Extent of Efficacy to Implement Inclusive Practices: A Quantitative Analysis among BS Home Economics Students

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Abstract. Limited studies have been conducted determining the extent of efficacy to implement inclusive practices among the BS Economic students who would serve as basic education teachers. This study enlisted a total of 146 students who answered an adopted research question. The statistical analysis of the data provides that the respondents are of 'high' extent of efficacy. Moreover, the study also disclosed that gender is not a factor influencing the extent of efficacy. However, the ordinal variable year level is found to influence difference and association. Discussions on the results are provided herein.

Keywords: Inclusive practice, extent of efficacy, Home Economics, gender, year level

Introduction

It could be said that Inclusive Education is the greatest call of the time. In this era when the quest for equality and equity has come to the fore, the need to be inclusive, especially among educators should be ascertained by Higher Education Institutions (HEIs) which are primarily expected to train our professionals not only to be competent at what they are supposed to do, but also become inclusive in their practices. This isnecessarily important among those who shall find their path of becoming educators such as those taking Bachelor of Home Economics who, sooner or later, would end up becoming Technology and Livelihood Education teachers.

Teachers have been regarded as the greatest factor to consider in the successful and efficient implementation of Inclusive Education (Lao et al., 2022). In fact, Alieto (2018) explained that no educational programs or reforms could find fruition unless the classroom teachers participate and become truly involved. These claims provide an essential understanding that the teachers and would-be teachers are important considerations to account in the conceptualization and implementation of any educational program.

Although Inclusive Education is not something that is new, it is a concept that remains to be emerging in some areas (Pil et al., 2022). Hence, it has become a topic of interest among scholars in non-metropolitan areas and in some far-flung places (e.g., Lao et al., 2022; Siason et al., 2022). Notably, studies conducted in this area are set in various contexts. Most of the studies were on attitude towards Inclusive Education (Lao et al., 2022; Medina et al., 2022; Pil et al., 2022; Siason et al., 2022), readiness for Inclusive Education and teachers' skill for Inclusive Education (Dioso et al., 2022a, 2022b), and others were on the shift of learning modality and learning experiences during the pandemic (Butial et al., 2022; Diaz et al., 2022; Francisco et al., 2022; Loo et al., 2022). Limited studies (e.g., Tubo& Antonio, 2022) were conducted with respect to determining extent of efficacy to implement inclusive practices. Moreover, most of the studies were directed with students

enrolled in education courses (Lao et al., 2022; Medina et al., 2022; Pil et al., 2022; Siason et al., 2022). Scrutiny revealed that respondents of these studies were those enrolled in secondary and elementary education courses. There is scarcity of studies which enlisted respondents who are taking BS Home Economics. It appears that the identified respondents are not well represented in the landscape of research. Relative to this, different research works with respect inclusive education have enlisted varied respondent types such as pre-service teachers taking Bachelor of Secondary Education and Bachelor of Elementary Education (Lao et al., 2022; Siason et al., 2022), prospective teachers taking Bachelor Special Needs Education (Francisco et al., 2022), and would-be teachers taking Bachelor of Early Childhood Education (Pil et al., 2022).

Accounting the importance of would-be teachers to be inclusive in their practices, this current empirical research aimed to determine the extent of efficacy in the implementation of inclusive practices. Additionally, the present research work intended to identify the influence of the variables gender and year level.

Research Questions

This basic and empirical research on the extent of efficacy to implement inclusive practices bears a four-pronged objective. One is to quantify the efficacy to implement inclusive practices among the respondents. Second is to identify whether a gender difference exists in the extent of efficacy to implement inclusive practices among the respondents. Third is to determine if the respondents' year level is statistically influencing difference on the extent of efficacy to implement inclusive practices among the respondents. Finally, to determine whether the year level of the respondents significantly associated with their extent of efficacy to implement inclusive practice.

The research objectives, which served as a guide in the development of the study from its conception to its completion, are presented as research questions, to wit:

- 1. What is the extent of efficacy to implement inclusive practices among the respondents?
- 2. Does the variable gender statistically influence difference on the respondents' extent of efficacy to implement inclusive practices?
- 3. Do the respondents significantly differ on their extent of efficacy to implement inclusive practices when data are grouped across year level?
- 4. Is there a significant association between the respondents' extent of efficacy to implement inclusive practices and their year level?

