

The Cognate Subjects and their Relationship to the Major Subjects in Graduate School

Dr Janet R Valdez

La Consolacion University Philippines
Office of the Vice President for Academic Affairs

Abstract: Aside from the challenging journey required by the graduate education, the students are currently adjusting to the demands of the Industrial Revolution 4.0. Academic institutions incorporated new competencies into their curricula and offered innovative programs. Drago, Shire, & Ekmecki (2016) revealed the relevance of aligning a program's mission and vision with the functional skills necessitated in the job market from the graduates of Education 4.0. Studies along this line were tried. Aligning the subjects in the graduate school and making them relevant in the current academic milieu require a second look into the major and cognate subjects included in every discipline and program in the Master's and doctorate curricula. Students should, therefore, know the cognates related to their major subjects to ensure the relevance of the competencies and skills that can be acquired in their graduate school. A cognate subject presents a selection of courses providing broad support to the major subjects. In the Master of Arts in Education major in Educational Management, the cognate subjects include two (2) courses of three (3) units each in the fields of psychology or sociology. On the other hand, the major subjects include six (6) courses of three (3) units each in education such as: human behavior in organization, educational legislation and fiscal management, organization and management in educational institutions, educational planning and development, personnel management in education, education and national development, decision analysis in education, current issues and trends in education, educational leadership, instructional management, crisis management, and seminar in educational research preparation.

The study assessed the significant relationship of the cognate and major subjects by utilizing a descriptive correlational research design which accessed universal sampling of students in the Master of Arts in Education major in Educational Management during the school year 2018-2019 in the Graduate School in a private higher educational institution (HEI) in Bulacan.

Keywords: Cognate Subjects, Graduate School, Major Subjects

I. Introduction

Aside from the challenging journey required by the graduate education, the students are currently adjusting to the demands of the Industrial Revolution 4.0. Academic institutions incorporated new competencies into their curricula and offered innovative programs. Drago, Shire, & Ekmecki (2016) revealed the relevance of aligning a program's mission and vision with the functional skills necessitated in the job market from the graduates of Education 4.0. Studies along this line were tried. The Australian federal government prepared a higher education quality assurance framework under the leadership of the Tertiary Education Quality and Standards Agency (TEQSA) whose framework developed outcome-based graduate standards in a selected range of disciplines (Hay, 2012). Also, Shaw (2000) examined major themes of curricula in North American universities and discussed their relevance to international students who come to these schools for graduate degrees. Furthermore, Alvarez, Bonnet, & Kahn (2014) learned that the major takeaways from the graduate program included the following: the value of student assessment in shaping publishing workshops; awareness of the discrepancies of registration numbers and actual attendance, highlighting the potential for enhanced promotion techniques; the importance of university press and faculty insight; and the benefits of collaboration among librarians, publishing professionals, and faculty members. Aligning the subjects in the graduate school and making them relevant in the current academic milieu require a second look into the major and cognate subjects included in every discipline and program in the Master's and doctorate curricula. Students should, therefore, know the cognates related to their major subjects to ensure the relevance of the competencies and skills that can be acquired in their graduate school.

A cognate subject presents a selection of courses providing broad support to the major subjects. In the Master of Arts in Education major in Educational Management, the cognate subjects include two (2) courses of three (3) units each in the fields of psychology or sociology. Interestingly, Olson & Brosnan (2017) pointed the emergence of role-based identities among students. Also, O'Neill & McNamara (2016) suggested a collaboration among educational developers in the establishment of the communities of practice, situated in cognate disciplines, so as 'to intertwine subject-specific and generic approaches to academic development that are beneficial to staff, to institutions, as learning organizations, and to the wider academic community' (Grace et al., 2004). Milech & McGann (2016) talked across shared differences - different but cognate disciplines, different but cognate migrant histories, and the shared difference of a (past) supervisor/supervisee relationship and that "something" as it relates to three important dimensions of graduate research: the nature of a creative- production thesis; the process of making/writing such a thesis; and the potential of a supervisory relationship pertaining to such making/writing.

