

“BACKWASH EFFECTS” OF TESTING ON LEARNING MATHEMATICS

Jenilyn D. Sabio¹

Tropical Village National High School
sabio_jenilyn777@yahoo.com

Marilyn U. Balagtas²

Philippine Normal University
balagtas.mu@pnu.edu.ph

Adonis P. David²

Philippine Normal University
adonis.ap@pnu.edu.ph

Abstract The study determined the “backwash effects” of Mathematics tests administered to students in eight (8) purposely selected private and public secondary schools in a province in Region 4A or CALABARZON. Specifically, it identified the backwash effects on students’ learning of periodical examinations in mathematics before, during and after their administration. One thousand one-hundred-fifty nine (1,159) students served as respondents in this study. Forced-choice survey questionnaire, coupled with open-ended format was conducted for data gathering. The results of the study showed negative and positive backwash effects on students’ learning of quarterly tests in mathematics before, during, and after their administration. These backwash effects on students’ learning are content-related, method-related, test-related, affect-related, social-related, and faith-related. The study recommended that testing be improved to increase the positive backwash effects and reduce the negative ones on the secondary school students’ learning of mathematics.

Keywords: Backwash effect, Learning, Mathematics tests, Testing

Introduction

The dismal performance of Filipino students in Mathematics in national and international examinations has drawn the attention of education leaders and policy makers so as to propose reforms in basic education curriculum. Such underachievement was revealed in the results of the Trends in International Mathematics and Science Study (TIMSS), reflecting consistently low scores each time they participated in international study (TIMSS 1999; 2003; 2007). The results of the National Achievement Tests (NAT) for Grade 6 and Year 2 from 2006 to 2009, likewise show the same alarming results as the Mean Percentage Scores (MPS) in Math range from about 54% to 69% for Grade 6 and about 39% to 43% for Year 2 (Benito, 2010). Apparently, the assessment results demand the need to raise the bar of quality in the way students learn Mathematics to increase their achievement. This same clamor in the Education for All Report 2000-2015 (UNESCO, 2015 p.191) for national assessments authorities are called to improve students' knowledge level and competencies.

Alevazo (2002) pointed out some causal attributions for the poor performance in mathematics examinations. Accordingly, these factors include difficulty of examination, interest in the examination, effort exerted in preparing for the test, study methods used, knowledge of mathematics, general intelligence, ability in mathematics, method of teaching, the desire to perform well, and interest in mathematics and on the subject matter covered in the test.

Noticeably, attitude towards examination and Mathematics itself is an acknowledged factor for poor performance. These attributions for poor performance could

also explain why only few students, when asked, would say that they like mathematics. Figures would yield that only few students would pursue mathematics-related degree programs. As Warton (2001) reported, eight (8) out of ten (10) students enrolled in a class do not like Mathematics, which is one reason for the students' poor performance in the subject.

There are other realities in schools that offer some explanations for the underachievement of Filipino students in Mathematics. For instance, in a survey conducted by Ibe and Ogena (1998), they reported that in Philippine education, mathematics teaching is still largely focused on the transmission of content and procedure. Students are exposed to mathematical tasks that merely require memorizing and repetitive application of algorithms and formulas. Instead of stressing on the mathematical process, classroom teaching focuses on the product where the students' main task is producing correct answers similar to the examinations given to them. According to Peard (1995), when students see mathematics as a set of rules and procedures to be memorized, they definitely believe that the discipline is detached from their real life and meaningless. This belief could lessen the students' motivation to learn mathematics resulting in their achieving less.

Apparently, testing is criticized as driving the focus of instruction to skills that test could effectively capture but may not be the essentials that reality demands. Hence, the use of test may limit the content of the discipline or instruction, which in a way is a negative consequence of testing.

