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An Action Research Approach for Using Self/Peer Assessment to Enhance Learning and Teaching Outcomes

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Abstract: This study provides an account of the place of peer and self-assessment in higher education. It particularly focusses on introducing these assessments in three graduate courses and measures the impact on learning outcomes, and compares the results of self/peer assessments vis-à-vis those conducted by teachers. Using the action research approach, this study develops models for implementing self/peer assessments that can have direct implications for promoting self-efficacy in learners. Within the overarching framework of the Social Cognitive Theory, this paper provides pedagogical implications for curriculum development, instructional practice, and workable assessment mechanisms.

Keywords: Action research, Assessment and evaluation, Self/peer assessment, School reform

1. INTRODUCTION

Assessment and evaluation are integral parts of program improvement, curriculum transformation, and enhancing learning/teaching outcomes. In addition, implementing new program initiatives requires assessment approaches that can inform instructional practice and reform decisions. In fact, creating a rich culture of learning depends on integrating workable assessments that engage all participants in the educational process. Thus, students and teachers should be central to the curriculum development, pedagogical practices, and assessment systems in schools at all levels.

There are various assessment paradigms that underlie assessments techniques used in schools especially in the K-20 settings. Traditional approaches, for instance, use formal techniques such as testing and other strategies that provide a limited account of what learners know and are able to do. On the other hand, there are alternative ways such as self and peer evaluations in which learners are central to the assessment process in an attempt to give them ownership for their own learning. Regardless of its forms, assessment and evaluation should be based on sound principles and realistic expectations that are keenly linked to expected learning and teaching outcomes.

Having this in mind, this paper builds on the premise of engaging students in the assessment process to maximize learning outcomes at the university level. In particular, it uses self and peer assessment as tools to bring about desired outcomes. Based on the action research approaches, this paper also provides an alternative model that might guide curriculum transformation and program improvement.

2. CONTEXT AND BACKGROUND

There has been a growing trend to promote a culture of assessment in higher education worldwide. Program assessment and evaluation are primary expectations of accreditation guidelines and standards. In addition, institutional accountability measures require that programs and faculty integrate viable assessment tools that reflect student learning outcomes. This is an essential step for the process of self-renewal in educational institutions (Calhoun, 1994). Thus, faculty have started to revisit existing assessment and evaluation mechanisms within their courses to ensure meeting the desired learning outcomes in their respective academic programs. This task requires taking into consideration

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various environmental, cognitive and social conditions that underlie relevant assessment processes. It is also expected to engage students and their peers in curricular treatments and assessment practices in order to maximize performance outcomes and promote self-efficacy in students (Bandura, 1993, 1997; Schunk & Pajares, 2002).

Having this in mind, the researchers at one of the leading universities in the West Bank have undertaken the initiative to explore alternative assessment approaches in their graduate courses. Their institution, An-Najah National University (ANU), has just started an important leap to revolutionize its educational system by revisiting all academic programs at the university, including both undergraduate and graduate teacher education programs. This transformation involves all educational aspects that include curricular activities, pedagogical practices, evaluation and assessment approaches. In addition, the reform efforts require faculty to integrate action research in their courses in order to enhance the program's functions and outcomes.

The Faculty of Education at ANU is considered one of the leading educational institutions in the Palestinian Territories. The faculty graduates every year in various disciplines hundreds of teachers who will serve as school teachers in Palestine and in the Arab World. With its Master's programs, the faculty provides continuing education for those who wish to further their higher education, and provides a platform for researchers seeking to investigate various problems and issues that are keen to the educational system in Palestine.

The graduate programs at the university are built on different core and elective courses that students complete. Some of these courses at the graduate level tackle the Palestinian research priorities, and help students to establish a strong educational research background in order to complete a research project that culminates in the form of a Master's thesis.