Research Design

The study employed a quantitative-descriptive-correlational research design. Quantitative studies are research investigations which measure or quantify investigated variables (Alieto & Rillo, 2018) as

realized in this present empirical investigation which ventured on determining the extent of efficacy to implement inclusive practices among prospective BS Home Economics students.

In addition, the study is determined to be descriptive as it involved the processes of data collection and analysis towards the aim of establishing a trend or characterizing a phenomenon (Johnson, 2001 cited in Somblingo & Alieto, 2019; Nassaji, 2015 in Aranas et al., 2021; Patten & Newhart, 2017 in Tanpoco et al., 2019) as performed in this study with respect to the respondents extent of efficacy to implement inclusive practices. Furthermore, the study is identified to be descriptive as it utilized descriptive statistics, such as mean and standard deviation (Abdon et al., 2019 cited in Lim-Susan et al., 2020), to identify and charaterize the main variable investigated in this empirical study. Furthermore, this research is cross-sectional and non-experimental in design. It is cross-sectional as data gathering was performed in a short span of time and realized in 'one shot' (Setia, 2016 in Perez & Alieto, 2018). This means that data collection was completed within a relatively short period and that contact with respondents to fulfill data gathering happened only once. Finally, the study is noted to be non-experimental as there was no establishment of controlled and uncontrolled groups performed. Additionally, no intervention was both devised and introduced (Torres & Alieto, 2019a).

Respondents of the study

As the current research is directed towards a defined population, the BS Home Economics students, the present study is acknolwedged to be a population-based research. In total, the study enlisted 146 BS Home Economic students across the four year levels. In terms of gender, which is operationally defined accounting the practice of previous researchers (e.g., Abequibel et al., 2021; Alieto, 2018; Bacang et al., 2020; Buslon et al., 2020; Mumbing et al., 2021; Ricohermoso et al., 2019; Rosales, 2020; Torres & Alieto, 2019a) to mean simply asthe binary category of being a male or female. From the sample size, the majority are females which accounts for 69.9% (102). This implies that the BS Home Economics course, which provides a path for the teaching career, is attractive among females. The identified trend has been well recorded in previous research works (e.g., Alieto, 2019; Antonio et al., 2020; Cabangcala et al., 2021; Dela Rama et al., 2020; Ricohermoso, 2021). The distribution of the respondents across the four year levels are as follows: freshmen - 28.8% (42), sophomores - 29.5% (43), juniors - 21.2% (31), and seniors - 20.5% (30). As regards the respondents'age, the youngest is aged 20 while the oldest is 34 (Standard Deviation = 2.33).

Research Instrument

The study adopted the research questionnaire developed by Sharma et al. (2012). The mentioned instrument was originally used among pre-service teachers sampled across four countries (Canada, Australia, India, and Hong Kong). The same instrument was also utilized by Filipino scholars in the conduct of investigations in the Philippines. Illustrative of this is the study of Tubo and Antonio (2022) who conducted a quantitative investigation among 247 pre-service teachers. A total of 18 items compose the research tool equally divided among three subparts – (1) efficacy in using

inclusive instruction, (2) efficacy in collaboration, and (3) efficacy in dealing with disruptive behavior.

The items of the instrument are all homogenous; hence, no reverse coding was performed. In addition, the items were all answerable with a six-point Likert scale ranging from strongly disagree to strongly agree. Importantly, the instrument was declared to be reliable (Cronbach's alpha = 0.89).

Data Coding procedure

To enable the performance of statistical analysis on data gathered, coding was performed. As regards the data relating to gender, noted as nominal variable, male was coded as 1 while female was coded as 2. In the case of respondents' year level, identified as an ordinal variable, the following is the code applied: 1 for first year (also freshmen), 2 for second year (also sophomores), 3 for third year (also junior), and fourth year (also senior). As regards the responses in each item of the questionnaire, the Likert responses, identified as scale variable, were coded as 1 for strongly disagree (SD), 2 for disagree (D), 3 for somewhat disagree (SWD), 4 for somewhat agree (SWA), 5 for agree (A), and 6 for strongly agree (SA).

