FEATURE

Theoretical Contributions of Graduate Research:
An Investigative Study in the Philippines

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Abstract. The purpose of this study was to determine the level of theoretical contribution present in the dissertations and theses of the education and business departments of a private institution of higher education in the Philippines. One of the aspects of the mission of the institution is to produce individuals who excel in research. As such, it is critical to the development and the betterment of the institution in terms of pursuing its mission to develop leaders that excel in research. Therefore, it is our belief that this study particularly informs the institution and its constituents regarding the nature of research output taking place at that institution. The findings of this study suggested that most of the studies done in the business and education departments of the institution were weak in theoretical contributions. Additionally, it was found that studies that were categorized as high in theoretical contribution had increased in the recent years.

Keywords: Graduate research, theoretical contribution, trends in research, content analysis, descriptive research, Philippines

Introduction

The purpose of a dissertation has always alternated between two views: the dissertation as a training instrument for the researcher and the dissertation as an original contribution to the body of knowledge (Berelson, 1960). Duke and Beck (1999), however, argued that the dissertation must be both—a contribution to knowledge as well as a training instrument for the research. This multi-purpose view of the dissertation continues to exist (see Yeager, 2008 for discussion). Thus, any graduate school should consider the purpose of the dissertations in the
training of their students. In fact, the Council of Graduate Schools in the United States (1991) stipulated that doctoral dissertations should have the following features:

(1) Revelation of the student’s ability to analyze, interpret and synthesize information, (2) demonstration of the student’s knowledge of the literature relating to the project or at least the ability to discuss previous studies on which the dissertation is built, (3) description of the methods and procedures used, (4) presentation of the results in a sequential and logical manner, and (5) display of the student’s ability to discuss fully and coherently the meaning of the results.

The five points as stipulated by the Council of Graduate Schools in the United States culminate in the five chapters of the dissertation in its traditional format—introduction, literature review, methodology, results, and conclusion. In addition to this traditional format, there is also a four-chapter dissertation format, but the choice of format is largely institution-, department-, or chair-specific (Joyner, Rouse, & Glatthom, 2013). It is also important to note that the Council of Graduate Schools asserted that the dissertation is the beginning of one’s scholarly work and not its culmination. Thus, they concluded that the dissertation research should provide students with hands-on, directed experience in the primary research methods of the discipline, and should prepare students for the type of research or scholarship that will be expected of them after they receive the doctoral degree (Cimini, 2011).

Arguably, the above five points somewhat miss the second purpose of the dissertation; that is the original contribution to the body of knowledge or theory that is the basic aim of science (Kerlinger & Lee, 2000; Lykken, 1968; Roll-Hansen, 2009). This disconnect is undesirable because the dissertation should be not a training instrument but also bring some contribution to the knowledge base. Hence, it is critical that graduate schools be able to train students in both—to become a researcher and to contribute to the body of knowledge. Hambrick (2007) argued that one of the basic questions asked in research is about its theoretical contribution. The importance of theory to scientists is critical (for discussion, see Colquitt & Zapata-Phelan, 2007) and it is argued in this paper that research at the graduate level should have theoretical contribution because it is the highest academic experience in terms of qualification.

**Literature Review**

The review of the literature typically provides direction for a research study (Creswell, 2013). It does so by providing an understanding of the topic being investigated and justifies the research problem. The subsequent paragraphs discuss the literature related to this study and finally the questions guiding the study are presented.
Theoretical Contribution

There are several definitions of theory in literature, yet there exists no consensus. Attempts, however, have led scholars to define theory in terms of relationships between variables and others have defined them in terms of narratives and accounts (Colquitt & Zapata-Phelan, 2007). It is also argued that a theory must contain four elements: identify factors, establish relationships, build upon a sound theoretical framework, and be generalizable (Whetten, 1989). Additionally, a theoretical contribution constitutes using original insightful perspectives to advance knowledge that is useful for practice (Corley & Gioia, 2011). Put simply, a research paper may be considered a contribution when it contains two elements, originality and utility. Consequently, this study conceptualizes theoretical contribution as the ability of research to have originality and utility.

