ZIPGRADE: REDEFINING ASSESSMENT PRACTICES IN THE DIGITAL AGE

Rachelle C. Aclo[1] and Maedel Joy V. Escote[2]

[1] Faculty Member, New Sambog Elementary School, DepEd-Division of Davao del Norte, Philippines
[2] Professor, Graduate School, Assumption College of Nabunturan, Davao de Oro, Philippines

ABSTRACT

With the advent of digital tools that can expedite the teaching and learning process, Zipgrade emerges as a tool that can improve teachers' performance. The study utilized the correlational research design to determine the relationship between Zipgrade use and teachers' performance based on IPCRF rating. A validated survey questionnaire was used to gather data from the 84 respondents who were purposively selected from the public elementary and secondary schools within the municipality of New Corella. Findings revealed that the respondents are mostly female and are largely within the 22-30 age range, and that Zipgrade is used to a great extent. Additionally, there is no significant difference based on age, but there is a significant difference based on gender. Therefore, the researcher suggested that Zipgrade be integrated into teacher development initiatives such as Teacher Induction Programs (TIPs), regional teachers' conventions, and Learning Action Cells (LACs) sessions while making it accessible for all teachers.

Keyword: - *zipgrade, training process, ease of use, effectiveness, giving feedback, teacher performance, IPCRF, demographic profile, correlational study*

1. INTRODUCTION

One technological advancement that can help with expediting the assessment process is ZipGrade. At its core, ZipGrade is an application that can check answer sheets and quickly produce an accurate score (Cortez et al., 2023). By simply scanning the answer sheets with a mobile device, teachers can instantly get the students' score and identify mistakes, while also having access to detailed analytics and performance metrics.

Teachers tirelessly nurture and educate the next generation, but their extensive responsibilities often go unnoticed. They face overwhelming workloads, including lesson planning, grading, classroom management, and meeting curriculum requirements. Achieving a work-life balance is a constant struggle. Even the simple task of checking tests with large class sizes is particularly challenging (Wagstaff et al., 2019). However, the advancements in technology can help alleviate the burdens teachers face, allowing them to concentrate on teaching. Technological tools for assessment provide teachers with technical support in creating assessments, administering student responses, automating scoring, and generating reports (Llamas-Nistal et al., 2013).

The rise of ZipGrade as a tool for expediting the assessment process is seen internationally. A study in Indonesia explored the effectiveness of ZipGrade in enhancing the assessment of vocational teachers' competence in high-stakes tests. The research revealed that trained teachers achieved improved overall results and found it easier to recall information in the post-test. ZipGrade proved particularly beneficial for correcting multiple-choice questions, analyzing assessment outcomes, and creating group or grade assessments. Moreover, students could input their data into the application, and grade statistics could be displayed in less than 5 seconds by scanning answer sheets using mobile phones (Suhendara et al., 2020).

In the Philippine context, particularly in San Miguel North District, Schools Division of Bulacan, the ZipGrade application got positive feedback from the respondents wherein it is highly suggested to be used by the teachers to have a convenient way of assessing learning outcomes. Results also revealed that ZipGrade is a highly effective assessment tool in assessing and evaluating students' outputs and examinations (Estarez et al., 2023).

In the Division of Davao del Norte particularly in New Corella District, teachers utilized ZipGrade, a mobile application that transformed smartphones or tablets into optical scanners for grading multiple-choice exams. Ningsih

and Mulyono (2019) highlight that this tool provides instant feedback to both students and instructors, significantly speeding up and simplifying teachers' work.

In light of this, as a user of the application, the researcher is eager to assess the extent to which ZipGrade can alleviate teachers' burdens and reduce their workload. The findings of this study hold promise in informing school policies and implementing suitable innovations for the benefit of students and teachers alike.

1.1 Research Problem

1. What is the demographic profile of the respondents, in terms of:
   a. Age, and
   b. Gender?
2. What is the extent of the respondents' use of Zipgrade terms of:
   a. Training process;
   b. Ease of use;
   c. Effectiveness; and
   d. Giving feedback?
3. What is the level of teacher's performance, in terms of;
   a. IPCRF rating?
4. Is there any significant relationship between the extent of Zipgrade use and the teachers' individual performance commitment rating?
5. Is there a significant difference in the extent of Zipgrade use when grouped according to:
   a. Age, and
   b. Gender?