With the recent developments at the university, a huge debate between the stakeholders at the university took place about the future direction of teacher preparation and educational reform in general. Many of these questions revolve around implementing actionable research practices to enhance and assess student performance outcomes among other key issues related to curriculum planning and development. There is still a continual effort to examine various questions by integrating action research approaches in schools and universities in order to address arising issues in education.

Capitalizing on the premise of participatory action research (Sagor, 1992; Deschler&Ewert, 1995), the authors of this paper serve as faculty members who undertook the task of creating and implementing some of these innovations. They also participated in developing several different aspects using an action research model that was synthesized in order to develop curricular and instructional aspects of three core courses in the Master's program. This model was based on introducing self and peer assessment concepts as tools to examine alternative ways for the development of the curriculum and instruction. With the role of action research to bring about desired educational change (Elliot, 1993) in mind, this study was in line with the institutional goals and strategic plan at An-Najah National University which supports radical educational change through adopting innovative ideas and approaches to enhance educational outcomes.

Although there has been rapid and active movements to re-organize the process of teaching, most of the courses at ANU are still being taught within the traditional realm in most courses. Similarly, traditional assessment methods prevail in most courses and programs. Thus, the need to depart from traditional approaches has become more urgent.

Undoubtedly, there are many complex factors and conditions that affect academic programs' design, curricular components, assessment strategies, and pedagogical practices. These factors vary considerably based on the context of each institution and the larger community it serves.

3. CONCEPTUAL FRAMEWORK

There are several theoretical frameworks that overarch the process and product of assessment in educational settings. Generally, most of the frameworks relate to various cognitive, social, and contextual aspects that affect the interactive process in schools. In learning and teaching situations, the most viable frameworks consider key participants in the interactive process. Since students are central to the educational input and its pedagogical aspects and instructional practice including assessment and evaluation of learning outcomes, they should be fully engaged to take ownership of their own learning. In fact, learning and teaching embrace a wide range of domains such as cognitive and social aspects that should be taken into account when introducing interventions and treatments.

Accordingly, the Social Cognitive Theory (SCT) can serve as a broad framework for understanding how self and peer assessments can promote self-efficacy and lifelong learning. In addition, it can illustrate how learners can take ownership of their own learning by consuming feedback from their peers and teachers. The SCT involves understanding of behaviour and behaviour change that are deeply rooted in various social and cognitive domains (Bandura, 1993, 1997, 2001; Busse & Bandura, 1999). At its core principles, the SCT outlines

three main factors that constantly impact each other. These include the environment, people, and behaviour which are intricately related. Thus, assessing and evaluating behaviours largely depend on these factors and the interplay among them (Glanz et al., 2002). Moreover, the SCT provides a viable blueprint for program design, implementation, and evaluation.

As far as assessment is concerned, there are key concepts postulated by the SCT that can have direct implications for attaining desired learning and teaching outcomes. While focusing on health behaviour and education, Glanz et al. (2002) outlined several constructs gleaned from the SCT that are relevant to assessment practices in schools especially in higher education. One of the most important concepts involves *self-control* which requires participants to engage in personal regulation of goal-oriented evaluation; provide opportunities for self-monitoring, goal setting, problem solving and self-reward. Another key idea is observational learning in which participants watch, analyze and assess the actions and performance of others such as teachers and peers in order to follow a credible model for desired target or goal. Glanz et al. (2002) also listed other relevant key concepts such as *expectations*, *reinforcements*, *situations*, *behaviour change*, *self-efficacy*, among others that revolve around the premise of dynamic interactions of various avenues that can affect responses, knowledge construction, skill development, performance, and maximizing learning and teaching outcomes.