Taxonomy for Determining Theoretical Contribution

Colquitt and Zapata-Phelan (2007) developed a taxonomy in order to determine the theoretical contribution of published research. This taxonomy has two dimensions: theory building that is on the Y-Axis and theory testing that is on the X Axis. These dimensions combined together have five different classifications: reporters, qualifiers, testers, builders, and expanders (see Figure 1). It is critical to state upfront that all the different kinds of studies as classified by the taxonomy are important for they play different roles in the body of knowledge. The distinction among them, however, is not in their utility but in terms of their theoretical contribution. Therefore, since this taxonomy is used to determine the theoretical contribution of the theses and dissertations of the graduate school in the institution under study, it will be discussed at length according to the various points in the taxonomy on the two dimensions.
Figure 1: Colquitt and Zapata-Phelan’s Taxonomy of theoretical contribution.

**Reporter in terms of theory building.** A study that is classified as a reporter is one that has the lowest level of both theory building and theory testing. In terms of theory building, these are studies that attempt to: replicate previously demonstrated effects (point 1 of Y-Axis) or examine effects that have been the subject of prior theorizing (point 2 of Y-Axis). Thus replication studies are important because they establish external validity or generalizability (Vogt & Gardner, 2012) and also the reliability of the findings. Replication studies, however, concentrate on new settings and do not contribute any new construct or relationships to be examined other than those examined before. As such the theoretical contribution is low.

Further, studies that examine the effects that have been the subject of prior theorizing are important because they lead to new avenues of theory-driven research. These studies are testing, however, prior theorizing. Therefore, in terms of theory building, they do not add any new construct or relationship to be examined. As such, the theoretical contribution is low.
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**Reporter in terms of theory testing.** In terms of theory testing (X Axis), a study is a reporter if it is inductive or grounds predictions with logical speculations (point 1 of the X axis) or grounds predictions with references to past findings (point 2 of the X axis). Studies that are inductive or ground predictions with logical speculation are those studies that actually begin with the reality and end with propositions (Monette, DeJong, Sullivan, & Hilton, 2013). In other words, these are studies that do not delve into the body of knowledge to begin with a priori hypotheses. Such studies are useful in terms of generating new constructs or relationships. Such studies, however, have low confirmatory abilities. Further, studies that ground predictions with references to past findings are those studies that rely on extant literature to ground a priori hypotheses. The grounding, however, consists solely of lists of references to past findings without explication of the causal logic that might explain those findings. As such, these studies are those that Sutton and Staw (1995) describe as ones in which “references are sometimes used like a smoke screen to hide the absence of theory” (p. 373). This means that a recital of past findings can convince the reader that the same sort of relationships can be found but the understanding of why those relationships might exist would still be lacking. In additions to this, Bacharach (1989) supported that logical theories provide clear directions for the scholars in executing the empirical testing of the constructs.

**Qualifiers in terms of theory building.** In order for a study to be classified as a qualifier, it must have moderate levels of theory testing and theory building. Along the line of theory building (Y axis), a qualifier is one that strengthens previously established relationships either by introducing a moderator or a mediator (point 3 of the Y axis). In other words, it introduces a new variable in order to explain how an already-existing relationship or process unfolds. Although adding another variable or two to a previously-established model or relationship is moderate in terms of theory building, it may not significantly alter the logic central to an existing theory (Whetten, 1989). Studies that fall under this category use arguments based on literature to qualify relationships or processes that have been established in previous studies. The theoretical contribution of such studies is moderate as they introduce new variables to add to the understanding of an established relationship.

**Qualifiers in terms of theory testing.** A study is called a qualifier in terms of theory testing (X Axis) when predictions are made solely using arguments based on extant literature (point 3 of the X axis). These studies endeavor to explain why a process or relationship exists by means of logic made available in past research. Such supply of logic is useful as it helps readers understand the justification for a prediction in the light of existing literature. Such a study, however, may not represent a true theory, as the arguments have not been significantly developed. They are moderate in their ability to test a theory as predictions are grounded in existing models and diagrams. Such studies typically
have models that emerge based on literature that is then tested on a population to test the relationships. Studies of this nature are important as they indicate mediators and moderators that regulate certain relationships (Baron & Kenny, 1986). Consequently, these studies can be useful for both researchers and practitioners in understanding what causes certain relationships.