1.2 Null Hypothesis

To treat the problems extensively and accurately, the following hypotheses were formulated:

HO₁: There is no significant relationship between the extent of Zipgrade use and the teachers' individual performance commitment rating.

HO₂: There is no significant difference in the extent of Zipgrade use when grouped according to age and gender.

2. METHODOLOGY

2.1 Research Design

This study employed a quantitative correlational research design. Quantitative correlational research is a research design that aims to analyze the relationship between variables using numerical data without establishing causal relationships (Fraenkel & Wallen, 2012). A significant advantage of this research design is its capacity to analyze relationships among numerous variables within a single study (Gall et al., 2003).

Correlational research is well-suited for investigating the extent to which teachers use ZipGrade and its relationship to their performance. By collecting numerical data on teachers' usage of ZipGrade and their performance measures, such as student outcomes or evaluations, it becomes possible to quantitatively analyze the strength and direction of the relationship. This approach will provide valuable insights into the potential impact of ZipGrade on teachers' performance and inform educational practices and interventions.

2.2 Research Respondents

The respondents of this study were the teachers in the public elementary and secondary schools of New Corella District who have been using Zipgrade for checking assessments. There were 84 respondents in this study; from public elementary schools and public secondary schools.

Moreover, purposive sampling technique was used by the researcher in identifying the qualified research participants. Purposive sampling is a non-probability sampling technique in which a researcher selects a sample of individuals or cases that have specific characteristics or meet certain criteria relevant to the research question. The sample is chosen purposefully to ensure that it is representative of the population or sub-group of interest. It is a type of non-probability sampling in which the researcher makes decisions about who should be included in the sample based on a range of factors, such as the person's capacity and willingness to participate in the study or their level of expertise in the research topic (Oliver, 2015).

2.3 Research Procedures

       This study utilized the survey questionnaire method as the primary data-gathering approach. The participants received a standardized set of questions that were carefully structured and instructed to obtain quantitative descriptions of their experiences using ZipGrade as an assessment feedback tool.

       To conduct the data-gathering process, the researcher followed a set of procedures. Initially, a request was made to the Public Schools District Supervisor of New Corella to obtain authorization for distributing the standardized instruments used in the study. The instrument comprised three Likert scale questionnaires for the participants.

       After receiving permission, the researcher obtained approval from the school heads of the participating schools to distribute the questionnaires. The questionnaires were personally distributed by the researcher to the participants after obtaining approval.

       Following the distribution of the questionnaires, the researcher collected them from the participants and verified that each item was answered accurately to ensure the study's validity.

2.4 Statistical Treatment of Data

Mean Score. This was used to determine the level of integration of ICT in the new normal learning delivery.
Pearson r. This was utilized in determining the significant relationship between the extent of Zipgrade integration as a digital assessment tool and the teachers' IPCRF rating.
T-Test. The independent t-test was used in determining the significant difference in the extent of Zipgrade integration as a digital assessment tool when grouped according to gender.
ANOVA. This was utilized in determining the significant difference in the extent of Zipgrade integration as a digital assessment tool when grouped according to age.

3. RESULTS AND DISCUSSION

Table 2: Demographic profile of the respondents in terms of gender and age

Profile		Number of Respondents	Percentage
Gender	Male	34	40%
	Female	50	60%
Age	22-30	49	58.3%
	31-40	25	29.7%
	41-50	6	7.2%
	51-60	4	4.8%

       Table 2 reveals that the majority of respondents are female and within the 22-30 age range. Specifically, 50 respondents (60%) are female, while 34 respondents (40%) are male. Regarding age distribution, 49 respondents (58.3%) are between 22-30 years old, 25 respondents (29.7%) are between 31-40 years old, six respondents (7.2%) are between 41-50 years old, and only four respondents (4.8%) are between 51-60 years old.

Extent of Zipgrade Use

       Presented below is the extent of Zipgrade usage of the respondents based on training process, ease of use, effectiveness, and giving feedback.