Recognizing the limitations of curriculum and assessment approaches, Janssen & Lourenc (2006) noted that teaching strategies and assessment techniques should be purposefully integrated to account for measurable performance outcomes rather than mere passive transmission of knowledge. Unless pedagogical and assessment strategies capitalize on the social and cognitive factors, desired outcomes will hardly be attained. In fact, the long dominant traditional academic assessment approaches have been widely criticized given their limited and negative impact on students and their learning outcomes. For example, Liu (2013) illustrates how such techniques as achievement tests are counterproductive and elicits several traits that include: (1) standardization; (2) designated test duration and limits to the use of self-controlled learning strategies for searching and verifying answers; (3) strictly limited to individual participation; (4) insufficient context regarding the terms used in test items; and (5) resulting anxiety and self doubt in participants. Clearly, such practices in assessment undermine the interplay of complex cognitive and social factors that affect students' academic achievement and skill development. Therefore, teachers and students should be engaged in designing and evaluating curriculum activities and assessment tools that are conducive to their expectations, relevant to their needs, linked to contextual demands and situations and more importantly consistent with long term academic and professional goals.

In order to reduce the negative effects of traditional testing, various alternative assessment techniques are proposed for this current research project. Most of these techniques are considered to be very different from traditional assessment techniques. They are also keenly linked to the various domains delineated by the Social Cognitive Theory. As such, the approach used builds on the power of peer interaction, clarity of expectations, and participatory processes that promote social, cognitive, academic and professional development in learners. Among the most important techniques in the proposed approach is integrating self and peer assessment which have become widely used in university courses at various levels (Tomayess, 2012).

There is a huge bulk of literature and research that provide a comprehensive account of the benefits of self and peer assessments in education especially at the university level. McGarr& Clifford (2013) reviewed these benefits which promote deepening students' learning and understanding, and enhancing their abilities to inquire and reflect creatively. In addition, self and peer assessments can enhance students' metacognitive skills and encourage them to play a major role in managing their own learning efficiently. Additionally, they can help teachers to establish a learning environment based on increased collaboration between students while they actively engage in solving problems. These factors and others have made the process to gain popularity in higher education given the need to equip graduates with important transferrable skills necessary for life-long learning.

While self-assessment occurs when students evaluate their own work and make a judgment about its quality, peer assessment also engages learners as they examine the work of their counterparts thus allowing them access to alternative cognitive and social strategies necessary for enhancing knowledge and skills. Once students are given the opportunity to review their peers' work, they will find themselves become more cognizant of their accomplishments and areas of need. This also provides them with rich learning opportunities and a wide range of learning options and models that are mutually beneficial. In short, self and peer assessments make unique contributions to the progress of learning through which students come to understand what counts as authentic quality learning experiences and situations (Brookhart, 2007).

Moreover, the benefits of using self and peer assessment in the educational process are not limited to learning outcomes, but embrace curriculum design and its transformation. Apart from the benefit of bridging the gap between theory and practice (Seery, 2012), self and peer assessments can facilitate learning and teaching, promote critical thinking, enhance social and interpersonal skills, encourage collaboration and discourse, and give learners ownership for their own learning.

4. APPROACH AND METHODOLOGY

This study incorporates elements of action research to examine the use of self and peer assessments at the university level. Historically, action research pioneered by Kurt Lewin in the mid forties (see Lewin, 1946, 1947, 1948), evolved as a model to investigate social conditions that permeated inequities and injustices in society and its organizational structures such as schools. During the fifties, Corey (1953) expanded on the potential of action research as a tool for teachers to achieve equity in pedagogical and assessment approaches, engage in actionable reflective practice, and enhance learning and teaching outcomes in schools. Accordingly, action research is a process by which practitioners attempt to study their problems scientifically in order to guide, correct, monitor and evaluate their decisions and actions (Corey, 1953, cited in Calhoun, 1994, p. 20). In other words, such approach required teachers to examine, evaluate, re-evaluate, monitor, and modify their pedagogical choices and instructional practices in a participatory-collaborative manner. Thus the "spiral" representation of the action research includes reconnaissance, planning, first action step, monitoring, reflecting, rethinking, and evaluation. In addition, this includes looking, thinking and acting as a "continually recycling set of activities" (Kemmis, 1990; Stinger, 1996, cited in Mills 2002, pp. 17-18).