The poor performance in Mathematics, attributed to the effects of tests and their ripple effect to instruction, is not actually an intention of testing. Testing is given in schools because of ten potential benefits other than fulfilling its traditional function to assign grades to students (Roediger, Outnam & Smith, 2011). These testing benefits classified as

direct and indirect effects include its function as an aid to retrieval and later retention; its function of identifying gaps in knowledge; it causes students to learn more from the next study episode; it produces better organization of knowledge; it improves transfer of knowledge to new context; it can facilitate retrieval of material that was not tested; it improves metacognitive monitoring; it prevents interference from prior material when learning new material; it provides feedback to instructors; and it encourages the students to study.

Cognizant of these benefits of testing, apparently, one can say that testing improves learning. Likewise, teaching generally affects testing and testing could also affect teaching, which is responsible for the learning process. This kind of relationship among teaching, testing, and learning is called “backwash effect” in the field of measurement and evaluation. According to Gates (1995), backwash effect is the influence that a test could have on the teaching and learning process.

Given all these issues about testing, it cannot be denied that it is still recognized as a practical and valid way of assessing students’ knowledge and understanding developed in the process of teaching. This is a process of collecting information inevitable even in the 21st century when high order thinking skills are underscored. Testing happens from the classroom level to international level. Even in the K to 12 assessment, written test results have high bearing on students’ grades (DepEd Order No. 8. S. 2015). Considering the value given to testing in classroom up to international assessments, for whatever purpose it may have, it is worth exploring how it could actually improve learning particularly in often tested area, such as Mathematics. Hence, this study was conducted to explore the backwash effects of testing in the enhancement of students’ learning in Mathematics.

Conceptual Framework of the Study

Academic curriculum and the process of teaching are often affected by the belief in the “washback” effect of testing on form, content, focus, and delivery of a test. These features of a test have a great influence on the skills emphasized during instruction. The backwash effect of testing lies primarily in its influence on the teaching and learning process. Brown (2002), explained that backwash could have a potential benefit or threat to the curriculum; for backwash of a test can lead a curriculum and even teaching to a single direction or otherwise.

As to different types of backwash effects, Griffin and Izard (2012) categorized these effects as teaching content and method backwash, backwash effect as a criterion of a test, pressure backwash, and backwash as a factor for innovation in education. To them, teaching content and method backwash refers to the effect of testing on the content and method of teaching. Backwash effect as a criterion of a test refers to the need to ensure that a test is valid and reliable when developed so that results could really be used for the defined purpose. Pressure backwash refers to the affective effects of test to students and even to teachers like the feeling of fear, guilt, shame, embarrassment, and anger. Backwash as a factor for innovation in education refers to the effect of changes in the design of a test in improving the curriculum and instruction.

The arguments of Roediger, Outnam and Smith (2011) as to why tests are given could illustrate the positive backwash effects of testing classified as direct and indirect benefits. They hold that, direct effects of testing in educational settings that greatly improve performance include the retrieval practice that occurs during tests. Reviewing before the test greatly enhances retention of the retrieved information, which is relatively better than no testing or even to re-studying. Besides durability of acquired

information, repeated retrieval through testing could produce knowledge that can be retrieved flexibly and transferred to other situations. Open-ended assessments could also help organize information and form a coherent knowledge base. Some of the positive indirect effects of testing are that it causes students to study more regularly, especially if quizzes are given more frequently. Through testing they could discover gaps in their knowledge and focus study efforts on these gaps. Students also study after taking a test, which could be another learning episode. Quizzing also enables better metacognitive monitoring for both students and teachers as it provides feedback as to how learning progresses. Greater learning would occur in educational settings if students used self-testing as a study strategy.