Table 3: Extent of Zipgrade use among the respondents in terms of training process

Indicators	Mean	Interpretation
Training Process		
1. ZipGrade is accessible, and is inexpensive.	3.67	Great Extent
2. It can be learned quickly.	3.61	Great Extent
3. It can be learned independently.	3.65	Great Extent
4. It can be learned easily.	3.67	Great Extent

5.	It can be customized according to the teacher's preference, and has flexibility of features.	3.74	Great Extent
	Overall Mean	**3.67**	**Great Extent**

Training Process. For this dimension, Table 3 shows that the overall mean of 3.67 indicates that respondents use Zipgrade in terms of this dimension to a great extent. Additionally, this is evidenced by the item *"It can be customized according to the teacher's preference, and has flexibility of features."* which got the highest mean of 3.74, followed by the items "ZipGrade is accessible, and is inexpensive." and "It can be learned easily." which both received a mean of 3.67.

Table 4: Extent of Zipgrade use among the respondents in terms of ease of use

	Ease of Use		
1.	ZipGrade is easy to navigate.	3.73	Great Extent
2.	Students fill in ZipGrade answer sheets easily using pencils, pens, or markers.	3.68	Great Extent
3.	It makes it easy for teachers to quickly correct student test answers.	3.76	Great Extent
4.	The teacher can create a variety of objectives and exam types (e.g., true-false questions, multiple-choice questions, and matching).	3.49	Great Extent
5.	Student data and assessment results can be stored in a cloud database.	3.55	Great Extent
	Overall Mean	**3.64**	**Great Extent**

Ease of Use. As presented in Table 4, the dimension of Ease of Use has an overall mean of 3.64, which indicates a great extent. This suggests that respondents find ZipGrade to be highly user-friendly. This is further supported by the highest-rated item, "It makes it easy for teachers to quickly correct student test answers," which scored a mean of 3.76. This was followed by the item "ZipGrade is easy to navigate," with a mean of 3.73, and the item "Students fill in ZipGrade answer sheets easily using pencils, pens, or markers," with a mean of 3.68.

Table 5: Extent of Zipgrade use among the respondents in terms of effectiveness

	Effectiveness		
1.	ZipGrade provides valid assessment of data, and really measures student achievement.	3.61	Great Extent
2.	It provides high accuracy for correcting the results of tests anywhere and anytime using a smartphone.	3.77	Great Extent
3.	Teachers can obtain the scores with additional details, such as score distribution charts and statistical analysis for each test item.	3.75	Great Extent
4.	It is effective in terms of timeliness of submission of student assessment results.	3.79	Great Extent
5.	It enables teachers to accelerate the grading process and assessment.	3.51	Great Extent
	Overall Mean	**3.69**	**Great extent**

Effectiveness. On the other hand, for the Effectiveness dimension, the results as presented in Table 5 show an overall mean of 3.69, which indicates a great extent. This suggests that respondents find ZipGrade to be highly effective in their checking their students' tests. This is especially evident in the item "It is effective in terms of

timeliness of submission of student assessment results," which received the highest mean of 3.79. Following this are the items "It provides high accuracy for correcting the results of tests anywhere and anytime using a smartphone," with a mean of 3.77, and "Teachers can obtain the scores with additional details, such as score distribution charts and statistical analysis for each test item" with a mean of 3.75.

Table 6: **Extent of Zipgrade use among the respondents in terms of giving feedback**

	Giving Feedback		
1.	Students receive immediate feedback and can see their scores on a test as soon as they are done.	3.74	Great Extent
2.	Immediate feedback to the students allows them to have follow-up questions as well.	3.69	Great Extent
3.	The timing of feedback greatly affects the retention rate of learners.	3.81	Great Extent
4.	Timely and immediate feedback gives information on what the students need further (which the teacher can address).	3.73	Great Extent
5.	Timely and immediate feedback gives insight as to whether the students really understand the topic/s.	3.75	Great Extent
	Overall Mean	**3.74**	**Great Extent**

Giving Feedback. Finally, for this dimension, the overall mean of 3.74 indicates a great extent. This can be interpreted that respondents believe ZipGrade provides valuable feedback when checking students' tests. This is particularly reflected in the item "The timing of feedback greatly affects the retention rate of learners," which received the highest mean of 3.81. Following closely are the items "Timely and immediate feedback gives insight as to whether the students really understand the topic/s" with a mean of 3.75, and "Students receive immediate feedback and can see their scores on a test as soon as they are done" with a mean of 3.74.