On the other hand, the major subjects include six (6) courses of three (3) units each in education such as: human behavior in organization, educational legislation and fiscal management, organization and management in educational institutions, educational planning and development, personnel management in education, education and national development, decision analysis in

education, current issues and trends in education, educational leadership, instructional management, crisis management, and seminar in educational research preparation. Buchan et al. (2007) described the evolution and re-shaping of a subject designed for postgraduate students from diverse programmes. They detailed the key ingredients of a subject designed to prepare postgraduate students for careers involving sustainability at international or regional level. The subject's structure is a potential model for adoption in other tertiary programmes. However, Jakeman, Henderson, & Howard (2017) found that the efforts to integrate course content and methodology differed from students' prior experiences and resulted in a disconnection between their experience and the intended course learning objectives.

This study was, therefore, motivated by the assessment of the relationship of the subjects in the graduate education. It is interesting to assess the significant relationship of the cognate subjects and the major subjects in the Master of Arts in Education.

1. Theoretical / Conceptual Framework

The study was anchored on the findings of Afar et al. (2017) which defined the problems, expectations, and suggestions in graduate education. The findings included implications for internationalization in developing countries and suggestions that can solve the problems of the challenging life in graduate education, especially in the milieu of Industrial Revolution 4.0. The completion of the rigorous and tedious activities in the cognates and major subjects contributes to the hurdles and challenges faced by the graduate students. Being at par with the graduate students globally, the inclusion of subjects should comprehensively suffice the demands and current trends of the industry. Education is expected to provide the necessary skills and competencies relevant to the field of expertise.

Figure 1 shows the conceptual framework of the study. The independent variable was the cognate subjects including first cognate and second cognate subjects. On the other hand, major subjects included the following ratings: exemplary, proficient, accomplished, emerging, beginner, and failed.

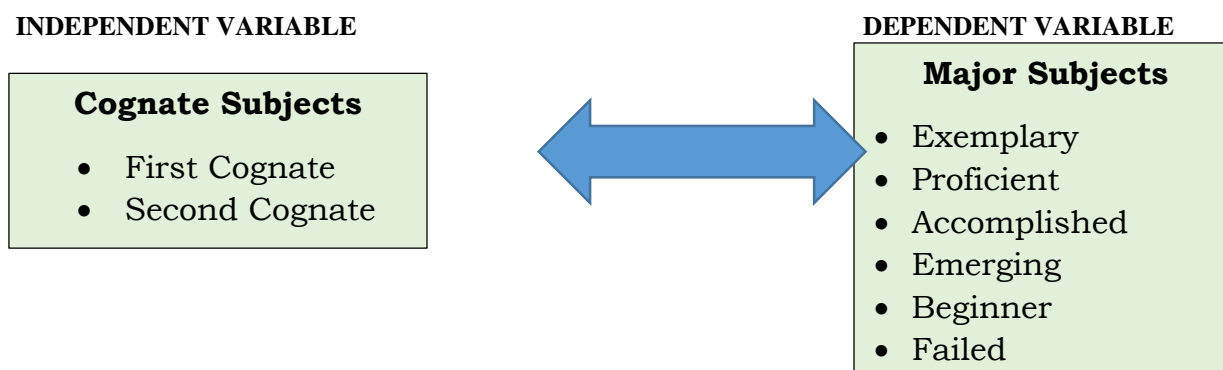


Figure 1. Conceptual Framework of the Study

2. Statement of the Problem

The main concern of the study was to assess the significant relationship of the cognate subjects and the major subjects in the Master of Arts in Education.

Specifically, the researchers aimed to find the answers to the following questions:

1. How can the cognate subjects be assessed based on the grades in the following:
 - 1.1 First cognate; and
 - 1.2 Second cognate?
2. How can the major subjects be assessed based on the following ratings:
 - 2.1 Exemplary;
 - 2.2 Proficient;
 - 2.3 Accomplished;
 - 2.4 Emerging;
 - 2.5 Beginner; and
 - 2.6 Failed?
3. Do the cognate subjects relate significantly to the major subjects in the Graduate School?
4. What implications in Graduate School education can be drawn based from the findings of the study?

3. Hypothesis of the Study

The hypothesis of the study was tested at 0.05 level of significance.

“The cognate subjects do not relate significantly to the major subjects.”

