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# THE MEDIATOR ROLE OF RESILIENCE BETWEEN SELF-DETERMINATION AND SELF-EFFICACY

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***Abstract***
*This ex post facto research examined the mediator role of resilience in the relationship between self-determination and self-efficacy. The authors analyzed the cross-sectional data collected from a total of 302 university students. The participants answered 3 standardized questionnaires on self-efficacy, resilience and self-determination. It was found that resilience may act as a full mediator in the relationship between self-determination and self-efficacy. Findings imply that being self-determined increases self-efficacy through the mediation of resilience. Since the relationship between self-determination and self-efficacy is weak, it is noteworthy to include resilience when considering establishing such relationship between the two variables. The findings indicate a need for educators and administrators in understanding and exploring the individuality of students because these are potentially helpful bases in designing and implementing appropriate educational policies and setting overall quality learning environment. It is recommended that teaching professionals who would like to focus on increasing the self-efficacy levels of students should consider students' perceived resilience.*

***Keywords:*** *resilience; self-efficacy; self-determination; mediator*

## 1. Introduction

Resilience is defined as the ability to withstand a difficult situation that requires one's capacity to act and solve problems effectively (Beardslee, 1989; Block & Block, 1980; Caplan, 1990; Rutter, 2008). In this study, we define resilience to refer to the capability of youth to adjust productively according to the demands of their social conditions; and referring to the youth in the age group of 15-24, as the universal definition used by UNESCO. This study finds a preferential focus among university students (belonging to youth) and their resilience capacity because this stage of their life can be loaded with high expectations and pressures of finishing school as well as preparing long term career plans. Studies show that students who consistently adapt successfully in academic situations are, arguably, better equipped to succeed in their future career endeavors. When dealing with a challenge, the youth are propelled to test and showcase their strength and abilities at a stage where they strive for independence. It was also found out that their resilience is interconnected and interdependent in the coping mechanism to set into motion personal resources, and that resilience is turned into a positive outcome (Compas et al., 2001).

The importance of resilience among university students is a critical issue because it is considerably a preparatory stage for young men and women to become competent individuals of the future workforce. Such realization prompts various resilience studies to know effective methods and approaches on how to prepare students effectively in dealing with issues relating to their emotions and environmental challenges. In the study of resilience that captured issues of families, communities, and society, Norris, Sherrieb and Pfeferbaum (2011) argued that resilience itself rests on both the resources themselves and the dynamic attributes of those resources. Youth at this stage

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of their lives are subjected to various pressures and that they are looked at as successful professionals.

Studies on resilience has contributed substantially to human learning and the advancement of the scientific knowledge in social science and mental health in the past decades. Feder, Charney, and Collins (2011) said that even the neurobiological model of neural systems response to stress has its own fair share of resemblance in operationalizing resilience (Browne et al., 1992; Rose et al., 1997). As such, this brings up strong evidences of peoples' experiences of physiological changes required to cope with stressors and being able to thrive successfully amidst adversities (Rosenfield et al., 1971). Resilience is something that is learned and acquired over time and that early childhood experiences, which included close confiding relationships, overall contribute to the development of resilience (Druss & Douglas, 1998; Beardslee, 1989).

With the technology-driven environment today that the youth has learned to deal with, their lifestyle situates themselves to a so-called 'technological complexity' which puts them into greater challenges and greater risk (Goldstein, Brooks, & DeVries, 2013). Youth who are users of technology can make extraordinary impact in bringing significant changes from the customary way of doing things (e.g. use of books or manual) to a more creative and highly fast-paced lifestyle (e.g. use of virtual applications) for greater efficiency. As such, educators as well as the business management operations are propelled to respond to the youth in more creative and distinctive ways, to align and meet their concurrent needs to pursue high-quality of teaching and meaningful learning experiences among students.