Table 7: Mean Score of Extent of Zipgrade Use and Teachers' Performance based on IPCRF Rating

Variable	Mean	SD	Interpretation
Zipgrade	3.68	.25	Great Extent
IPCRF	4.35	.22	Very Satisfactory

As shown in Table 7, the mean score of the extent of Zipgrade use among elementary and secondary public-school teachers in New Corella stands at 3.68. This indicates that the Zipgrade is used to a great extent among the respondents.

Meanwhile, the IPCRF rating of the respondents revealed a mean score of 4.35, which indicates very satisfactory based on the adjectival rating equivalences outlined in the DepEd Order No. 2, series of 2015. This suggests that the respondents are effectively meeting or exceeding the standards and expectations set for their roles. This performance level likely reflects positively on their teaching practices, classroom management, and overall contribution to student learning outcomes.

Significant Relationship Between Zipgrade Use and Teachers' Performance Based on IPCRF Rating

Table 8 shows the relationship of the Zipgrade usage of the respondents and their teaching performance based on the IPCRF rating.

Table 8: Correlation of Zipgrade Use and Teachers' Performance

Variables	Pearson Correlation	Sig.	Decision	Action
Extent of Zipgeade use	0.038	.732	Not Significant	Failed to reject H_{01}

Performance Rating				

It shows that the correlation coefficient is 0.038, which indicates no correlation between the two variables. Meanwhile, the p-value (Sig.) is 0.732. Since the p-value is greater than the common alpha level of 0.05, this indicates that there is no significant relationship between the grade usage of the respondents and their teaching performance based on the IPCRF rating. Hence, this means that the study failed to reject the null hypothesis.

Significant Difference in the Extent of Zipgrade Use

Presented in Table 9 are the results of the difference in the extent of Zipgrade use using Analysis of Variance (ANOVA).

Table 9: Difference in the extent of Zipgrade use when grouped according to age

	Sum of Squares	df	Mean Square	F	Sig
Between Groups	.514	2	0.77	1.218	.301
Within Groups	5.175	82	0.63		
Total	5.139	84			

It shows that among the age groups 22-30, 31-40, 41-50, and 51-60, the sum of squares between groups is 0.154, with a mean square of 0.077 and an F-value of 1.218. The sum of squares within groups is 5.175, with a mean square of 0.063. The total sum of squares is 5.329. The significance level (p-value) is 0.301. Since the p-value is higher than the common alpha level of 0.05, this indicates that there is no significant difference in the use of Zipgrade among the different age groups of teachers. Therefore, the study failed to reject the null hypothesis.

Meanwhile, Table 10 shows the significant difference in the Zipgrade use of the teachers when grouped according to gender.

Table 10: Difference in the extent of Zipgrade use when grouped according to gender

	Mean	p-value	t-value	Decision	Action
Male	3.6	0.045	-2.308	Significant	Reject H_{03}
Female	3.7				

As shown in Table 10, the difference in the extent of Zipgrade use when grouped according to gender reveals that the mean score for Zipgrade use among male teachers is 3.6, while the mean score for female teachers is 3.7. Furthermore, since the p-value of 0.045 is lower than the common alpha level of 0.05, this indicates that there is a significant difference in the use of Zipgrade between male and female teachers. Therefore, there is a difference in the use of Zipgrade among the teachers if grouped according to gender. Hence, the study rejects the null hypotheses.