Additionally, the mean scores were interpreted using the following scale: 1.0-1.82 (Very Low Extent of Efficacy [VLEE]), 1.83-2.65 (Low Extent of Efficacy [LEE]), 2.66-3.48 (Somehow Low Extent of Efficacy [SLEE]), 3.49-4.31 (Somehow High Extent of Efficacy [SHEE]), 4.32-5.15 (High Extent of Efficacy [HEE]), 5.15-60 (Very High Extent of Efficacy [VHEE]).

Data gathering procedure

The data gathering was performed employed both personal administration of hardcopies of the research tool and employment of digitized form of the instruments. The nominated hybrid approach was prompted by the situation brought about by the COVID 19 pandemic which remains to limit physical contact.

The respondents reached both in person and digitally were informed of the main intention of the research. They were all informed further that participation in the study is purely voluntary and that if they intend not to participate no form of sanction nor demerit would be provided. Further, the respondents were also informed that they would answer in anonymity and that they would never be identified nor singled out in any phase of the presentation of results. Instead, the data gathered from each participant would be grouped and would be presented in a general sense. The study only sampled from respondents who have provided consent.

Results

Extent of efficacy to implement inclusive practices among the respondents

The responses of the respondents on the utilized research tools were collected and entered initially into a spreadsheet. Data cleansing was first performed prior to descriptive or inferential treatment. To determine the extent of inclusive practices among the BS Home Economics students, the data set

was treated with descriptive statistics limited to mean (M) and standard deviation (SD). Included in the presentation of data in the following Tables are the description (Descr.) and Interpretation (Interp.).

Respondents' Extent of Efficacy in using Inclusive Instruction

Table 1.0
BS Home Economic Students' Extent of Efficacy in using Inclusive Instruction

No.	Statements	M	SD	Descr.	Interp.
1	I can make my expectations clear about student behavior.	4.78	1.08	Agree	HEE
5	I can accurately gauge student comprehension of what I have taught	4.73	1.01	Agree	HEE
6	I can provide appropriate challenges for every capable students	4.59	1.04	Agree	HEE
10	I am confident in designing learning tasks so that the individual needs of students with disabilities are accommodated	4.64	1.12	Agree	HEE
11	I am able to provide an alternate explanation or example when students are confused	4.86	1.17	Agree	HEE
15	I can use a variety of assessment strategies (e.g., portfolio assessment, modified tests, performance-based assessment, etc.)	4.86	1.04	Agree	НЕЕ
	Subtotal	4.74	0.94	Agree	HEE

The descriptive analysis provided in Table 1 presents the respondents' extent of efficacy in utilizing inclusive instruction. It could be noted that, in all of the six items in the subscale, the respondents in general have reported to have 'high extent of efficacy'.

Only two respondents claimed to have 'very low extent of efficacy' and 'low extent of efficacy'. There are, however, eight respondents who reported to have a 'somewhat low extent of efficacy'. The great majority (134) of the respondents, on another hand, reported to possess a 'somewhat high extent of efficacy' to 'very high extent of efficacy'.

From the analysis, it could be noticed that in two items 11 'I am able to get children to follow classroom rules' and 15 'I can use a variety of assessment strategies (e.g., portfolio assessment, modified tests, performance-based assessment, etc.)' the respondents have reported to have had the highest extent of efficacy.

Detailed analysis provides that for item number 11, only 6.8% of the respondents claimed to possess an extent of efficacy characterized as 'somewhat low' to 'very low' extent of efficacy. And the percentage is even lower (only 4.1%) with respect to statement number 15 of the instrument.

Respondents' Extent of Efficacy in collaboration

Table 2.0
BS Home Economic Students' Extent of Efficacy in Collaboration

No.	Statements	M	SD	Descr.	Interp.
3	I can make parents feel comfortable coming to school	5.0	1.04	Agree	HEE
4	I can assist families in helping their children do well in school	4.78	1.15	Agree	HEE
9	I am confident in my ability to get parents involved in school activities of their children with disabilities	4.58	1.20	Agree	HEE
12	I can collaborate with other professionals	4.59	1.22	Agree	HEE
	I am able to work jointly with other professionals and				
13	staff (e.g., aides, other teachers) to teach students with	4.67	1.51	Agree	HEE
	disabilities in the classroom				
14	I am confident in my ability to get students to work	4.88	1.70	A gree	HEE
14	together in pairs or in small groups	4.00	1.70	Agree	HEE
	Subtotal	4.75	1.01	Agree	HEE

Table 2 gives the descriptive analysis of the responses of the respondents on items included under the subscale extent of efficacy in collaboration.