**Expanders in terms of theory building.** In terms of theory building (Y axis), an expander study has the same characteristics of a builder. As such, they place emphasis on processes, constructs, or relationships that have not been theorized earlier. In other words, these are studies that examine previously unexplored relationships (point 4 of the Y axis) or introduce a new construct if not significantly reshaping an existing one (point 5 of the Y axis). In other words, the nature of theoretical contribution for these studies is significantly high. Studies that are categorized as expanders contribute to building a theory and introducing new constructs (Klassen & Whybark, 1999), and as a result, they can alter the direction of thinking in the field of research.

**Expanders in terms of theory testing.** Studies that are termed as expanders are also generally high in their ability to test a theory that was theorized earlier. They are similar in characteristics to the testers; and as such, they ground predictions using existing models, diagrams, or figures (point 4 of the X axis) or based on existing theories (point 5 of the X axis). These studies often draw upon theories established earlier to justify predictions made. Typically these studies make significant contributions to the advancement of knowledge and, therefore are important research studies.

**Builders.** Studies that are significantly high in theory building and low in testing may be classified as builders. A study is a builder when, in terms of theory building (Y axis), it examines relationships and processes that have been previously unexplored (point 4 of the Y axis). Still further, a study may be classified as a builder when it introduces a new construct or conceptualizes an existing one in a new direction (point 5 of the Y axis).

Builders offer a marked departure from existing work that can considerably alter future thinking. A field may greatly be impacted as a result of the ideas generated from studies of this nature (Conrad & Serlin, 2006). Although such studies are desirable to advance theory, their novelty may come under question as to whether they are really new or just old ideas presented in newer ways.

**Testers.** Sutton and Staw (1995) explained true theory to be an explanation of underlying processes that go beyond models and diagrams in explaining the relationships, using closely-related concepts and logical arguments. Studies that fall under this category are generally high in testing theory and low in building theory. In terms of theory testing (X axis), these studies ground predictions with existing models, diagrams, or figures; or they ground predictions in existing theories (point 5 of the X axis).
Although testers are low in their ability to build theory, they are high in the degree of testing. Hence, they may be deemed useful as they help in qualifying theories and propositions. Testers have the ability to enhance the reliability of a theory and therefore are useful.

Taking this taxonomy into account, the goal of the study was to investigate the nature of research done in the departments of education and business in an institution of higher education. In doing so, the intent was to inform the institution of how well the research in the departments under investigation fared in contributing to theory. To achieve this goal, the following questions guided the study.

1. What are the areas being researched in the two departments of the selected institution?
2. Based on Colquitt and Zapata-Phelan’s (2007) taxonomy of theoretical contribution, what are the types of research being carried out in the two departments of the selected institution?
3. What is the trend in the theoretical contribution of the research being done in the two departments of the institution under examination?

Methodology
This study was largely descriptive in nature. The purpose of a descriptive research is to describe what exists. Plainly, descriptive research reveals the nature of the data. As directed by the questions guiding the study, the purpose of this study was to describe the nature of graduate research—thesis and dissertation—pertaining to their extent of theoretical contribution. This study was a result of interest in a taxonomy developed by Colquitt and Zapata-Phelan (2007) to assess the theoretical contributions of research articles and an awareness of the need for graduate research to be effective in its theoretical contribution. The taxonomy was therefore used to assess the data (discussed in the next section) for this study. The data collection procedures, analysis and results are further discussed in subsequent sections.

Data Collection
This study was quantitative in nature and did not constitute human participants. The data for this study was textual and was taken from dissertations and theses collected from education and business departments of the institution. In order to collect the data for this study, permission was secured from the institution and the library was contacted for the access of the theses and dissertations of the two departments included in this study. As a result, access to dissertations and theses from 1998 to 2013 was made available to the researchers. When the sample needed is large in comparison to the population, a technique known as complete
enumeration may be used (Cochran, 2007). Therefore, all the dissertations and theses were included as data for the study, which were further coded and analyzed.