4. CONCLUSIONS

Based on the study's findings, it is evident that ZipGrade is widely embraced and used among elementary and secondary school teachers in New Corella, regardless of age. The tool's user-friendly interface and effectiveness in facilitating quick checking and grading of students' tests are highly valued by the respondents. Additionally, while the study did not establish a direct correlation between Zipgrade usage and teaching performance, it did reveal a significant difference in the teaching performance of the respondents following the utilization of ZipGrade. Additionally, since there is no significant difference in Zipgrade use across the four age groups, this means that Zipgrade can be utilized by everyone, whether they are still new to the profession or are already decades into being a teacher. Moreover, the significant difference in ZipGrade usage based on gender indicates varying levels of adoption

among male and female teachers, emphasizing the need for targeted support and training to ensure that the tool appeals and is accessible to all genders.

4.1 Implications of Future Research.

According to the study's findings, these are the conclusions that can be drawn. The subsequent suggestions were put forth:

1. The Department of Education policymakers should prioritize integrating comprehensive training programs on using digital tools such as ZipGrade into teacher development initiatives such as Teacher Induction Programs (TIPs) and regional teachers' conventions. Additionally, guidelines should be established to ensure equitable access to such technology across all schools, addressing potential disparities in resource allocation and infrastructure.

2. The school administrators are encouraged to facilitate workshops and seminars that provide hands-on training in ZipGrade utilization for teachers in their own schools, particularly in Learning Action Cells (LACs). These sessions should emphasize best practices for incorporating the tool into the assessment processes of the teachers. Additionally, they should also allocate resources for regular updates and technical support to sustain the effective implementation of ZipGrade across the school.

3. The elementary and secondary school teachers should actively participate in the professional development opportunities offered by their schools or education departments to enhance their proficiency in various digital tools, including ZipGrade. They should also explore the utilization of Zipgrade for all multiple-choice assessment tasks to maximize the benefits of Zipgrade and have more time for other pressing tasks. Moreover, educators should collaborate with colleagues to share insights and innovative practices for maximizing ZipGrade's impact on the teaching-learning process.

5. REFERENCES

[1]. Cortez, N. M. K. M., Singca, N. M. D., & Banaag, N. M. G. E. (2023). USE OF ZIPGRADE: a REVOLUTIONARY TOOL FOR GRADE 7 TEACHERS IN CHECKING STUDENTS' LONG TEST AND UNIT TESTS. *EPRA International Journal of Research & Development*, 151–156. https://doi.org/10.36713/epra13848

[2]. Estarez, A. R., Cheng, M. A., Libunao, S. M. P., & Manalastas, R. S. (2023). Teacher's experience in using ZipGrade as an assessment tool. *International Research Journal of Modernization in Engineering Technology and Science*, 5(4), 2102. Retrieved from www.irjmets.com

[3]. Fraenkel, J. R., Wallen, N. E., & Hyun, H. H. (2012). How to desIgn and evaluate research In educatIon (8th ed.). New York: Mc Graw HIll.

[4]. Gall, M. D., Gall, J. P., & Borg, W. R. (2003). Educational research: An introduction (7th ed.). Boston: Allyn & Bacon.

[5]. Llamas Nistal, M., Fernández Iglesias, M. J., Tato, J., & Mikic Fonte, F. (2012). Blended e-assessment: Migrating classical exams to the digital world. *Computers & Education*, 62, 72-87. https://doi.org/10.1016/j.compedu.2012.10.021

[6]. Ningsih, S., & Mulyono, H. (2019). Digital assessment resources in primary and secondary school classrooms: Teachers' use and perceptions.

[7]. Oliver, Paul and Jupp, Victor (2006) Purposive sampling. In: The SAGE dictionary of social research methods. Sage, pp. 244-245. ISBN 9780761962977

[8]. Suhendara, Surjonob, H. D., Slamet, P. H., & Priyanto. (2020). the effectiveness of the ZipGrade-assisted learning outcomes assessment analysis in promoting Indonesian vocational teachers' competence. *International Journal of Innovation, Creativity and Change*, 11(5).

[9]. Wagstaff, B., Lu, C., Chen, X.A., 2019. Automatic exam grading by a mobile camera: Snap a picture to grade your tests, in: Int Conf Intell User Interfaces Proc IUI. Presented at the 24th International Conference on Intelligent User Interfaces, IUI 2019, Association for Computing Machinery, pp. 3–4. https://doi.org/10.1145/3308557.3308661