On the contrary, a lot of negative backwash effects of standardized examination and language testing had been studied and written across the world (Ferman, Donitsa-Schmidt & Shohamy, 1996; Fujimoto, 1999; Kohn, 2000; Hua, 2005; Qinling, 2007; Mkandawire, 2008; Razavipour and Riazi, 2011). For example, a teacher tends to teach for the sake of the test and not really for learning. Since the standardized tests are written and usually in multiple-choice form, students' knowledge and ability in answering these formats usually enhance their reading and writing skills. Unfortunately, despite frequency of testing, many students still find it hard to communicate orally as there are a few opportunities to do productive skills requiring them to speak and listen. There are even cases when students could pass a subject as they passed their written examinations but could hardly speak.

Also, Hamp-Lyons (1997) enumerates some negative backwash effects of testing in general such as limiting the content of the subject, reduced instructional time, less emphasis on higher order thinking skills or problem solving,

cheating on the test scores, and lack of any improvement on the skill or construct being tested.

Moreover, Senel and Turkey (2012) explained that learners' anxiety level increased and their performance decreased when they know that there is an assessment. This would then suggest that students pressured by examinations may end up with a poor performance. As Aragon (1991) explained, students can be frightened by fearful classroom environment leading to mental shutdown. Put differently, when students are in a positive and fearless classroom environment, acquisition of knowledge and skills could be accelerated and optimized for better learning.

In recognizing the beneficial and possible harmful backwash effects of tests based on the aforementioned literature and studies, six categories of effects were explored in this study applied in the area of Mathematics. These effects are categorized as "content-related backwash," "method-related backwash," "test-related backwash," "affect-related backwash," and "social-related backwash," and "faith-related backwash". **Content-related backwash** covers those responses explaining that the test has directed the content that students have to study in preparation for the test. **Method-related backwash** covers responses pertaining to students' ways to learn or activities they do to aid their mastery or retention and understanding of the lesson in preparation for the test. **Test-related backwash** covers those responses that students tend to do due to the content, format or quality of the test. **Affect-related backwash** covers responses that students have experienced emotionally or their attitude and values developed due to the test. **Social-related backwash** refers to the responses that show effects of the test on how the students relate with their family, friends or others. **Faith-related backwash** refers to behaviors of the students that show deep faith in God when they take their test.

Mathematics has been the area of investigation as it is a core curriculum area and often a content of almost all tests given nationally and even internationally where the Filipino students have a dismal performance. According to the UNESCO Report (2015 p.191), national assessments are predominantly curriculum-based and subject-oriented and 98% of these assessments cover Mathematics. In the K to 12 Curriculum (DepEd, December 2013), Mathematics is viewed as one subject that pervades life at any age and in any circumstance. Its value goes beyond the classroom and the school, therefore, as a school subject, it must be learned comprehensively and with much depth. Its twin goals are the development of students' critical thinking and problem solving skills, which could be achieved through an organized and rigorous curriculum content, a well-defined set of high-level skills and processes, desirable values and attitudes, and appropriate tools, taking into account the different contexts of Filipino learners. Considering the fact that students in basic education under the K to 12 reform are to be assessed in all curriculum areas including mathematics, and where written test is a recognized process of assessment, it is hoped that this study can shed light as to how the students stand to benefit more in their exposure to tests to improve their learning.

Figure 1 shows the conceptual framework of the study. As shown in the figure, backwash effects of testing will be investigated in terms of six areas of concern in learning mathematics. The research hopes to contribute to better learning of mathematics by exploring how testing can contribute to it. In particular, the study aims to answer the question "What are the positive and negative backwash effects on students' learning of periodical tests in Mathematics before, during and after their administration?"

Purpose of the Research Study

By knowing these effects, the study will have bases in recommending possible ways to act on them to improve students' learning of Mathematics.

