

THE EFFECTIVENESS OF THE FREE CIVIL SERVICE EXAMINATION REVIEW PROGRAM ON THE PRE- AND POST-TEST MODEL OF REVIEW ATTENDEES' PERFORMANCE

Lanuza MH^{1*}, Aligam NP² Barrion LO³ and Gonzales RA⁴

¹*Office of the Vice President for Research and Innovation, City College of Calamba, Philippines*

²*Office of the Vice President for Extension and Linkages, City College of Calamba, Philippines*

³*Office of the Vice President for Administration, City College of Calamba, Philippines*

⁴*Office of the Vice President for Academic Affairs, City College of Calamba, Philippines*

Abstract: Didactic lectures are a widely accepted method of teaching and learning, especially for government employees when the majority had formal schooling more than years ago. Also, due to time constraints and a large amount of material to be covered, providing feedback for examination takers before and after lectures can help inform lecturers about the level of knowledge gained by them and improve the effectiveness of their lectures in the next waves of the CCC-CGCs joint free civil service review program. The study aims to determine the extent of knowledge gained by civil service examination takers through pre- and post-test-based examinations. The original 303 registered participants in the program were deduced to 261 who completed the 8-Saturday Review program and voluntarily took the post-test examination. Parallel tests were given at the beginning and end of the program to assess the effectiveness of the didactic lecture. There is a significant increase in scores after the review session at $p \leq 0.000$, it meant that the program helped them increase their receptive power through the pre-and post-lecture knowledge. However, this percentage of scores was not reaching yet the passing score defined by the civil service commission with a mean score of 54% against the national passing standard percentage of 80%. The study looked also at attendance proportion with the $p > 0.05$ ($p = 0.392$; $n = 261$) and hence this factor was not related to the scores they got. Results were analyzed through paired t-test and Pearson correlation along with the Shapiro-Wilk p-value of 0.934. This joint project is of great help to the prospective takers of the civil service commission examination and recommended continuing the project initiated by the City College of Calamba (CCC) supported by the City Government of Calamba (CGC).

Keywords: pre-and post-test, civil service review, local government unit, community extension.

Introduction

Given the extensive syllabus, the competitive nature of the exam, and the desire to pass with a high grade, studying for a civil service exam can be challenging. Review programs become invaluable tools in such a situation and can greatly improve exam results. The subject areas have been specially created to give thorough coverage of the civil service examination, provide organized materials and resources, and choose the best lecturers of the College to make the extension project more worth it and effective.

*Corresponding Author's Email: mhlanuza@ccc.edu.ph

In a review program, one may have accessed a plethora of resources, including practice questions, mock examinations, professional advice, and peer support, all of which are targeted at honing the skills and increasing review attendees' confidence. In this CCC's community extension project, the College looks at how reviewing courses can help them do better on their civil service test and raise their chances of passing. It's crucial to have a firm idea of your strengths and weaknesses when studying for a civil service exam. Along the process of the review, before and after performance may be considered in testing its difference, this is when pre-and post-tests are essential in this situation. These tests offer insightful information about reviewing attendees' knowledge and ability levels both before and after the start of exam preparation. Lecturers and review attendees can identify areas of weakness and learn which subjects or topics need more attention by taking a pre-test. Similar to the pre-test, the post-test enables them to assess the development and evaluate the success of their exam study efforts. This program is one initiative to help the community took their advantage of passing the civil service exam since the civil service examination is a necessary first step for anyone seeking employment with government organizations.

For those looking for work in government agencies, the civil service exam is an essential step. Success in obtaining coveted professions is frequently determined by preparation level and exam performance. A free civil service test review program has been designed to help applicants become exam-ready because it has been recognized how important proper review and preparation is. This is the reason why the study looks into how well the program works to improve review participants' performance and how it might affect how successful they are on the civil service exam.

Objectives of the Study

This article investigates the effectiveness of a free civil service examination review program in raising review participants' performance. The study's main objectives are to examine the possible advantages of participating in such a program and how it affects participants' performance on civil service exams. The research approach includes correlational analysis in addition to a quantitative examination of performance data collected before and after the review, as one of the policy mechanisms to mandate the attendance to review sessions.

Framework of the Study

The following research paradigm reflected the study flow.