Action research is the term which describes the integration of action (implementing a plan) with research (developing an understanding of the functioning and effectiveness of this implementation). As distinct from traditional academic research, those involved in action research participate in an ongoing testing and monitoring of improvements in their practice. It is one method teachers use for improvement in both their practice and their students' learning outcomes. The central goal of action research is positive educational change. As a living practice (Kemmis & McTaggart, 1988; Carson & Sumara, 1997; Glanz, 2003), action research is characterized as being integrated, reflective, flexible, active, quasi-experimental, and cyclical involving a number of cycles, with each cycle clarifying an issue leading to a deeper understanding and more meaningful outcomes (Hopkins, 1995; Hollingsworth, 1997; McClean, 1995; Mills, 2006).

Action research creates knowledge based on inquiries conducted within specific and often practical contexts. The purpose of action research, therefore, is to learn through action that then leads on to personal or professional development (Reason, 2008).

Action research involves a spiral process with self-reflective cycles that include: planning a change; acting and observing the process and consequences of the change; reflecting on these processes and consequences; and then re-planning, acting and observing, reflecting, and so on (Koshy et al., 2010). Since action research in education is study conducted by colleagues in a school setting of the results of their activities to improve instruction (Glickman, 1990; Calhoun, 1994), the researchers in the current study collaborated in the planning and implementation of the action research cycle to examine the effects of self and peer assessments in the courses they teach while investigating the following research questions: (1) What impact do self and peer assessments have on students' learning outcomes in each course?; (2) How do participants interact with self and peer assessments in all three courses?; and (3) What are the similarities and differences in achievement and performance outcomes based on target competencies?

While taking into account the environment and context of the university mission, the researchers sought to introduce alternative assessment techniques to enhance students' learning outcomes in their courses. In addition, the researchers attempt to solve existing problems in current assessment practices in higher education and overcome challenges facing instructors and students alike. As the university is transitioning in its academic programs to develop a culture of assessment and evaluation, three courses were identified in which self and peer assessment were be implemented. The three courses were purposefully chosen to be the subject of this development. The first course, entitled Research Design and its Statistical Analysis, in which students study various educational concepts and are introduced to different statistical tests. The second course is also about research methods, entitled Scientific Research Skills, but it is taught in a different Master's program, particularly the Gender Studies program. This course aims to clarify the major concepts of scientific research, its methodologies, tools, approaches and ethics. The third course is entitled Educational Research in Curriculum Analysis, in which students develop various research skills required for conducting scientific curriculum analysis.

Since it is important to provide explicit guidelines and clarity of purpose (Hattum-Janssen & Lourenço, 2006), students were oriented about the place of self and peer assessments in each course. The instructors modelled the process and provided rubrics that guide students and peers when they monitor and evaluate themselves and others using the course competencies and performance expectations and benchmarks.

After a series of cycles in which self and peer assessments were implemented, the content of the three courses was reviewed and analyzed by comparing competencies with assessment outcomes. In addition, the results of self and peer assessments were reviewed and compared. The instructors focussed on selected competencies that were measured through self and peer assessment in the first and second courses, while two competencies were assessed using peer and self-assessment on the third course. Variations between the three courses were not limited to the number of competences assessed via self and peer assessment, as there were also variations in the number of times or cycles of self and peer assessments used. In the first course, self-and peer assessment cycles were used five times while in the second and third course only two cycles of self and peer assessment were used. Every time self and peer assessment were used, there was also a teacher assessment carried out for each competency in an attempt to triangulate the findings.

Data collected from each action research cycle was reviewed and analyzed using both quantitative and qualitative methods. Quantitatively, basic central tendency measures were conducted using SPSS in order to examine the trends in each cycle. This helps in illustrating the different trends and allows identifying areas of comparison and contrast about the outcomes of each cycle. Qualitatively, internal and external factors within each course and the program structure at large were examined. For example, the course syllabi were reviewed in light of the program and university's expected learning outcomes and benchmarks. The researchers also held a series of debriefs with participating students to assess the benefits of peer and self assessments conducted in each course. This helped in gaining a deeper understanding of the benefits of the proposed alternative assessment approaches gleaned from each cycle.