II. Methodology of the Study

1. Research Design

A descriptive correlational method was utilized in the study. Creswell (2015) discussed that a descriptive research included the researcher's interest, process, meaning, and understanding of words or pictures; thus making a descriptive research qualitative in its method. Since the descriptive research employs qualitative method, it is considered relevant to the present research which

involves data collection for describing the existing situation. The design of this study was descriptive since the researcher collected facts through the survey questionnaire to obtain an accurate description of the existing status of the completion of the academic requirements and the performance in the comprehensive examination. The researcher, also, exerted efforts to assess the relationship of the independent variable to the dependent variable. Moreover, the design of the study provided a systematic, factual, and accurate description, as well as, a deeper insight into the relationship of the cognate subjects to the major subjects of the Graduate School students. Also, the researcher utilized the qualitative method which was based on the data provided by the responses gathered from the survey questionnaire and not about the number.

2. Research Locale

The locale of the study was the Graduate School at a private higher educational institution (HEI) in the Province of Bulacan. The choice of respondents was based on the efforts of the department in assessing relationship of the cognate subjects and the major subjects at the Graduate School.

3. Population of the Study

The study accessed the universal sampling of the total population of forty-eight (48) graduate school students in the Master of Arts in Education major in Educational Management who succeeded in completing the Master's program during the School Year 2018-2019.

4. Data Processing and Statistical Treatment

This descriptive correlational research assessed the gathered data and processed them through the utilization of the regression analysis of the significant relationship of the cognate subjects and the major subjects in the Master of Arts in Education major in Educational Administration program. The cognate subjects were assessed based on their grades in the first cognate and second cognate, while the major subjects were described as follows: *Exemplary* (1.00 -1.24); *Proficient* (1.25-1.49); *Accomplished* (1.50 – 1.74); *Emerging* (1.75 – 1.99); *Beginner* (2.00); and *Failed* (2.25 below). This produced quantitative data resulting from the documentary analysis of forty-eight total population of graduate students in the Master of Arts in Education in a private higher educational institution in Bulacan during the Academic Year 2018-2019.

5. Statistical Analysis

5.1 Cognate Subjects

A cognate subject presents a selection of courses providing broad support to the major subjects. In the Master of Arts in Education major in Educational Management, the cognate subjects include two (2) courses of three (3) units each in the fields of psychology or sociology. The cognate subjects of the Master of Arts in Education students from a private higher educational institution in Bulacan were assessed based on their obtained grades in the first cognate and second cognate subjects.

5.1.1 First Cognate Subject. Table 1 presents the grades of the students in the first cognate subject of the students in the Master of Arts in Education during the academic year 2018 – 2019.

Table 1

First Cognate Subject of MAEd Students during AY 2018-2019

Indicators	Frequency	Percentage
1.00-1.24 (Exemplary)	14	29.2
1.25-1.49 (Proficient)	31	64.6
1.50-1.74 (Accomplished)	3	6.3
1.75-1.99 (Emerging)	0	0.0
2.0 - (Beginner)	0	0.0
2.25 below-(Failed)	0	0.0
Total	48	100.0
Mean = 1.19 (Exemplary)		
Std. Deviation = .13876		

Table 1 revealed the *exemplary* performance in the first cognate subject of the students in the Master of Arts in Education during the academic year 2018 – 2019 as shown by a Mean score of 1.19 and a Standard Deviation of .13876. Specifically, it showed their grades in the first cognate subject as follows: 29.2% (14 out of 48) *exemplary*; 64.6% (31 out of 48) *proficient*; and 6.3% (3 out of 48) *accomplished*. No one (0%) of the students obtained grades in the first cognate subjects as *emerging*, *beginner*, or *failed*. Most of the students were *proficient* (1.25 – 1.49) in their first cognate subject.

5.1.2 Second Cognate Subjects. Table 2 presents the second cognate subject in the Graduate School of the students in the Master of Arts in Education during the academic year 2018 – 2019.