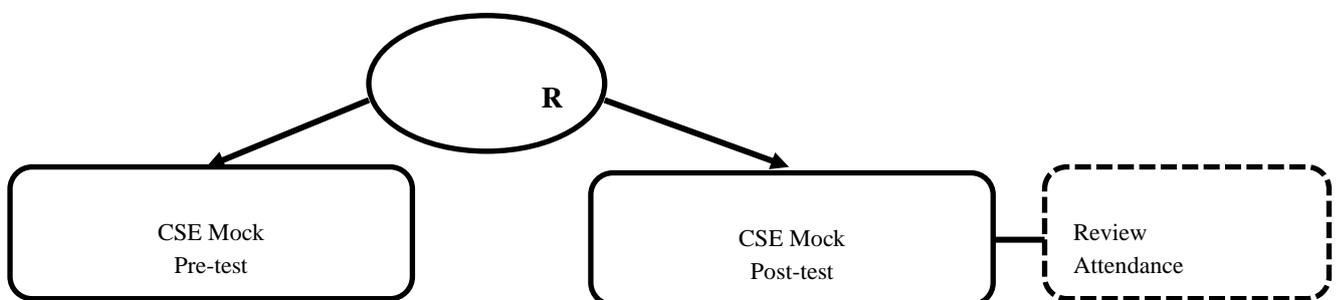


Figure 1. The Research Framework

The study's research paradigm as shown in Figure 1 involved determining if the difference value is zero using a paired t-test design analysis. The review participant's pre-and post-test results were acquired to compare the results before and after the review program. Another factor that was taken into account was the number of absences incurred by the attendees. The study used a broken line rather than a one-way arrow because it is only a theory and only looked at one specific lens, rather than looking for a cause-and-effect relationship but instead just trying to establish if one may affect the other.

METHODS AND PROCEDURES

The complete methodology of the study is presented in this section including research design, locale, sampling and respondents of the study, the instruments used, how the data were gathered, the statistical measure used and the ethical standards considered.

Research Design

To evaluate the effectiveness of the free civil service examination review program, this study used a quasi-experimental methodology. The performance of participants before and after the review program was compared in the study. The review program is put into action as an intervention to see how it affects the test results of the participants. The study compared the performance improvement between individuals who attended the review program and those who did not by collecting and analyzing the pre-and post-intervention data. However, the lack of a control group is one drawback of a quasi-experimental single-group pre-and post-test design. Establishing a causal link between the intervention (in this example, the review program) and the observed effects becomes difficult in the absence of a control group. This design does not include a comparison group, which would enable a more thorough evaluation of the program's performance, (Shadish, W. R., Cook, T. D., & Campbell, D. T., 2002). Moreover, one lens examined as well by the study was to correlate the number of absences incurred by the attendees and their post-test performance and hence used a correlational analysis.

Research Locale

The study's research locale is one of the local colleges in Laguna, which has as its objective to advance civic virtue, moral uprightness, and national service under the guidance of Dr. Jose Rizal, the Philippines' national hero. It is the only college in Calamba that is offering free civil service exams to the citizen as part of its extension programs and as a method to repay the taxpayers as one of the reasons why the institution continues its operation. The City College of Calamba was chosen to be the local since aside from its mandate, the review program was supported and partnered under a memorandum of understanding between the City Human Resource Management to strengthen local government employees' professional qualifications and service through its initiative to take and hopeful to pass the Civil Service Exam. The extension project came from the needs analysis that almost still half of the government employees are contract-of-service and job-order since lacking eligible qualifications.

Sampling and Respondents of the Study

The original design of the study called for a full count of the three-hundred-three (303) registered participants in the CCC-CSC Free Review Program. However, voluntary participation was taken into account due to ethical considerations, and the number of responses was reduced to two hundred sixty-one (261). The respondents were largely CGC employees, CCC administrative staff, and Department

of Education (DepEd) employees, but they were also open to Calamba-based citizens who wanted to enroll in the program.

Instruments

The free civil service review community extension program of the joint project of CCC and CGC's instrument is a 170-item test with seven parts. The first part of the test is the examinee's personal information, which is similar to the actual civil service examination. The following six parts of the exam are a 5-option Multiple Choice in the areas of Grammar, Reading Comprehension, word analogy, public environmental issues, and current events, the Philippine constitution, code of conduct, ethical principles, abstract reasoning, numerical reasoning, problem-solving, and data representation and Filipino topical areas. The aforementioned elements were gathered from the CCC-CSC professors, who are all licensed professionals with at least a master's degree who are eligible for the civil service and are therefore all considered experts. The said items were collected from the CCC-CSC lecturers, who are all civil service eligible and licensed professionals with at least master's degree qualification and hence considered all experts. Only 15 nonactual volunteers were used for the pilot testing validation since expert validation had been skipped. Before the pre-test was given, the items were amended in light of certain typographical problems found during the pilot test and some repeated items. Cronbach's alpha value of 0.937 is also taken into account and is seen as being highly acceptable and prepared for floating.