5. Findings and Discussion

The focus of the study was to determine the effect of each assessment mechanism and its outcomes in respective courses. It also involved evaluating the results of self, peer, and teacher assessments and their variation if any in each course and during every cycle. Then two modules were created to illustrate what occurred during each cycle.

The following table and chart illustrate the results of Module 1 during the first cycle and indicates the values based on who conducted the assessment in the first two courses:

Table 1. Module 1 One Cycle

course	evaluator	M	SD	N
research1	teacher	17.78	2.41	23
	peer	20.30	3.17	23
	self	22.91	2.89	23
research2	teacher	20.35	2.43	20
	peer	23.75	2.55	20
	self	24.60	2.68	20

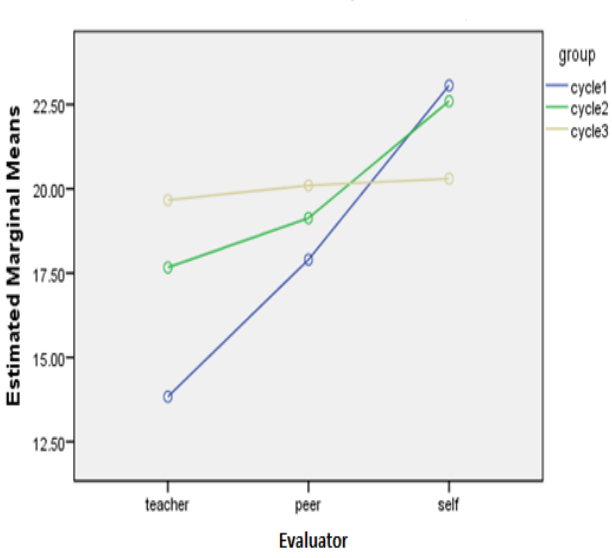

Figure 1. Estimated marginal means of assessments (Module 1)

The findings indicate that teachers and students varied in their assessments during the first cycle. The results reflect that students' self assessments are higher than those of their teachers and peers. Similarly, the findings indicate that there was variance between peer and self assessments in the same cycle.

Upon conducting trend analysis source, the results indicate that there was a significant effect of evaluator on the assessment levels. The following table further illustrates these trends:

Table 2. Trend Analysis Source

course		source	Sum of Squares	df	Mean Square	F	P	η^2
research1	Between Groups	evaluator	271.01	2	135.50	16.56	0.00	0.34
		Linear Term	270.13	1	270.13	33.02	0.00	0.33
		Quadratic Term	0.25	1	0.25	0.03	0.86	0.00
	Within Groups		523.65	64	8.18			
	Total		794.66	66				
research2	Between Groups	evaluator	202.30	2	101.15	15.45	0.00	0.35
		Linear Term	180.63	1	180.63	27.59	0.00	0.31
		Quadratic Term	21.68	1	21.68	3.31	0.07	0.04
	Within Groups		373.10	57	6.55			
	Total		575.40	59				

As the table shows, there was a significant effect of evaluator on levels assessment for Research1 Course, $F(2, 64) = 16.56$, $p < .01$, $\eta^2=0.34$. There was also a significant linear trend, $F(1, 64) = 33.02$, $p < .01$, $\eta^2= 0.33$, indicating that as the the evaluator changes from teacher to peer to self, assessment increased proportionately. Likewise, for Research 2 Course, there was a significant effect of evaluator on levels assessment, $F(2, 57) = 15.45$, $p < .01$, $\eta^2=0.35$. There was a significant linear trend, $F(1, 57) = 27.59$, $p < .01$, $\eta^2= 0.31$, indicating again that as the evaluator changes from teacher to peer to self, assessment increased proportionately.