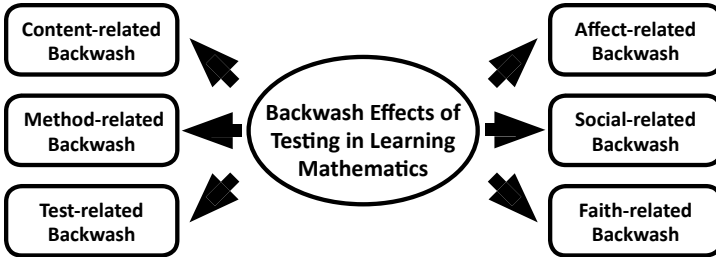


Figure 1. Backwash Effects of Testing

Methodology

Using the descriptive research method, the research purposely selected 8 secondary schools in a province in Region 4A based on the mathematics performance of their students in the National Achievement Test (NAT) in school year 2012-2013. These schools were the two low performing private schools (LPrs), which got the lowest mean percentage score (MPS) among private schools in the province; the two (2) high performing private schools (HPrs), which had the highest MPS among private schools in the same province; the two (2) low performing public schools (LPAs), with the lowest MPS among public schools in the same province; and two (2) high performing public schools (HPAs), which scored the second highest MPS among public schools also in the same province. A total of one thousand one hundred fifty nine (1,159) students were involved as survey respondents of the study.

A researcher-made survey questionnaire, which contains both forced-choice and open-ended items was used

for data gathering. The instrument content validated by experts determined the personal profile of the respondents, and what happens or what they do before (15 items), during (10 items) and after (13 items) their periodical test in Mathematics. The frequency of practice was asked ranging from never (coded 1) to always (coded 5). The positive and negative backwash effects of testing on students' learning were drawn from these items.

Data were analyzed using appropriate descriptive statistics and procedure for qualitative investigations. Categorization of responses was done to indicate if they were positive (+), negative (-) or both (+ -). These responses were further categorized into six according to prevailing themes of backwash effects of testing on students' learning from the data collected and informed by the work of Griffin and Izard (2012), namely: content-related backwash; method-related backwash; test-related backwash; affect-related backwash; and social-related backwash and faith-related backwash.

Results and Discussion

Backwash effects of examination system were identified on the student learning activities in three different phases: before, during, and after the administration of their periodical tests in Mathematics.

Pre-Test Administration-Backwash Effects

Table 1 presents the most popular response of the students on the different behaviors that a student does before taking up a periodical test in Mathematics. It can be gleaned from the table that the students' responses show positive, negative and a combination of both positive and negative backwash effects of periodical tests in mathematics before

its actual administration. Some of the **positive backwash effects**, which students claim of doing *almost always* are categorized as “method-related backwash” or effects that lead to improving the way they learn mathematics. These include taking down notes and studying individually for the test based on what it covers with or without pointers from the teacher. This could be seen as a positive backwash effect because the students get to learn again what has been taught to them, which could increase their mastery of the lessons. Studying on their own *almost always* is also a good manifestation of backwash effect as knowledge is something students should possess individually. However, in the study of Pilarta (2008), it was recommended that parents are needed to serve as tutors to their children when they study in preparation for tests as parental involvement is considered a contributory factor to students’ performance in Mathematics even for high school students. The parents should then be available when their children need them in their attempt to prepare themselves for whatever assessment that they have to go through individually as this is often the process observed in educational setting.

Table 1. *Backwash Effects of Periodical Tests in Mathematics on Students’ Learning **Before** the Test Administration*

Practices <u>Before</u> Testing	Frequency	Backwash Effect
1. taking down notes every time there is a discussion to have it as a review material.	Almost Always	+
2. studying my lessons in mathematics whenever there is a test (quizzes, long test, etc.)	Almost Always	+
3. studying alone	Almost Always	+
4. asking the coverage of the periodical test	Almost Always	+

5. reviewing the lessons that are most likely to be part of the periodical test in the absence of the pointers to review	Almost Always	+
6. asking the type of test (multiple choice, true or false, etc.) to be given	Almost Always	+ -
7. studying if the test type gives options such as multiple choice and matching type	Almost Always	+ -
8. studying if the test type requires to supply an answer such as identification and problem solving	Almost Always	+ -
9. asking the math teacher to have a review session in the class	Sometimes	+ -
10. having a study group with my friends	Sometimes	+
11. studying the lessons in mathematics even without a test	Sometimes	+
12. preparing for probable tests in class after class discussions in preparation for the periodical test	Sometimes	+
13. asking parents to help in reviewing for the test	Seldom	+
14. asking older siblings and relatives to help in reviewing for the test	Seldom	+
15. getting angry	Seldom	-