In contemporary development theory posited by Arnett (2000) suggested that this period between 18-25 years of age is a distinct period called as 'emerging adulthood' that is separated from adolescence and adulthood. As such period, it lays the groundwork for the future occupation of students who eventually indulge themselves to focus on main areas of identity exploration: love, work, and worldviews (Arnett, 2000). Notably, this particular age group has vast amount of experience in frequent changes and exploration of possible life directions which is considerably a distinct period of life (Arnett, 2000). Students are faced with many great expectations and undertake challenges in view of their occupational preparations and overall life course. Hence, students are not spared from having to experience pressures and failures along the way. Transition process therefore invites personal resilience that is concurrent to the experience and may alter the individual's overall view and perspectives toward the situation. Oftentimes, this can be very troublesome for most students as they are still in the exploration stage of their interests and building of their skillsets. Coupled with varying capabilities of student's emotional upswings as a response to various circumstances, it is relatively tough to create healthy learning climates and at the same time, maintain motivated learners.

The issue that resilience is defined in the literature either as an outcome and as a process of producing an outcome is discussed by researchers (Luthar, Cicchetti & Becker, 2000; Manyena, 2006; Almedom, 2013). Cutuli and Masten (2009) defend the view that resilience is an outcome stance implying that resilience is a product of interactions both within the individual and between the individual and the environment. On the other hand, Masten (1994) claims that resilience is a process focused on an individual's internal traits. However, the most important fact that resilience appears to be fostered by secured relationships (Beardslee, 1989; Richmond & Beardslee, 1988; Rutter, 1985) and in the process of developing, whatever varied settings (e.g. school or community), it is found to be an essential element that is contributory in establishing a solid foundation of self-confidence, curiosity, self-discipline, self-esteem, and control (Richmond & Beardslee, 1988; Caplan, 1990; Beardslee, 1989; Honzik, 1984).

Studies searching for relationships between resilience and other psychological variables are very limited. The study of Li and Yang (2016) revealed that self-efficacy could predict trait resilience, and self-efficacy which, in turn, could predict active coping regardless of cultural background. They argued that resilience and self-efficacy are traits obtained from positive experiences of interacting to challenging life situations. Thus, resilience and self-efficacy of university students at their level of exposures are capable of exhibiting factors that can help deal

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with and overcome varied stress and adversaries. Bandura (1997) implies that self-efficacy is built upon the individual's belief in himself (herself) to succeed in a given situation. Intentionally, it does not necessarily mean valorizing other internal factors such as self-determination rather self-efficacy stands as a fundamental element in motivation. Other than self-efficacy, self-determination is also found to affect resilience (Earvolino-Ramirez, 2007; McCrea, 2014). Hanfstingl (2013) determined that among some variables not including self-efficacy, only self-determination was associated with resilience in people whose age below 30. These linear and unidirectional relationships associated with resilience may give a clue to the nature of resilience among university students, but a more complex research model is needed.

## 2. Research Objectives

The chief purpose of the study is to test a structural model that assumes resilience as a potential mediator of the relationship between self-determination and self-efficacy. Based on previous research (Earvolino-Ramirez, 2007; Hanfstingl, 2013; Li & Yang, 2016; McCrea, 2014) affect resilience), the researchers hypothesized that resilience would contribute to the relationship between self-determination and self-efficacy and would mediate the link between these variables. In this regard, this study poses these following hypotheses:

H1: Resilience is positively correlated with self-determination.
H2: Resilience is positively correlated with self-efficacy.
H3: Self-determination is positively correlated with self-efficacy.
H4: Resilience fully mediates the relationship between self-determination and self-efficacy.

## 3. Method

### *3.1. Research Design*

The mediating role of resilience in the relationship between self-determination and self-efficacy was investigated by employing the ex post facto co-relational causal design (Cohen, Manion & Morrison, 2007). This design is used when research variables already exist in nature, leaving no room for manipulation (Fraenkel, Wallen & Hyun, 2012). Since there is a lack of manipulation, this design generates results which have weaker causality comparing to the experimental design. Yet, it can reveal the causality when an experimentation is not possible. Thus, it can be considered as an alternative method to the experimental design.

### *3.2. Population and Sampling*

In this study, the population consist of 59,458 students belonging to a university who are enrolled in varied courses from first up to senior years in four different universities in the Philippines during the 2016-2017 academic year. Two of these universities are considered to be the leading state universities in the Philippines located at the National Capital Region. The two other schools are a private technical and engineering universities located in the southern region of Luzon.