Evidently, in all of the items found under the subscale, the respondents, collectively, have reported to have 'high extent of efficacy'. In fact, the majority (56 or 38.36%) of the respondents claimed to have 'high extent of efficacy' while only 2 or 1.37% reported to have 'very low extent of efficacy'.

Among the items in the subscale, only statement number 3 'I can make parents feel comfortable coming to school' was analyzed with a mean score of 5.0 – the highest. However, item number 9 'I am confident in my ability to get parents involved in school activities of their children with disabilities' garnered the lowest average score.

For item number 3, only 15.1% (or 30) of the respondents reported to have a 'very low extent of efficacy' to 'somewhat low extent of efficacy' but the majority claimed to possess an extent of efficacy characterized from 'somewhat high' to 'very high'.

Respondents' Extent of Efficacy in managing disruptive behavior

Table 3.0 BS Home Economic Students' Extent of Efficacy in Managing Disruptive Behavior

No.	Statements	M	SD	Descr.	Interp.
2	I am able to calm a student who is disruptive or noisy	4.59	1.25	Agree	HEE
7	I am confident in my ability to prevent disruptive behavior in the classroom before it occurs	4.82	1.17	Agree	HEE
8	I can control disruptive behavior in the classroom.	4.68	1.14	Agree	HEE

	I am confident in informing others who know little				
16	about laws and policies relating to the inclusion of	4.62	1.18	Agree	HEE
	students with disabilities				
	I am confident when dealing with students who are	4.0.4	1.06		LIEE
17	physically aggressive	4.34	1.26	Agree	HEE
18	I am able to get children to follow classroom rules	4.88	1.16	Agree	HEE
	Subtotal	4.65	1.03	Agree	HEE

Provided in Table 3 is the analysis of the responses on the items constituting the subscale extent of efficacy in managing disruptive behavior. In general, the respondents disclosedpossessing 'high extent of efficacy' in managing disruptive behavior in class. Only 9.6% (14) of the respondents claimed to have an extent of efficacy described to be only 'very low' to 'somewhat low'. On the other hand, the greatest number of respondents (90.4%) disclosed their extent of efficacy to be 'somewhat high' to 'very high'.

Among the six items in the subscale, the statement that garnered the highest mean score was number 18 'I am able to get children to follow classroom rules'. For this item, only 8.2% (12) of the respondents claimed to possess an extent of efficacy noted to be 'very low' to 'somewhat low'. On another hand, the majority (91.8%) claimed to possess a 'somewhat high' to 'very high' extent of efficacy in managing disruptive behavior.

Overall Extent of Efficacy to implement inclusive practices

Table 3.0
BS Home Economic Students' Overall Extent of Efficacy to implement inclusive practices

	M	SD	Interp.
Efficacy in using Inclusive Instruction	4.74	0.94	
Efficacy in collaboration	4.75	1.01	HEE
Efficacy in Managing Disruptive Behavior	4.65	1.03	HEE
Overall Extent of Efficacy to Implement Inclusive Practices	4.72	0.96	

Table 3 presents the overall extent of efficacy to implement inclusive practices. In general the respondents reported their extent of efficacy to be 'high'. And the respondents' self evaluation of their extent of efficacy is not widely dispersed as suggested by the relatively small standard deviation. It could be further noted that the respondents, collectively, claimed to be best in the dimension of collaboration while least in managing disruptive behavior.

Extent of efficacy to implement inclusive practices across genders

To determine whether gender (male or female) significantly influences respondents' extent of efficacy to implement inclusive practices, the data were treated with a parametric statistical tool known as independent-samples T-test. Analysis is presented in Table 4.0. Presented in the Table are the Dependent and Independent variables (presented as DV and IV), the mean score (M), the standard deviation (SD), and the significance value (Sig.).