**Analysis**

This research was a descriptive study that purposed to describe the nature of dissertations and theses in terms of their theoretical contribution. The nature of the data determined that the study employs the content analysis technique to analyze the data. Further, because the study was primarily quantitative, it used an approach known as the quantitative analysis of qualitative data (Morgan, 1993). Content analysis may either be approached inductively or deductively (Hsieh & Shannon, 2005). In the case of this study pre-determined categories were used in the data analysis and hence, a deductive approach. Therefore, the content of each study was analyzed and characterized based on the taxonomy as presented in the literature review.

Based on the axes in Figure 1, the data from each dissertation and these were coded. In order to maintain reliability in coding, both authors coded the data together. When coding theory building, it was examined if the study had an element of novelty to it. In other words, studies that defined a new term that was not the subject of earlier studies were considered novel. Further, when a new relationship was established that was not the result of existing research, it was coded along theory building. Also, when a mediator of an existing relationship was the focus of prior research it was coded as replicating previously examined findings.

When coding theory testing, each study was examined to see whether predications made were based on models or theories emerging from previous research. Coding was based simply on whether a study was substantially using established theories to ground predictions and whether the model was developed inductively without explicating a priori hypotheses. The earlier “what” were coded as high in theory testing while the latter was coded as low in theory testing. A description of these categories is presented in Table 1.

Data were entered into MS Excel 2007 and coded based on the categories presented in Table 1. Graphs were then generated for the purpose of presenting the findings descriptively. Findings are presented and discussed in subsequent sections.
Table 1

Description of the Categories Used in the Analysis of Data

<table>
<thead>
<tr>
<th>Category</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reporters</td>
<td>These studies are low in theory building and testing. They replicate previous studies and their hypotheses are typically in reference to past findings. Usually these studies are carried out in reference to findings that are conflicting in past research.</td>
</tr>
<tr>
<td>Qualifiers</td>
<td>These are studies with moderate levels of both theory testing and building. Using arguments that are deep rooted in existing literature, these studies qualify relationships previously established. Typically these studies introduce newer ways of looking at existing findings.</td>
</tr>
<tr>
<td>Testers</td>
<td>These studies have high levels of theory testing but low levels of theory building. They test models and propositions generated from previous research. They typically follow a deductive approach and test hypotheses derived from existing theory.</td>
</tr>
<tr>
<td>Builders</td>
<td>Studies which are high in theory building and low in theory testing fall in this category. Mostly employing an inductive approach, builder studies introduce new constructs, processes and relationships. These studies are not based on previous research and extrapolate their findings purely from data.</td>
</tr>
<tr>
<td>Expanders</td>
<td>Expanders are high in both theory testing and building. They mostly focus on new constructs, process, and relationships not previously explored. Additionally, they test exiting theory. In doing both, they tend to advance existing literature significantly.</td>
</tr>
</tbody>
</table>

Results

For the purpose of this study, a total of 79 theses and dissertations—all the studies made available by the institution’s library—were analyzed. The dependent variables that were studied in each research are tabulated below.
Table 2