Table 2

Second Cognate Subject of the MAEd Students during AY 2018-2019

Indicators	Frequency	Percentage
1.00-1.24 (Exemplary)	11	22.9
1.25-1.49 (Proficient)	33	68.8
1.50-1.74 (Accomplished)	3	6.3
1.75-1.99 (Emerging)	1	2.1
2.0 - (Beginner)	0	0.0
2.25 below-(Failed)	0	0.0
Total	48	100.0
Mean = 1.21 (Exemplary)		
Std. Deviation = .15146		

Table 2 revealed the *exemplary* grade in the second cognate subject of the students in the Master of Arts in Education during the academic year 2018 – 2019 as shown by a Mean score of 1.21 and a Standard Deviation of .15146. Specifically, it showed the grade in their second cognate subject as follows: 22.9% (11 out of 48) *exemplary*; 68.8% (33 out of 48) with *proficient*; 2.1% (1 out of 48) *accomplished*. No one (0%) of the students obtained a grade in the second cognate subject as *emerging*, *beginner*, or *failed*. Most of the students were *proficient* (1.25 – 1.49) in their grade in the second cognate subject at the master's program.

5.1.3 Cognate Subjects. Table 3 presents the grades of the students in the cognate subjects at the Master of Arts in Education during the academic year 2018 – 2019.

Table 3

Cognate Subjects of MAEd Students during AY 2018-2019

Indicators	Frequency	Interpretation
First Cognate	1.19	Exemplary
Second Cognate	1.21	Exemplary
Grand Mean	1.20	Exemplary

Table 3 revealed the *exemplary* completion of the cognate subjects of the students in the Master of Arts in Education during the academic year 2018 – 2019 as shown by a Grand Mean score of 1.20. While the students rated *exemplary* in both the first and second cognates, it revealed a slightly higher rating in the first cognate (1.19) than in the second cognate (1.21).

5.2 Major Subjects

The major subjects include six (6) courses of three (3 units each in education such as: human behavior in organization, educational legislation and fiscal management, organization and management in educational institutions, educational planning and development, personnel management in education, education and national development, decision analysis in education, current issues and trends in education, educational leadership, instructional management, crisis management, and seminar in educational research preparation. Table 4 presents the ratings of the students in the major subjects of the Master of Arts in Education during the academic year 2018 -2019.

Table 4

Major Subjects of the MAEd Students During the AY 2018-2019

Indicators	Frequency	Percentage
1.00-1.24 (Exemplary)	21	43.9
1.25-1.49 (Proficient)	26	54.3
1.50-1.74 (Accomplished)	1	2.1
1.75-1.99 (Emerging)	0	0.0
2.0 - (Beginner)	0	0.0
2.25 below-(Failed)	0	0.0
Total	48	100.0
Mean = 1.23 (Exemplary)		
Std. Deviation = .10094		

As can be gleaned from Table 4, the students earned an *exemplary* rating as shown in the Mean score of 1.23 in the major subjects of the students in the Master of Arts in Education during the academic year 2018 – 2019. Specifically, it revealed the data on the major subjects as follows: 43.9% or 21 of 48 students were *exemplary*; 54.3% or 26 of 48 students were *proficient*; 2.1% or 1 of 48 students was *accomplished* in the major subjects in the Master of Arts in Education. The table further revealed that most of the students were *proficient* (1.25 – 1.49) in the major subjects, while the least was *accomplished* (1.50 – 1.74).

5.3 The Relationship of the Cognate Subjects and Major Subjects in the Graduate School

Table 5 shows the regression analysis on the significant relationship of the cognate subjects and the major subjects in the Graduate School.

Results of the regression analysis revealed that the first cognate subjects had a significant relationship on the major subjects as evidenced by the Beta coefficient of 0.467 with a p-value of 0.001; however, the relationship of the second cognate subject and the major subjects existed but not to a significant extent as evidenced by the Beta coefficients of 0.169 with p-values which exceeded the .05 alpha. Though insignificant, the B coefficient values signify that in every unit increase in the cognate subjects in the Master of Arts in Education will mean 0.34 and 0.113 respective increase in the rating of the major subjects of the respondents.

However, the obtained F-ratio of 7.137 was found significant since the associated probability of .002 greatly exceeds .05 alpha. The results suggested that the cognate subjects were found to be significantly related to the major subjects. Thus, the study *rejected* the null hypothesis which states that *the cognate subjects do not relate significantly to the major subjects*.