In the Philippines, education system composes of 12 years compulsory education comprising of Kindergarten, Primary Education, Junior High School, and Senior High School. The tertiary level or referred to as Higher Education known oftentimes referred to as 'college' is interchangeably used as 'university' with 4 to 5 years of bachelor's degree course. A diploma course is used to refer to full-time 2 years completed learning program which shows capability of student to study in the university's bachelor's degree program.

The minimum size of the sample to represent the population was calculated as 270 using 90% confidence level and 5% confidence interval (Cohen, Manion & Morrison, 2007). Structural equation modeling (SEM), the analysis technique employed in this research, generally requires data collected from samples of more than 200 people (Kline, 2011). Since 302 students participated in the study, it can be asserted that the research sample is of an adequate size. Participants were all university students who were recruited using convenience sampling method among students who volunteered and were fluent in English. Among the participants, 144 students were male while 152 students were female. As for year level, 62 students reported that they were freshmen, 114 were

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sophomore, 69 were junior and 54 were senior. Frequency analysis of age indicated that 229 students aged between 16 and 20, 51 students aged between 21 and 25 and 6 students aged between 26 and 30. Exploratory statistics of research participants are presented in Table 1.

Table 1. Exploratory statistics of research participants.

| Variable | Groups | Frequency | Percentage (%) |
|---|---|---|---|
| Gender | Male | 144 | 47.7 |
| | Female | 152 | 50.3 |
| | Unspecified | 6 | 2.0 |
| Year Level | 1 | 62 | 20.6 |
| | 2 | 114 | 37.7 |
| | 3 | 69 | 22.8 |
| | 4 | 54 | 17.9 |
| | Unspecified | 3 | 1.0 |
| Age | 16-20 | 229 | 75.8 |
| | 21-25 | 51 | 16.9 |
| | 26-30 | 6 | 2.0 |
| | Unspecified | 16 | 5.3 |

*3.3. Data Collection Instruments*

A questionnaire form consisting of three scales was used to collect data from the sample. The characteristics of these scales are presented in this section. The three standardized tools were obtained by securing consent from respective authors who designed the scales. The questionnaire form included brief instructions on how to respond to the items and demographic questions were added which indicated the age, gender and year level. No other questions were added to the tools. An informed consent letter was included as an attachment to the survey.

*3.3.1. The General Self-Efficacy Scale*

To measure the self-efficacy perceptions of university students the General Self-Efficacy Scale (GSE), developed by Schwarzer and Jerusalem (1995), was included in the questionnaire form. GSE aims to assess the perceived self-efficacy of adolescents and adults by predicting coping behavior and adaptation after life changes or stressful life events. GSE has 10 items based on a 4-point Likert scale and ranging from "1= not at all true" to "4= exactly true". An example item reads like this: "I can solve most problems if I invest the necessary effort." Higher scores mean better adaptation after stressful life events. GSE is unidimensional meaning that it has no sub factors. None of the items require recoding. GSE has been used widely with success and adapted into 31 languages. The reliability coefficient was calculated as $\alpha$=.80 by using data collected in this research. To validate its unidimensional structure, a confirmatory factor analysis (CFA) based on the maximum likelihood estimation was done by using data collected in this research. CFA results indicated a good fit (CMIN/DF=3.09, GFI=.93, AGFI=.90, CFI=.89, IFI=.89, RMSEA=.08, RMR=.02) according to Hu and Bentler (1999).

*3.3.2. The Brief Resilience Scale*

The Brief Resilience Scale (BRS), developed by Smith et al. (2008), was a part of the questionnaire form. BRS measures resilience of adults as the ability to bounce back or recover from stressful events. During its development, undergraduate students served in the norming samples. BRS has 6 items based on a 5-point Likert scale and ranging from "1= strongly disagree" to "5= strongly agree". One example item from the scale is "It does not take me long to recover from a stressful event". Higher scores mean higher bounce back or recover from stress. BRS is unidimensional without any sub factors. Half of the items (2, 4, and 6) require reverse coding. BRS has been recommended as one of the most valid and reliable scales to assess resilience (Windle, Bennett &

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Noyes, 2011). In different samples, Cronbach's alpha reliability coefficients ranged from α=.70 to α=.95 (Windle, Bennett & Noyes, 2011). The reliability coefficient was calculated as α=.72 by using data collected in this research. Using data collected in this research, CFA validated its unidimensional structure indicating a good fit (CMIN/DF=3.64, GFI=.98, AGFI=.93, CFI=.95, IFI=.95, RMSEA=.09, RMR=.04) according to Hu and Bentler (1999).