**Dependent Variables in the Studies Being Investigated**

<table>
<thead>
<tr>
<th>Year</th>
<th>Dependent Variables Under study</th>
</tr>
</thead>
<tbody>
<tr>
<td>1998</td>
<td>Quality efforts, organizational commitment*, spiritual maturity, organizational commitment*, teaching of thinking skills.</td>
</tr>
<tr>
<td>1999</td>
<td>Teachers empowerment, students performance***</td>
</tr>
<tr>
<td>2000</td>
<td>Student’s performance***, participation in decision making, job satisfaction**</td>
</tr>
<tr>
<td>2001</td>
<td>Students’ sense of community, organizational conflict, students learning styles, academic achievements.</td>
</tr>
<tr>
<td>2002</td>
<td>Effective communication, management performance***</td>
</tr>
<tr>
<td>2003</td>
<td>Job satisfaction**, academic performance***, performance in schools***</td>
</tr>
<tr>
<td>2004</td>
<td>Student academic writing, customer relationship management.</td>
</tr>
<tr>
<td>2005</td>
<td>Work values, character traits, level of need and perception of mentoring, academic performance, satisfaction in life, leadership style and its attractiveness</td>
</tr>
<tr>
<td>2006</td>
<td>Marital satisfaction, Teaching effectiveness, Employees' ranking of motivators</td>
</tr>
<tr>
<td>2007</td>
<td>Students’ intention on health, reading performance, strategic management implementation, management leadership behaviour, attitudes and intentions of students towards software piracy, leadership style of IT administrators</td>
</tr>
<tr>
<td>2008</td>
<td>Teachers’ motivation, school reputation, habits of the mind, students' performance, teaching performance***, school performance***, organizational health, doctoral student satisfaction.</td>
</tr>
<tr>
<td>2009</td>
<td>Professional effectiveness, school underachievement, effective online instructional design</td>
</tr>
<tr>
<td>2010</td>
<td>Integrated Ghanian Adventist curriculum, perception and attitude changes to the STEP program</td>
</tr>
<tr>
<td>2011</td>
<td>Work values, Teaching performance***, Organizational performance***, Turnover intention, Job satisfaction**, Server virtualization adoption, Institutional value</td>
</tr>
<tr>
<td>2012</td>
<td>Student's performance***, Profitability, Organizational citizenship behaviour, Employee innovative behaviour, Sustainable growth</td>
</tr>
<tr>
<td>2013</td>
<td>Classroom management, Organizational silence, Employee engagement, Academic achievement, College completion intention</td>
</tr>
</tbody>
</table>

*strands in commitment, **strands in satisfaction, ***strands in performance
It was revealed that strands of commitment (*), satisfaction (**), and performance (***) were among the most widely studied constructs in the institution. Additionally, it was found that although there seems to be a variety in the dependent variables, upon closer examination, it could be concluded that they were more an alteration of terminology as opposed to examination of new constructs. In other words, research studies tended to use different terminology but essentially studying different dimensions or strands of the same construct limiting major deviations in topics being studied.

One of the reasons for such limited deviations in topics could be attributed to research interests of the advisers. It may be possible that the interests of advisers to a certain degree influence the researcher’s choice of topic. Additionally, it could be that when searching for a topic, the researchers were influenced by the topics of previous researchers in the institution.

Further, the data for the study was analyzed for trends. One way of examining trends is to look at the frequency distribution of reporters, qualifiers, builders, testers and expanders from 1998 to 2013. The data in Figure 2 reflect the distribution of research studies based on their categories. Such presentation of data provides a comprehensive understanding of the data and is helpful when making conclusions.

The distribution suggests that there was a trend in each category. The research studies categorized as reporters (studies with the lowest level of theory building and theory testing). These increased until 2007 but decreased thereafter. This trend is represented in Figure 3.

![Figure 2. Distribution in each category from 1998-2013](image-url)
Figure 3. Trend in reporters, qualifiers, builders, and testers.
Further, it points to the gradual increase in both testers (studies that are high in the degree of testing theory) and builders (studies that are high in the degree of theory building). Although both indicate a gradual increase, it must be noted that for 10 years, there were no testers, and it was not until 2009 that builders came into the picture (see Figure 2). The trend in each is represented in Figure 3. It is also evident that there is a decent distribution of qualifiers (studies that are moderate in their levels of theory building and theory testing) with an absence of any in the years 2004-2006. It must be borne in mind that there are only four categories illustrated in Figure 3 because of the absence of expander studies in the data.

Another important finding of this study was in terms of both the departments of business and education. The data seems to indicate that the highest number of theses and dissertations in the education department fell in the category of reporters while the least were builders (see Figure 4). A similar distribution was indicated in the theses of the same school. On the other hand, the data from the school of business indicate the highest number of research studies fell in the category of reporters. In terms of dissertations of the same school, the majority of the studies were qualifiers with one builder and one tester.

