](http://www.interscience.wiley.com))

Gardner, D.G. and J.L. Peirce

2010 The core self-evaluation scale: Further construct validation evidence. *Educational and Psychological Measurement* April 2010 vol. 70 no. 2291-304. SAGE Journals Online. <http://epm.sagepub.com/content/70/2/291>.

Imel, S.

1998 Transformative learning in adulthood. ERIC Digest No. 200. ERIC Clearinghouse on Adult Career and Vocational Education Columbus OH

Judge, T. A., A. Erez, , J. E. Bono, , & C. J. Thoresen

2002 Are measures of self-esteem, neuroticism, locus of control, and generalized self-efficacy indicators of a common core construct? *Journal of Personality and Social Psychology*, 83, 693–710.

Judge, T. A. and Kammeyer-Mueller, J. D.

2004 Core self-evaluations, aspirations, success, and persistence: An attributional model. *Attribution Theory in the Organizational Sciences*, pages 111 132 Copyright © 2004 by Information Age Publishing

Kenny, D.A.

2009 Mediation. <http://www.davidakenny.net/cm/mediate.htm>

Merriam, S.B.

2008 Adult learning theory for the twenty-first century. *New Directions For Adult And Continuing Education*, no. 119, Fall 2008 © 2008 Wiley Periodicals, Inc. Published online in Wiley InterScience ([www- inerscience.wiley.com](http://www.inerscience.wiley.com))

Marzano, R.J. & D.J. Pickering,

1997 Dimensions of learning teacher's manual. Alexandria, Virginia USA: ASCD.

Möller, J., B. Pohlmann, O. Köller, & H.W. Marsh

2009 A meta-analytic path analysis of the internal/external frame of reference model of academic achievement and academic self-concept. *Review of Educational Research*, 79, /1129-1167. <http://rer.sagepub.com/content/79/3/1129.pdf>

Ross-Gordon, J.

2003 Adult learners' in classroom. *New Directions For Student Services*, no. 102, Summer 2003 to Wiley Periodicals, Inc.

Taylor, E. W.

2009 The new andragogy: Transformative learning Theory. *Third Update on Adult Learning Theory*. *New Directions for Adult and Continuing Education* no. 119 San Francisco: Jossey-Bass

2006 The challenge of teaching for change. *New Directions for Adult and Continuing Education* no. 109 (Spring 2006) p. 91-5 <http://vnweb.hwwilsonweb.com/hww/jumpstart.jhtml?recid=0bc05f7a67b1790ea8655ea073280e6278f41050bcfb8352fec88b7a056abf2195d93a524cb3f9c2&fmt=P>

Terehoff, I.

2002 Elements of adult learning in teacher professional development *NASSP Bulletin* 86 S 2002, WN: 0224401571005