Likewise, the practice of *sometimes* forming study groups with friends to discuss lessons learned in preparation for periodical tests is a positive backwash effect of testing. Moreover, there is also the “social-related backwash” as when the students form study groups with peers and learn from and care for one another, which is a good value to possess.

Some of the backwash effects of tests before administration, which could be viewed as both **positive and negative** include reviewing the lessons based on the type of test. This practice, which the students doing *almost always*, is a positive “test-related backwash” effect, especially if the

students feel the need to prepare for their test in Mathematics that emphasizes problem solving skills and other high order skills. However, if tests make use of formats that encourage low-order thinking skills, then this would have negative effects as the students tend to just memorize facts without understanding. Items that require recall of simple facts require less thinking on the part of students or deprive students to think critically about a lesson. As Lovers (2003) has reported, many teachers opt to use lower cognitive level for their tests for they are easier to prepare and where students trained to memorize would likely to succeed.

Moreover, conducting a review before examination in Mathematics is also good for retention and for greater mastery of the lesson and could increase students' confidence to pass. However, if this consumes so much time when the focus is low order, instead of giving the students a task to support results of periodical examinations where they could show their creativity and apply critical thinking skills, then doing the review is an impractical use of instructional time.

Additional **positive backwash effects** could be deduced from the open-ended questionnaire. These effects might be categorized as "affect-related backwash" like feeling challenged and excited to know what they would be tested on. These behaviors could prove that test could motivate students to study hard. Furthermore, praying is a "faith-related backwash" where about eight percent (8%) of the students said they would pray before taking their test in Mathematics. This shows that testing strengthens students' faith in God. A few also believed in some positive "content-related backwash" effects because they do not only rely on their notes when they review but would also recall their previews activities and test in Mathematics for them to restudy the topics where they were weak in. They also support knowledge through searching for more information

about their lesson in Mathematics. Again, because of the test, students learn to search for information beyond what is provided by the teacher, which is a good way to improve their learning and their resourcefulness as learners. Interestingly, a few students would listen to music while reviewing for the test, an illustration of “method-related backwash,” and one (1) would think of his/her parents as a source of inspiration in studying well for the examination, which could further illustrate “social-related backwash.”

Some of the **negative backwash effect** of tests before the administration, which could be categorized as “affect-related backwash,” includes the development of anger among students. As the survey reveals, this *seldom* happens, which is good, as it is unhealthy for the students to feel angry with their teacher when they are given a test. Such attitude of some students could be due to the feeling of pressure to pass their examination, otherwise, they get scolded, embarrassed or humiliated. This negative feeling could also be linked to some ill practices of teachers where they use test to punish students.

Besides, a significant number of students claimed that some “affect-related backwash” effects include feeling nervous, tensed or pressured before their examination in Math; getting irritated by things that distract them from their review; and preparing cheating notes. As William (2014) reported in his column, some students tend to cheat during examinations to avoid attending remedial classes. Unfortunately, if students would not be corrected to imbibe the right testing practice and perspective, then the goal to uplift the students’ performance in mathematics would always be a downside of testing.

Finally, a backwash effect which could either be **positive or negative** or categorized as “method-related

backwash” is the practice of few students to study with their tutor, which sends a message of dependence on adults to learn. In the absence of parents or elder siblings to guide students in their study, they resort to tutors who are paid for this purpose.