Data Gathering Procedure

The pre-test and post-test examinations of the registered attendees in the Free Civil Service of CCC-CGC Joint Project were done face-to-face on campus. Pre-test was administered through a paper and pencil test in the afternoon of the first session after the orientation part of the entire community extension project. The scores were distributed in the first lecture session, this rating became the basis of the lecturer's topic to focus and strengthen. The examination lasted for 3 hours. In the same manner, the post-test was conducted in the morning time of the 8th and last Saturday session of the program via paper and pencil test that lasted for 3 hours too. The scores were distributed to the review attendees as their reference and motivation to perform better in the actual examination.

Data Analysis

The tests used in the study are parametric inferential statistics. The data assumptions were checked first such as the paired normality index of the test scores giving a normality p-value of 0.655, and Doornik Hansen test p-value of 0.236, which both falls under the normally distributed observations. The skewness and kurtosis of multivariate data that have been modified to ensure independence form the basis of the Doornik-Hansen test for multivariate normalcy (Doornik and Hansen 2008). For the majority of examined multivariate distributions, the DH test is more effective than the Shapiro-Wilk test especially if the data are both ratio scale and correlation analysis is suited to use, (Doornik and Hansen 2008). To describe the mean performance in both CSE Mock pre-and post-test, mean and standard deviation were used. To describe the proportions of the number of absences that occurred, the simple frequency count and percent formula were utilized. Moreover, to test if a significant increase between the mean scores pooled paired t-test was used, and lastly, to determine if a significant

relationship exists between the post-test score and the number of absences incurred, Pearson product-moment correlation was used.

Ethical Considerations

It is crucial to ensure ethical standards in research. Several ethical principles were observed to preserve the study's integrity. First, all participants were asked for their consent after being fully informed of their rights and the study's objectives. Participants' names and other private information have remained anonymous, and only aggregate data were disclosed. Participants were also given the choice to leave the study at any time without incurring any penalties. The study abides by the ethical standards established by the City College of Calamba and acknowledges the Data Privacy Act of 2012.

RESULTS AND DISCUSSION

The discussions were presented according to the chronological arrangement of the research problems.

1. The pre-and post-test performance of the review attendee before and after the review program.

Table 1. The Frequency Distribution of Scores Gained by the Review Attendees Before and After the Review Program.

Performance Level	Before the Review Program		After the Review Program	
	f	%	f	%
Passed 80-100	0	0.0	0.0	0.0
Failed 0-79	261	100.0	261	100.0
Mean	45.55		53.75	
Standard Deviation	9.39		8.75	
Level	Failed		Failed	

The 261 review participants' pre-test and post-test performance data were shown in Table 1 and showed a noticeable improvement in scores following participation in the review program. The mean score climbed from 45.55 before the program to 53.75 after it was completed. The pre-test and post-test scores had standard deviations of 9.39 and 8.75, respectively.

Both the pre-test and post-test mean scores are below the passing mark given that the civil service examination has an 80% national standard passing rate. This implies that while there was an improvement, the review program might not be enough to achieve the exam passing requirements on its own. Additional preparation could be needed, (Smith, 2017).

Intensive review courses do have advantages, but they frequently fall short of fully preparing students to pass difficult tests, according to a new study on the effectiveness of review programs, Jones, C. & Johnson, A. (2014). The authors advise adding targeted practice exams, one-on-one tutoring, and independent study utilizing official exam preparation materials to review programs, Jones, C. & Johnson, A. (2014). According to another study, review participants who engaged in at least 10 additional hours per week of independent study outside of the official review program had a doubled chance of passing the target exam compared to those who did not. (Thomas, 2015).

2. The comparison of the pre-and post-test performance of the review attendee before and after the review program.

Table 2. The Mean Distribution of the Review Attendees' performance before and After the Review Program.

Tests	Mean	Level	t-value	P-value	Decision	Remarks
Pre-test	45.55	Failed	-	0.000	Reject the Null Hypothesis	Significant
Post-test	53.75	Failed	16.991**			

The data shows a statistically significant increase in mean scores following program completion. From 45.55 the average score increased before the program to 53.75. It ended with a t-value of -16.991. Supported by a p-value that is less than the alpha value at 5%. (n=261; p=0. 000). This demonstrates that the program was successful in assisting participants in raising their test results.

Participating in educational activities and programs has been demonstrated by several studies to have positive effects on cognition. The brain grows new connections and strengthens old ones when performing mentally challenging tasks, (Sternberg, 2008). Cognitive training therapies, including those that increased processing speed, working memory, and reasoning, were found to significantly improve cognitive performance by one meta-analysis, Melby-Lervåg, M. & Hulme, C. (2013). There is proof of advantages in areas like memory, attention, and executive function, according to a study of cognitive intervention programs for older persons (Reijnders, J. van Heugten, C. & van Boxtel, M., 2013).