Table 4.0 Gender influence on the extent of efficacy to implement inclusive practices

DV	IV	M	SD	Sig. (2-tailed)
Efficacy in using Inclusive Instruction	Male	4.55	1.05	0.093
Efficacy in using inclusive histraction	Female	4.83	0.88	0.093
Efficacy in collaboration	Male	4.52	1.20	0.067
Efficacy in collaboration	Female	4.85	0.91	0.067
Efficacy in Managing Diamenting Bahavian	Male	4.50	1.24	0.218
Efficacy in Managing Disruptive Behavior	Female	4.72	0.93	0.218
Overall Extent of Efficacy to Implement	Male	4.52	1.14	0.183
Inclusive Practices	Female	4.80	0.86	0.183

N=44 (Males), 102 (Females)

Table 4 shows that inferential analysis of the data determining whether gender statistically influences difference on extent of efficacy to implement inclusive practices. It was revealed that, in general, the females claimed to be more effective than the males; however, this identified difference is not statistically significant.

This implies that the difference noted between the data when grouped according to the nominal variable gender may have occurred by chance. Moreover, it could be said that the male and female BS Home Economics students, more or less, have reported a relatively similar extent of efficacy which was previously reported in this paper as 'high'.

Furthermore, the males have been consistently noted to be of 'lesser' extent of efficacy across the three subscales as compared to their female counterparts.

The female respondents were identified to be 'most efficient' in doing collaboration while 'least' in managing disruptive behavior. In the case of the males, they have reported to be 'most efficient' in using inclusive instruction while 'least' in managing disruptive behavior.

Noticeably, both the male and female respondents claimed to be 'least' effective in managing disruptive behavior.

Extent of efficacy to implement inclusive practices across year levels

To determinewhether the ordinal variable year level significantly influences the extent of efficacy to implement inclusive practices among the respondents, the data was treated with the inferential statistics known as one-way Analysis of Variance (ANOVA).

Table 5.0 Extent of efficacy to implement inclusive practices across year levels

	Sig. (two-tailed)	Interpretation
Efficacy in using Inclusive Instruction	0.002*	Cionificant
Efficacy in collaboration	0.017*	Significant

Efficacy in Managing Disruptive Behavior	0.002*	
Overall Extent of Efficacy to Implement Inclusive	0.003*	
Practices	0.003	

^{*} at alpha = 0.05

Table 5 gives the statistical analysis determining the influence of the respondents' year level on their extent of efficacy to implement inclusive practices. It was determined that there is significant difference across the three subscales and on the overall extent of efficacy. This means that year level is a factor influencing the variable extent of efficacy with respect to the respondents of this study. To determine between which groupthe statistical difference was noted, a post hoc analysis was performed.

Post Hoc Analysis

Schefe test was employed to determine between which group did the significant difference occur. Table 5.1 provides the analysis.

Table 5.1 Post Hoc Analysis

	I	J	Mean Difference (I-J)	Sig. (two-tailed)
Efficacy in using Inclusive Instruction			-0.78	0.004*
Efficacy in collaboration			-071	0.027*
Efficacy in Managing Disruptive Behavior	Sophomores	Juniors	-0.91	0.002*
Overall Extent of Efficacy to Implement Inclusive Practices			-0.80	0.004*

^{*} Significant at alpha = 0.05

Table 5.1 presents the post hoc analysis. The analysis revealed that only between two groups a significant difference exists – the sophomores and the juniors with the former possessing 'greater' extent of efficacy when compared to the latter. Notably, however, no significant differences were noted across the subscales and overall extent of efficacy to implement inclusive practices between other groups (freshmen and sophomores, freshmen and sophomores, freshmen and juniors, freshmen and seniors, sophomores and seniors, and juniors and seniors).

Relationship between Respondents' Extent of efficacy to implement inclusive practices and their year level

Table 6
Extent of efficacy to implement inclusive practices and their year level: Correlation

Variables		p-value	r-value
Efficacy in using Inclusive Instruction	Year Level	0.026*	0.185

Efficacy in collaboration	0.054	0.160
Efficacy in Managing Disruptive Behavior	0.056	0.159
Overall Extent of Efficacy to Implement	0.037*	0.173
Inclusive Practices	0.037	0.173

^{*}Significant at alpha = 0.05

Table 6 shows the correlational analysis. From the Table, it could be inferred that the ordinal variable year level significantly correlates with the subscale efficacy in using inclusive instruction and with the overall extent of efficacy to implement inclusive practices. Additionally, the relationship is positive or direct which suggests that as the respondents' progress in their year level the higher their extent of efficacy becomes. However, the extent correlation identified, as provided by the r-values, is described to be 'low'.