Actual Test Administration - Backwash Effect

Table 2 presents the responses on the backwash effects of mathematics tests on learning activities **during the** administration of periodical test. As gleaned from the table, students practice almost always five **positive backwash effects** of test, during the actual administration. These effects considered as “test-related backwash” include students following the do’s and don’ts in taking a test; scanning the whole test and answering the easy items first before the difficult ones; re-checking their answers, if time permits; and *sometimes* leaving no item unanswered and ignoring classmates asking for answers while the examination is going on. These test-related practices increase the validity of assessment. In the open-ended questionnaire, the students added some positive “affect-related backwash” like they feel excited, challenged, and confident to pass the examination, especially that they reviewed for the test. Some reiterated that they pause and pray before they start answering the test items, which is a manifestation of “faith-related backwash.”

On the other hand, there were some **negative backwash effects** of tests during their actual administration. Most of these effects are categorized as “affect-related backwash” to include feeling nervous; being disturbed by their classmates who cheat and keep doing unnecessary activities while the test is going on.

Table 2. *Backwash Effects of Mathematics Tests on Learning Activities During the Administration of the Periodical Test*

Practices <u>During</u> Testing	Frequency	Backwash Effect
1. following do's and don'ts in taking a test	Almost Always	+
2. scanning the whole test and answering first the easy items before the difficult ones	Almost Always	+
3. re-checking answers if time permits	Almost Always	+
4. leaving no item unanswered	Sometimes	+
5. ignoring students who ask questions about the test	Sometimes	+
6. asking classmates for hints/ clues in answering the items	Sometimes	-
7. asking the teacher for hints/ clues in answering the items	Sometimes	-
8. guessing for answers if the test type gives options such as multiple choice and true or false	Sometimes	-
9. getting angry by irregular activities during periodical test, such as noise and students who keep on roaming around the classroom	Sometimes	-
10. cheating	Seldom	-

Other practices done *sometimes if not seldom* fall under negative “test-related backwash.” These practices include having hard time answering the test; not remembering everything they reviewed; asking their teacher to explain the directions again while the test is going on; cheating to pass the test; guessing answers since the test format allows for it; getting deductions on the final scores for being noisy; asking their classmates and their teachers for hints/clues in answering the items; and seeing items that were not discussed in the class. Ensuring the validity of the test like making sure it is

designed based on a Table of Specifications (TOS) will play a vital role in correcting the issue regarding undiscussed items. Test instructions should be made clear in written and oral form so that students would not ask for further clarifications while the test is going on. These practices support the claim of Buck (1988) that inherently both teachers and students adjust their classroom work to navigate their activities based on the test, especially when the test could make or break the future of the students, and that the passing rates are used as indicator of one's performance or success.

Post-Test Administration- Backwash Effect

Table 3 presents the responses on the backwash effect of mathematics tests on learning activities **after** the administration of periodical test.

Table 3. *Backwash Effects of Mathematics Tests on Learning Activities After the Administration of the Periodical Test*

Practices <u>After</u> Testing	Frequency	Backwash Effect
1. checking the items one failed to answer correctly to identify errors committed	Almost Always	+
2. motivating oneself to do better next time upon seeing test result	Almost Always	+
3. reviewing the checking of one's paper for possible additional points on the final score	Almost Always	+
4. restudying the topics on the items where one got wrong answers	Sometimes	+
5. going to one's family to celebrate success in passing the mathematics test	Sometimes	+
6. giving oneself a reward for passing the mathematics test.	Sometimes	+

7. going to friends to celebrate success in passing the mathematics test	Sometimes	+
8. getting sad whenever one fails to have a good score in the mathematics test	Sometimes	+
9. remembering most of the content of the test	Sometimes	+
10. going to one's family to seek comfort whenever one fails the mathematics test	Seldom	-
11. going to friends to seek comfort whenever one fails the mathematics test	Seldom	-
12. getting angry whenever one fails to have a good score in the mathematics test	Sometimes	-
13. ignoring the result of the periodical test since it is just a part of ones' grade in mathematics	Seldom	-