*Figure 4: Distribution of Each Category in Both Departments*
The findings of the study indicated that there were more research studies—both dissertations and theses—generated in the school of education than in the school of business. This could be attributed to the fact that the business program was a recent addition to the institution as compared to the other programs that existed way before. Further, it was found that no thesis or dissertations fell in the “expander” category. A reason for this could simply be because of the fact that doctoral dissertations are not necessarily about moving mountains but rather bringing a small crumb to a larger body of knowledge that advances over time (Letiche & Lightfoot, 2014). The work for a true expander is a lot more than can be accomplished in a single doctoral dissertation; hence, its absence. Further, Figure 4 suggests that most of the studies that are high in theoretical contributions are doctoral dissertations. This is normal because a Master’s thesis is more often tailored for the labor markets and therefore is less expected to have high levels of theory contribution (Eggins, 2008).

Additionally, the study also showed that the theoretical contribution in the years that were investigated was rather weak considering the number of reporters and qualifiers as compared to the number of testers and builders. The trend lines in Figure 3, however, indicate that there is a gradual increase in testers and builders while a gradual decrease in reporters and qualifiers is also evident. There could be several factors contributing to such a trend. First, it is possible that the expertise in terms of methodology was limited in the earlier years. Second, it may be that resources in terms of related technology, human resources, administrative support, and expert knowledge were limited in the earlier years. Regardless of the prior limitations, it is worthwhile to note that there is a positive trend in the level of theoretical contribution of graduate research, which should be maintained in order to enhance the institution’s capability of theory advancement.

Discussions

The findings reported in this study are important because they expand the understanding of both theory building and theory testing. This knowledge should be especially relevant to academia such as dissertation advisors, all students in graduate schools, institutions leaders, and managers.

Although findings of this study indicate that theory-building practices have improved in the recent years, more focus should be placed on improving theory building practices in both business and education departments, especially in dissertations. Both departments (business and education) should encourage theory-building practices through training by means of course offerings or periodic workshops. Overall, it is possible to strengthen theory expanding through developing both theory testing and theory building among researchers in graduate school settings.
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Additional research needs to investigate the validity of these suggestions. Research should also examine additional variables that might promote theory advancement in institutional settings.

Like most studies, this study is not short of limitations and weaknesses. Consequently, this content analysis is limited to data provided by the office of the institution and exclude dissertations and theses that are still in the process of acquisition. It is also for this reason that some years have as less as two studies (see Table 2). Additionally, the study was limited to the taxonomy developed by Colquitt and Zapata-Phelan (2007) and as such, it used only the categories proposed by them to analyze the data in this study.

Conclusions and Recommendations

It was the purpose of this study to analyze the dissertations and theses of the graduate school in a selected higher educational institution using the taxonomy developed by Colquitt and Zapatta-Phelan (2007). The study found that most of the research studies done in the education and business departments of the institution were weak in theoretical contribution. The trend analysis, however, revealed that the categories of builders and testers, which were high in theoretical contribution, have increased in number in the recent years. Additionally, it was found that although topics were largely unique, a few of them were actually repeated. It maybe important to point out that repeating a topic does not necessarily mean repeating knowledge (Roberts, 2004). On the contrary, repeating a topic could add a newer perspective to the same.

The recommendations made as a result of this study are made for both researchers and practitioners. Future research may use the same taxonomy and procedure to evaluate the theoretical contributions made by dissertations in an online database or all the articles published in a particular journal. Also, future researchers can expand the size of the taxonomy (more than five categories) to be accurate and precise depending on the nature of the data employed in their research. Further, if a similar study were to be carried out in other institutions, researchers are recommend that it be done with a higher number of theses and dissertations and that they be analyzed and reported separately.

Research advisors may use the taxonomy guide and evaluate the level of theoretical contribution of their advisees. Journal editors or managers may use the taxonomy as a tool to evaluate publications to ensure that the articles in some way make theoretical contribution. Institutions of research may consider developing strategies to increase the awareness of the importance each research study has in making theoretical contribution.
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