Discussion

The current empirical study which primarily aimed at determining the extent of efficacy in implementing inclusive instruction is one of the few investigations conducted towards BS Home Economics students.

The investigation identified that the extent of the respondents' efficacy is described to be 'high'. This finding mirrors the findings of the study of Tubo and Antonio (2022) which was conducted among pre-service teachers. This result is perceived to be a result of the revision of the curriculum utilized for the current respondents which involved courses that orient about special education, inclusive education and other topics relating to inclusive teaching. Although inclusive education is claimed to be emerging in some areas, especially those outside the metro cities (Lao et al., 2022), the present finding on the extent of efficacy suggests that the campaign for inclusive education and inclusive practices in education is seeing success.

Results of the study provide that the respondents perceived themselves to be most efficient in terms of using inclusive practices and 'least' competent in the management of disruptive behaviors. Through inference, it could be said that the reason for this result is the fact that the development of the respondents' teaching skill is the focus of the instruction and training given to respondents. In analysis, it could be noted that there is not much emphasis given on orienting BS Home Economics students how to handle and manage disruptive behavior when the classroom is inclusive. This specific result affords an essential understanding to training institutions that would-be teachers such as the respondents of this study should be given training and be instructed on how to manage disruptive behavior as such is an essential component inclusive teachers need to master and gain skill in.

With respect to the influence of gender, it was found out that gender bears a neutral effect on the main variable investigated. It is important to note that the females were found to have reported 'better' extent of efficacy as compared to the male respondents. However, the difference is not significant. This means that respondents do not differ statistically in their extent of efficacy when data were grouped across gender. There are two reasons seen to explain this. The first relates to the number of sample of the study. There were only 44 males respondents. In terms of number, the

males were overwhelmingly outnumbered by the females. Honest effort was extended to enlist more male respondents, but such was to no avail. The BS Home Economics course is more popular to females than it is to males, and this is the reason the gender divide identified in the said course. Another reason is that the respondents, regardless of the gender, were exposed to the same instructionand training. This is the case as the students were taught and trained under the same curriculum.

As regards the difference on the extent of efficiency among the respondents across year levels, the analysis shows that only between the sophomores and juniors was the difference statistically significant with the juniors to be of greater extent of efficacy. One explanation for this is that classroom observation and courses on inclusive education are set in place when students are in their third year already. On another note, students in their second year are provided with courses focused on mastering their major which is Home Economics. Intriguingly, the respondents who were already seniors have not significantly differ with other lower years. The perceived cause for this is the fact that the fourth year students are being employed to schools which do not have inclusive classrooms, meaning classrooms only for regular students. The absence of the condition demanding inclusive practices may have served as the reason for the result found in this study.

On the account of the significant association between the year level and extent of efficacy of the respondents, the study confirmed a popular take that as students progress in their education the more inclusive their practices are. Interestingly, it could be noted that the association is only true between the variables year level and extent of efficiency to use inclusive instruction and overall extent of efficacy for inclusive practices. This suggests that the focus of training and discussion provided to the respondents center on instruction. Therefore, as the respondents progress in their education, their efficacy to provide activities which cater to learners with special needs, ability to appropriate strategies, create activities to cater to needs of diverse learners among others enhances. However, the ordinal variable year level has a neutral effect in terms of the subscale relating to managing disruptive behavior and doing collaboration. This implies that these two core areas are not given emphasis in the curriculum.

Conclusion

Inclusive Education, accounting how it is for the least, last and lost, should become an advocacy of educators and would-be teachers. Because, unless classrooms become a learning space for all, quality and equitable education shall remain nothing but as an aspiration.

From the results of the analysis, it could be concluded that the respondents' possess 'high' extent of efficacy to implement inclusive practices. Moreover, it could be said that gender has neutral influence and is not a variable significantly influencing the extent of efficacy of would-be teachers. On another note, the study revealed that the variable year level significantly influences the main variable investigated, and that there is a positive/direct correlation when analysis for relationship was performed. Thus, it could be said that year level is a factor influencing the extent of efficacy to implement inclusive practices.

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