As shown in Table 3, a lot of positive backwash effects of tests emerged after their administration. Apparently, students *almost always* practice some positive “content-related backwash” effects. These could be illustrated by their checking at once items that they failed to answer correctly and relearn from them. This “content-related backwash” was further shown when students claim they could still remember the contents of the test, which indicated retention of ideas learned. There were also manifestations of positive “affect-related backwash”, as when students feel motivated to do better next time to improve test results and giving oneself a reward for passing the test. In the interview, students reported that they feel relieved that their test is over. A practice that illustrates a positive “test-related backwash” is reviewing the correctness of checking of test papers for possible additional points, which could increase the validity of the test. Other positive indicators of “social-related backwash” included the practice of *sometimes* celebrating success in

passing the examinations with one's family and friends. Also added during the interview are indicators of "faith-related backwash" like praying to give thanks for the test is over and that they got a passing mark, just as indicators for "method-related backwash" like keeping their test papers as reference for future examinations.

Some of the **negative backwash effects** of test after their administration are "affect-related backwash" as *sometimes* getting angry with themselves whenever they failed to have good scores in the mathematics test. This action was confirmed when they claimed they *seldom* go back to their family and friends to get comfort for their failure. This may suggest that teachers need to introduce to students some coping mechanisms like discussing this with their friends and most especially with their parents, to provide comfort when there is a potential danger when students blame themselves for their failure. Besides, teachers may also explain students' errors for them to understand how to get better next time. In other words, feedback giving to students as a result of their test is critical to make test a powerful tool in improving learning.

Another negative "test-related backwash" effect of test after administration is when students claim of ignoring the results, if low, in the computation of one's grade or mark in Mathematics. This may mean that test has no value to them when it is low, hence, viewed invalid when grading their performance in the subject. Smith (1991) confirmed these results when he said that students could experience feeling of fear, guilt, shame, embarrassment and anger whenever they fail in their examination.

Conclusions and Recommendations

The results of the study reveal information that could be of use for teachers to know how to further help students learn and achieve in Mathematics through examinations. The different backwash effects of tests before, during and after their administration could pose both positive and negative repercussions to students' learning.

The effects classified as *content-related backwash* could inform the content of the lessons that students have to learn and master and hopefully value as tests value them, too. However, since students infer what is important for them to learn and master from what is emphasized in tests, then the tools should be designed to cover meaningful and realistic information that students will find useful in real life. Teachers planning their tests well and informing the students of their intents before administration is a good way to communicate the value of tests. Communicating the results and learning from them are also a good practice to sustain.

Effects categorized as *method-related backwash* could inform the ways by which the students learn from and through their tests. It is good to sustain the practice of testing as students see this as an opportunity to learn on their own as test is individually taken and to also seek adults' help like having tutors for lessons needing some further explanations.

Effects classified *test-related backwash* could remind teachers of the need to establish the validity and reliability of their tests to ensure that they really capture what the students have really learned and to effectively inform them as to where their efforts should be directed for their improvement.

Effects considered *affect-related backwash* should become a challenge for teachers on how they make the students appreciate what they have learned that tests should capture. Hence, test should be seen as a source of motivation

for students to show their best and not much of their weaknesses as a person or as a learner.

Effects taken as *social-related backwash* develop students' human relation and social skills. Tests become a venue for the students to learn from one another and get support from their peers to boost confidence to pass examinations. The process of learning together before testing also enhances students' learning as they learn from one another using a language that they all speak.

Effects of *faith-related backwash* are something to nurture, especially among Filipino students. As they value a strong faith in God the outcome of their work would be positive, tantamount to being "makadiyos", as stressed in the K to 12 Curriculum.

In sum, positive backwash effects of testing on students' learning should be continuously identified, sustained and nurtured while the negative effects be addressed through careful planning, administration and communication of test intents, coverage, design and results in a more learner-centered approach.

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