Table 5

Regression analysis of the relationship of the cognate subjects and major subjects

Variables	Unstandardized Coefficients		Standardized Coefficients		
	B	Std. Error	Beta	t	Sig.
(Constant)	0.969	0.152		6.377	0
1st Cognate subject	0.34	0.095	0.467	3.596	0.001*
2 nd Cognate subject	0.113	0.087	0.169	1.299	0.2

R-squared = .241
F-value = 7.137
p-value = .002
alpha = 0.05

III. Results and Discussions

The data gathered through this research yielded the following results and findings.

Problem 1. The cognate subjects in the Graduate School

The *exemplary* completion of the cognate subjects of the students in the Master of Arts in Education during the academic year 2018 – 2019 was shown by a Grand Mean score of 1.20. While the students rated *exemplary* in both the first and second cognates, it revealed a slightly higher rating in the first cognate (1.19) than in the second cognate (1.21).

Problem 2. The major subjects in the Graduate School

The students earned an *exemplary* rating as shown in the Mean score of 1.23 in the major subjects of the students in the Master of Arts in Education during the academic year 2018 – 2019. Specifically, it revealed the data on the major subjects as follows: 43.9% or 21 of 48 students were *exemplary*; 54.3% or 26 of 48 students were *proficient*; 2.1% or 1 of 48 students was *accomplished* in the major subjects in the Master of Arts in Education. The findings further revealed that most of the students were *proficient* (1.25 – 1.49) in the major subjects, while the least was *accomplished* (1.50 – 1.74).

Problem 3. The significant relationship of the cognate subjects and major subjects in Graduate School

Results of the regression analysis revealed that the first cognate subjects had a significant relationship on the major subjects as evidenced by the Beta coefficient of 0.467 with a p-value of 0.001; however, the relationship of the second cognate subject and the major subjects existed but not to a significant extent as evidenced by the Beta coefficients of 0.169 with p-values which exceeded the .05 alpha. Though insignificant, the B coefficient values signify that in every unit increase in the cognate subjects in the Master of Arts in Education will mean 0.34 and 0.113 respective increase in the rating of the major subjects of the respondents.

However, the obtained F-ratio of 7.137 was found significant since the associated probability of .002 greatly exceeds .05 alpha. The results suggested that the cognate subjects were found to be significantly related to the major subjects. Thus, the study *rejected* the null hypothesis which states that *the cognate subjects do not relate significantly to the major subjects*.

Problem 4. Implications in graduate education drawn from the results of the study

Based on the findings of the study, the following implications in graduate education were drawn:

- That the Graduate School students take the cognate subjects as equally relevant as the major subjects in the completion of their degree.
- That the Graduate School students are more likely to experience difficulty in the accomplishment of tasks in the major subjects than in the cognate subjects.
- That the students consider the availability of the subjects and their interest, among other things, in the selection of the cognate subjects

IV. Conclusions and Recommendations

The following conclusions and recommendations were arrived at after analyzing the results and findings presented by the gathered data.

1. The students of the Graduate School in the private HEI revealed an exemplary grade in their first and second cognates which showed their equal treatment on the relevance of the subjects comparable to their major subjects.
2. Most of the students attained proficiency in their major subjects which is one level lower compared to their rating in their cognate subjects.
3. The cognate subjects relate significantly on the major subjects at the Graduate School; thus, the students should aspire to exert similar preparations and treatment on the subjects to avoid neglecting the acquisition of skills and competencies from all the subjects offered in the curriculum.
4. There are implications on graduate education drawn from the findings of this study which could guide the students in the selection of their cognate subjects and the teachers of the cognate and major subjects in the giving of considerations.