*3.3.3. The Self-Determination Scale*

The Self-Determination Scale (SDS) was developed by Sheldon and Deci (1993) to assess individual differences in the extent to which people tend to function in a self-determined way. Undergraduate students served in the norming samples of its development. SDS has 10 items based on a 5-point Likert scale and ranging from "1= only A feels true" to "5= only B feels true". An example item is "I do what I do because it interests me". Higher scores indicate higher self-determination. SDS has two sub factors called "awareness of oneself", and "perceived choice in one's actions". Each sub factor consists of 5 items. Half of the items (1, 3, 5, 7 and 9) require reverse coding. In several samples, Cronbach's alpha reliability coefficients ranged from α=.86 to α=.92 (Sheldon, 1995). The reliability coefficient was calculated as α=.71 for "perceived choice in one's actions" sub factor and as α=.73 for "awareness of oneself" sub factor by using data collected in this research. CFA validated its factor structure indicating a good fit (CMIN/DF=2.63, GFI=.96, AGFI=.92, CFI=.96, IFI=.96, RMSEA=.07, RMR=.05) according to Hu and Bentler (1999).

*3.4. Data Collection*

The students have signed the informed consent letter which signified their voluntary participation in the research. The first author who resides in the Philippines personally distributed and collected the survey among university colleagues while the second author computed for the statistical analysis of the gathered survey. The purpose of the study was explained by the first author, and in certain cases, with help of some faculty members. Instructions on how to answer the survey was explained and ensured that instructions were clearly understood before students can begin to answer. The students submitted their completed questionnaire form to the first author who was on standby to collect the completed forms. Before leaving the classroom, the first author expressed gratitude to the students for their participation to the research. This procedure was done several times, wherein distribution and collection were administered during the period of September to November 2016. A total of 317 forms were collected from the respondents. Before the encoding of data, 15 forms were eliminated due to failure to respond properly. The remaining 302 forms were encoded into IBM SPSS Statistics 22 computer software.

*3.5. Analysis*

The mediating role of resilience in the relationship between self-determination and self-efficacy was analyzed by SEM, a multivariate statistical technique used for analyzing complicated data of more than two variables (Tabachnick & Fidell, 2013). Structural equation models enable researchers to test presumed relationships among multiple latent and observed variables. In this research, the observed variables consist of the scale items that were directly measured from the students' self-reported perceptions, and the latent variables derived from these observed variables are resilience, self-efficacy and self-determination. Structural equation models visualize the strength and direction of the relationships that are indicated by lines in a path diagram. In the same path diagram, the observed variables are represented by rectangles while the latent variables are represented by ovals. For the simplicity and saving space, path diagrams of this research show latent variables only. Computer software like LISREL, AMOS, Mplus and EQS can be used to construct and analyze the models. In this research, the IBM SPSS AMOS 22 software using the maximum likelihood estimation was used for this purpose. Gender was used as a confounding variable in the analysis of the models. The exploratory statistical analyses were conducted using IBM SPSS Statistics 22 computer software.

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## 4. Findings

Analysis findings indicate statistically significant correlations among resilience, self-efficacy, and self-determination at the p<0.001 level (Table 2). Correlations between resilience and self-efficacy (r=0.537, p<0.001), resilience and self-determination (r=0.400, p<0.001) were medium while the correlation between self-efficacy and self-determination (r=0.293, p<0.001) was weak. Therefore, first, second and third hypotheses are validated by these findings.

Table 2. Correlations among variables.

| Variables | Resilience | Self-Efficacy |
|---|---|---|
| Self-Efficacy | .537** | |
| Self-Determination | .400** | .293** |

**p<0.001

A structural equation model was constructed to test the fourth hypothesis (Figure 1). Analysis findings indicate an acceptable model fit (CMIN/DF=2.1, GFI=.90, AGFI=.87, CFI=.88, IFI=.88, RMSEA=.06, RMR=.03) according to Hu and Bentler (1999). The standardized regression weight for the effect of self-determination on resilience was at β=0.57 level (p<0.001). It was at β=0.65 level for the effect of resilience on self-determination (p<0.001). It can be inferred that resilience plays a mediating role in the relationship between self-determination and self-efficacy.