The participants' participation in mentally demanding exercises that required processing new information, remembering facts, and applying the knowledge is probably what contributed to the better scores observed after this program. Learning could have been reinforced by the process of studying and getting ready for the post-test. Maintaining cognitive capacities and perhaps delaying age-related cognitive decline may be made possible by continuing to engage in educational activities throughout life, (Wilson, R. S. Scherr, P. A. Schneider, J. A. Tang, Y. & Bennett, D. A., 2007).

3. The proportion of absences occurred by the review attendees in the review program.

Table 3. The Frequency Distribution of the Incurred Absences by the Review Attendees in the Review Program.

The number of Absences occurred	f	%
0	182	69.7
1	50	19.2
2	18	6.9
3	9	3.4
4	1	0.4
5	1	0.4
Total	261	100.0

In Table 2, 182 or 69.7% out of the 261 review participants, all review sessions were flawlessly attended, with no absences. Currently, 50, or 19.2% had 1, 18, or 6.9% had 2, 9, or 3.4 % had three absences, and one or 0.4% missed both 4 and 5 days. For reviewing program performance, high attendance rates are crucial (Smith et al. 2020). Regular attendance enables participants to learn and remember information at a regular rate, engage actively in conversations and activities, and form bonds with classmates and instructors (Jones, 2017). Absent attendees may miss important ideas, lag in the course material, and lose a sense of community (Thomas, 2019). In summary, the relatively high rates of absenteeism were seen in 19.2% to 30.0% (combined absences from 1-5) of review attendees will be checked its impact on the performance on the civil service examination mock examination. Efforts to improve attendance through well-planned scheduling and incentives or awards may be given in the succeeding implementation of the program.

4. The Degree of Relation between the Post-test Review Examination and the Incurred Absences by the Review Attendees in the Review Program.

Table 4. The Distribution of Means on the Relationship between the Post-test Review Examination and the Incurred Absences by the Review Attendees in the Review Program.

Variable	Mean	r-value	Degree of Correlation	p-value	Decision	Remarks
Post-test Ave. No. of Absences	53.75 1	-0.053	Negative very low/negligible correlation	0.392	Failed to Reject the Null Hypothesis	Not Significant

Table 4 of the correlation analysis between the post-test review program examination rating and the absence rates in the program found an r-value of -0.053, indicating a negative very low, or negligible relationship. This was confirmed using the p-value of 0.392, failing to reject the null hypothesis. This result can be interpreted in two ways: 1) the rating score performance and absences are two independent factors with no relationship, or 2) the evidence is insufficient to support the claim that attendance affects ratings.

Several studies have found that attendance can positively impact performance, which contradicts the present result. Attendance may help improve focus, understanding of the material, and familiarity with assessment formats, (Crede, M. Roch, S. G. & Kieszczyńska, U. M., 2010). Students who attend classes regularly are exposed to more examples, practice questions, and explanations that clarify challenging concepts (Moore, R. Armstrong, C. & Pearson, J., 2008). Missing classes can cause students to fall behind on readings, assignments, and in-class activities integral to mastering course content, (Marburger, D. R., 2001). Lanuza (2020) conducted an application of an intervention strategy and found that attendance also matters in the improvement of performance.

CONCLUSION AND RECOMMENDATION

The program should be continued to support employees’ (review attendees’) learning and test performance going forward, in light of these findings that the post-test review program was successful in assisting participants in raising their test results. the average score dramatically climbed. before the program but the review program alone is insufficient to meet the national passing score of 80%. To optimize the benefits, some adjustments could be required.

Despite the program's overall improvement in test scores, there was no statistically significant association between exam ratings and attendance. This implies that attendance alone may not have an impact on performance and that other factors also affect the results of students. Similar mixed findings have been made by researchers about the link between attendance and academic success (Crede et al. 2010; Gump, 2005).

The program administrators may want to think about additional tactics in the future to increase impact in addition to attendance. These might consist of more interactive exercises, specialized coaching and

tutoring, and more learning resources (Woolfolk, 2013). Such initiatives could result in even higher rewards for participants if there is significant attendance.

The review program has potential, but improvements are required to maximize its efficiency. Administrators can improve the program to have the maximum impact on students by discovering additional elements that affect learning and performance and putting in place focused interventions. Also, an impact study may be explored by getting the actual civil service rating score and the post-test civil service mock examination to identify if the items and coverage included in the review sessions are updated and relevant to the present coverage of the test.

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Declaration of Interest Statement

The authors declare that they have no conflict of interest.

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