References

- [1] Alvarez B, Bonnet J L, Kahn M (2014). Publish, not Perish: Supporting Graduate Students as Aspiring Authors. *Journal of Librarianship & Scholarly Communication*, 2 (3), 1–10 DOI: [10.7710/2162-3309.1141](https://doi.org/10.7710/2162-3309.1141)
- [2] Atar C, Erdem C, Koçyigit M (2017). Experiences of International Graduate and Postgraduate Students in the United Kingdom: Problems, Expectations and Suggestions. *Online Submission*, 57, 227–244. <http://search.ebscohost.com/login.aspx?direct=true&db=eric&AN=ED588085&site=ehost-live>
- [3] Çalışoglu M, Yalvaç A S (2019). The Difficulties That the Teachers Who Continue Master of Science Education Experience. *International Education Studies*, 12 (4), 100–109. <http://search.ebscohost.com/login.aspx?direct=true&db=eric&AN=EJ1211441&site=ehost-live>
- [4] Creswell J W (2015). *A concise introduction to mixed methods research*. Sage Publication
- [5] Creswell J W, Guetterman T C (2019). *Educational Research: Planning, Conducting, and Evaluating Quantitative and Qualitative Research*, 6th Edition. Pearson. Retrieved from <http://search.ebscohost.com/login.aspx?direct=true&db=eric&AN=ED594549&site=ehost-live>
- [6] Drago D, Shire S, Ekmekci O (2016) Improving Regulatory Education. *Therapeutic Innovation & Regulatory Science*. 50 (3), 330-336. DOI: [10.1177/2168479015620440](https://doi.org/10.1177/2168479015620440)
- [7] Grace S, Smith B, Bradford M, Elvidge L (2004). Maximising the synergy: Disciplinary and generic approaches to academic development. In L Elvidge, R Land, C Mason, B Matthew (Eds.), *Exploring academic development in higher education: Issues of engagement* (pp. 97–112). Cambridge: Cambridge Conference
- [8] Graeme D Buchan, Ian F Spellerberg, Winfried E H Blum (2007). Education for sustainability: Developing a postgraduate-level subject with an international perspective. *International Journal of Sustainability in Higher Education*, 8 (1), 4–15. [10.1108/14676370710717553](https://doi.org/10.1108/14676370710717553)
- [9] Hay I (2012). Over the Threshold—Setting Minimum Learning Outcomes (Benchmarks) for Undergraduate Geography Majors in Australian Universities. *Journal of Geography in Higher Education*, 36 (4), 481–498. [10.1080/03098265.2012.691467](https://doi.org/10.1080/03098265.2012.691467)
- [10] Jakeman R C, Henderson M M, Howard L C (2017). Reflective pedagogy: the integration of methodology and subject-matter content in a graduate-level course. *Teaching in Higher Education*, 22 (2), 207–221. [10.1080/13562517.2016.1237494](https://doi.org/10.1080/13562517.2016.1237494)
- [11] Olson R E, Brosnan C (2017). Examining Interprofessional Education through the Lens of Interdisciplinarity: Power, Knowledge and New Ontological Subjects. *Minerva: A Review of Science, Learning and Policy*, 55(3), 299–319. Retrieved from <http://search.ebscohost.com/login.aspx?direct=true&db=eric&AN=EJ1153312&site=ehost-live>
- [12] O'Neill G, McNamara M (2016). Passing the Baton: A Collaborative Approach to Development and Implementation of Context-Specific Modules for Graduate Teaching Assistants in Cognate Disciplines. *Innovations in Education and Teaching International*, 53 (6), 570–580. <http://search.ebscohost.com/login.aspx?direct=true&db=eric&AN=EJ1114103&site=ehost-live>
- [13] Onsmann A, Newton C (2015). Blurred Boundaries: Negotiating a Common Core Subject in a Multi-Faculty Bachelor of Environments. *Australian Universities' Review*, 57 (2), 37–45. <http://search.ebscohost.com/login.aspx?direct=true&db=eric&AN=EJ1073627&site=ehost-live>
- [14] Onwuegbuzie A J, Poeh C (2015). Special Issue: Mixed Methods. *International Journal of Qualitative Methods*, 14 (2), 122–125. [10.1177/160940691501400203](https://doi.org/10.1177/160940691501400203)
- [15] Shaw W W (2000). Graduate education in wildlife management: major trends and opportunities to serve international students. *Wildlife Society Bulletin*, 28 (3), 514. <http://search.ebscohost.com/login.aspx?direct=true&db=aph&AN=3753960&site=ehost-live>
- [16] Soft subjects damage university options, claims think-tank. (2008). *Education* (14637073), (336), 5. <http://search.ebscohost.com/login.aspx?direct=true&db=aph&AN=35751430&site=ehost-live>