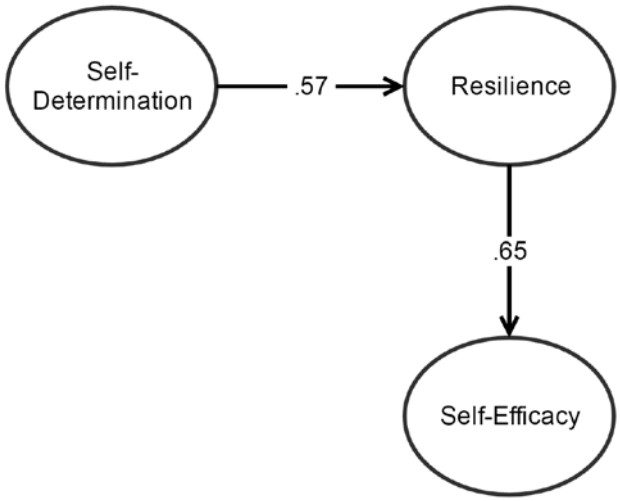


Fig. 1. The path diagram of the full mediator role of resilience.

Another structural equation model was constructed to see whether resilience plays a partial mediator role in the relationship between self-determination and self-efficacy (Figure 2). Analysis findings indicate an acceptable model fit (CMIN/DF=2.1, GFI=.90, AGFI=.88, CFI=.88, IFI=.88, RMSEA=.06, RMR=.03) according to Hu and Bentler (1999). This time the standardized regression weight for the effect of resilience on self-efficacy was reduced to β=0.64 level by the very weak and statistically insignificant (p>0.05) thus negligible effect of self-determination on self-efficacy at β=0.02 level. Therefore, the fourth hypothesis claiming the full mediator role for resilience in the relationship between self-determination and self-efficacy was accepted.

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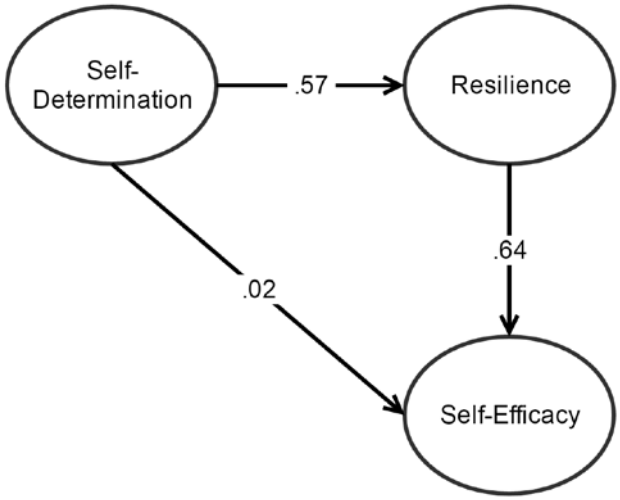


Fig. 2. The path diagram of the partial mediator role of resilience.

**5. Discussion**

The results of this study show that internal success factors such as resilience, self-efficacy and self-determination have varying degrees of correlations. Interestingly but not surprisingly, evidence showed that resilience and self-efficacy have significant level of correlations and that level of resilience is affected by the amount elicited self-efficacy. In this study, the university students as learners who are in the preliminary stage of their career planning see themselves to be more independent and self-sustaining. Given the fact that the expectations were high and requires initial preparations in establishing a career may include high stake of challenges and pressures. Therefore, these university students need some level of solid belief in themselves to overcome and surpass these expectations in their academic performance in view of creating career goals and overall life directions.

It was found that the idea that self-efficacious behaviors are important to students' conceptual understanding of success factors is also implicit to resilience. As such, when faced with crisis and challenges, it is noteworthy to realize that such a trait factor exercised during academic experience can be a preparatory stage in learning to adapt to changes and deal with a more real and challenging environment called 'the working world'. Significant findings of self-efficacy to resilience can be used in coaching students in processing and making judgement on issues over their past mistakes and to come out robustly in planning their career choices. For example, losing in a game or a project proposal being rejected, are high opportune time for school counselors or parents to read negative circumstances as a way to encourage students that these misgivings can be learning opportunities to become wiser and stronger in redoing things that will eventually lead to them to achieve success.

In the study of Winsett and colleagues (2010) that measures resilience and self-efficacy among adolescents, results showed that "self-efficacy is one mediating factor for adolescents achieving the confidence and competence of good control of diabetes mellitus" (p. 295). These adolescents, when "faced with stressful events, exude positive attributes and both concepts are dynamic processes influenced by the complex interactions of developmental stages, personal traits, and environmental stressors" (p. 295). On the other hand, the weak effect of self-determination to self-efficacy may suggest a unique take among adolescents. Historically, Deci and Ryan (2000) described that self-determination stems from the concept of goals as the dominant motivational concept. It further explains that the focus is on the goal selection and pursuit rather than the goals being selected. Moreover, this may not necessary indicate a negative or stressful experience to bring out the need for trait of resilience or to the ultimate sense of belief to succeed in which self-efficacy tries to convey.

Further, Thrash and Elliot (2002) asserted that in the self-determination theory, the needs of an individual use knowledge in deciding whether to accept or reject the forces that impinge on the

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self, such as impulses and social pressures. Thus, the need for achievement was due to high self-determination and implicit self-attributed forces. Conversely, self-efficacious behaviors would lead to capability of demonstrating stronger resilience.

Indeed, the interrelations of these factors show dramatic effect on the basic assumption and understanding of intrinsic motivation concept as well as individual strength of adaptation. As these findings showed, self-efficacy and self-determination with weak relationship may explain comparable findings of Garza and colleagues (2014) of the retention factors among university seniors in the higher education. They revealed that success factors such as resilience, self-efficacy, and persistence have no significant difference between students and parents who have a university degree and students with parents who do not have a university degree. Thus, this suggests that educational attainment does not necessarily guarantee better individual resilience, self-efficacy and persistence but may depend on the kind of unique circumstances or environment for such factors to thrive.

According to Johnson (2006), individual's self-efficacy is fostered when positive messages are attached to internal and external values. The effects of these positive individual intake are developed on how the individual was raised, such that the influence of familial support on self-efficacy which consequently influences a student's academic persistence (Torres & Solberg, 2001). Furthermore, familiar support can also go along with the nature of social institution where the students belong to (Muega, Acido, & Lusung-Oyson, 2016). The study of Muega et al. (2016) suggested that 'power distance' exists in the Philippines both in the classroom teaching-learning as well as in the homes involving parents and their children. According to Geert Hoftstede (1997) as cited by Muega et al. (2016) is one value dimensions that the less powerful members of the institutions and organizations accept and expect that power is distributed unequally. This is seen when students tend to quietly conform to most of their values and beliefs of their teachers. Muega et al. (2016) examined 171 junior and senior level students and found that in a high-power-distance home culture (e.g. Philippines) student's characterization of their relationships with parents did not carry through in the quality of interactions with their teachers in school. Thus, reversal of culture from home to school environments can be behaviorally influencing in student's recognition of authority and overall understanding of self-efficacy evident in their academic performance.

On the other hand, the weak correlation of self-determination to resilience can be associated to what Deci and Ryan (2000) had argued on goal pursuits, that social contexts and individual differences are contributory to support basic needs of human beings to facilitate natural growth processes which included intrinsically motivated behaviors.

University students who are considerably on the transitional stage of life, are substantially exposed to varying degrees of internal and external controls which may include parental control. According to the study of Soenens and Beyers (2012) on understanding psychological control and autonomy on parenting styles in adolescents, suppressing parenting is related to ill-being and maladaptive outcomes. Soenens and Beyers (2012) suggested that there are several perspectives of psychological control and autonomy. Though cultural orientation did not strongly moderate the associations of subjective experiences of psychological control and adolescent outcomes, their study assumes some level of moderation between the objective parental practices and subjective adolescent experiences of parents. Thus, the subjective adolescent experiences may be processed as rather external pressures to elicit intrinsic motivation rather than viewed as an obstacle or a difficult situation necessary to initiate personal resilience.

Consistent with the hypothesis, this study revealed that resilience fully mediates the relationship between self-determination and self-efficacy. This means that being self-determined likewise increases one's self-efficacy through the mediation of resilience. Since the relationship between self-determination and self-efficacy is weak, it is noteworthy to include resilience when considering establishing such relationship between the two variables. The findings of this study also suggest that resilience is the key variable which accounts for the relationship between self-determination and self-efficacy. This finding is found to be consistent with the results of previous research studies (Earvolino-Ramirez, 2007; McCrea, 2014; Li & Yang, 2016). However, the

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mediator role of resilience with these two variables has never been explored. Hence, it is a noteworthy outcome to consider the dynamic issues of learning process and understanding individual's coping behaviors.

## 6. Scope and Limitations

This study had some limitations that should be considered when interpreting the findings. Since the samples were comprised of university students in Philippines, the general findings in this study may not apply to other groups of students overseas which could result in different outcomes if implemented. Furthermore, future studies should find out the demographic differences in groups to address this issue. Second, the ex post facto design and correlational statistics used in this study limit the link of causality among variables. Future studies should facilitate experimental designs in order to establish a stronger link of causality. Third, cross-sectional data, as was the case in this study, may result in unidirectional inferences among variables. Therefore, it is suggested that future studies should use longitudinal data to get an understanding of multiple relationships among the variables. Fourth, the self-reported data collected in this research may be affected by respondents' subjectivity. Using alternative data collection techniques may help to solve this. Lastly, this study examined the mediator role of resilience in the relationship between self-determination and self-efficacy. There could be other variables (i.e. stress, grit) that may play a mediator role in this relationship.

## 7. Conclusion

Despite the limitations mentioned in this study, findings of the mediator role of resilience made significant contributions in the literature. The results indicated that resilience fully mediated the relationship between self-determination and self-efficacy. This finding is a valuable outcome for teaching professionals who would like to focus on increasing the self-efficacy levels of students by considering their respective personal resilience. Given the fact that the relationship between self-determination and self-efficacy was found to be weak, this study further provided evidence on the importance of resilience in achieving self-efficacy by demonstrating the crucial role of resilience in establishing relationship between self-determination and self-efficacy. Thus, highlighting the importance of the mediating role of resilience in improving this relationship.

The study of resilience indicates a need for educators and administrators in understanding and exploring the individuality of students because these are potentially helpful bases in designing and implementing appropriate educational policies and setting overall quality learning environment. Evidences of the mediating effects of resilience to self-efficacy and self-determination can be applied in many instances in academic and life mentoring experiences of students and youth in general. Whether resilience can be taken as an outcome or process, theoretically and empirically, it merits scholarly attention in recognizing that resilience is an important and valuable skill. It is in many respects the way to successfully adapt to constant changes to which university students at their distinct age and capabilities, must learn over time in order to guide them in dealing with life's major decisions such career, marriage, and parenthood.

The outcomes of this research can be practically applied to the daily dynamics of classroom interactions between teachers and students. Essentially, teachers becoming aware of the mediating role of resilience via channels of self-efficacy and self-determination, they can usher their students (especially those who are failing) by encouraging them to reframe their mind that will ultimately fortify their confidence to persevere. In school programs and activities, administrators can include professional training among teachers and guidance counselors to fine-tune their consultation sessions through scaffolding student's belief of self and ego control that will work toward regaining self-efficacy and self-determination despite the negative circumstances in order to build student's personal resilience.

Considering the findings of the current and former research, improving students' self-determination may be a good starting point for teachers. Deci et al. (1991) argue that teachers' involvement with this issue is mainly through the building intrinsic motivation by autonomy

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supporting. Taking this into account, Soenens and Vansteenkiste (2005) found that teachers may contribute to the development of self-determined behaviors of students by supporting their autonomy. Therefore, teachers should facilitate feelings of autonomy to make students resilient and self-efficient. This may be achieved through "offering choice, minimizing controls, acknowledging feelings, and making available information that is needed for decision making and for performing the target task" (Deci et al., 1991, p. 342).

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