Interestingly enough, data findings reveal that there was a major contrast between student and teacher assessments as suggested by the constructed orthogonal contrasts. The following table illustrates these areas of difference:

Table 3. Orthogonal Contrasts

		contrast coefficients							
course	contrast	teacher	peer	self	Value of Contrast	Std. Error	t	df	p
research1	teacher vs students	-2	1	1	7.31	1.51	4.85	64	0.00
	peer vs self	0	-1	1	2.61	0.84	3.09	64	0.00
research2	teacher vs students	-2	1	1	7.65	1.40	5.46	57	0.00
	peer vs self	0	-1	1	0.85	0.81	1.05	57	0.30

The above data indicate that for Research 1 Course, planned contrasts revealed that having any assessment of students (peer or self) significantly increased assessment compared to having a teacher assessments, $t(64) = 4.85$, $p < .01$, and that having self assessment significantly increased assessment compared to having peer assessment, $t(64) = 3.09$, $p < .01$. Furthermore, for Research 2 Course, planned contrasts revealed that having any assessment of students (peer or self) significantly increased assessment compared to having a teacher assessments, $t(57) = 5.46$, $p < .01$, and that having self assessment not significantly differs from peer assessment, $t(57) = 1.05$, $p > .05$.

For Module 2, trend analysis during the three cycles was conducted within one course. Significant findings were revealed as illustrated below:

Table 4. Module 2 Three Cycles (for one course)

cycle	evaluator	N	M	SD
cycle1	teacher	30	13.83	1.78
	peer	30	17.90	2.98
	self	30	23.07	2.08
cycle2	teacher	30	17.67	1.69
	peer	30	19.13	2.33
	self	30	22.60	2.65
cycle	teacher	30	19.67	1.84
	peer	30	20.10	1.52
	self	30	20.30	1.82

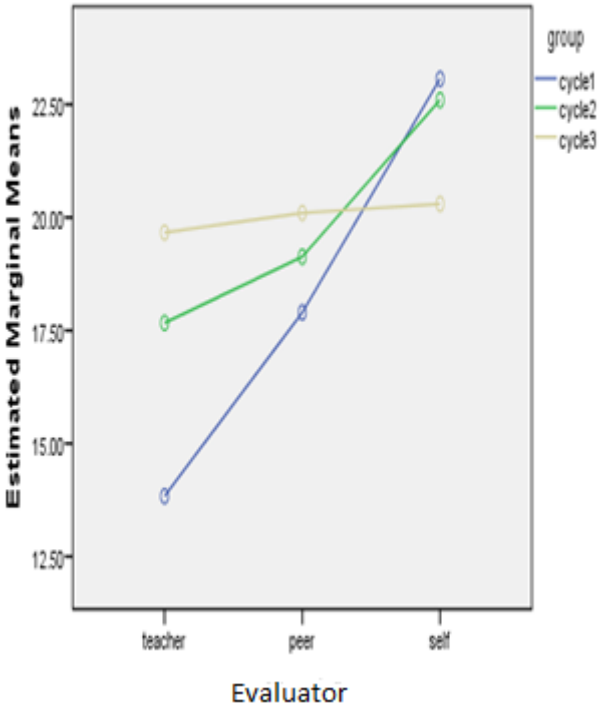

Figure 2. Estimated marginal means of assessments (Module 2)

Based on the trend analysis source for Module 2, the results indicate that there was a significant effect of evaluator on the assessment levels. The following table further illustrates these trends:

Table 5. Trend Analysis Source for Module 2

cycle	source		Sum of Squares	df	Mean Square	F	P	η^2
cycle1	Between Groups	evaluator	1284.87	2	642.43	117.73	0.00	0.73
		Linear Term	1278.82	1	1278.82	234.36	0.00	0.73
		Quadratic Term	6.05	1	6.05	1.11	0.30	0.00
	Within Groups		474.73	87	5.46			
	Total		1759.60	89				
cycle2	Between Groups	evaluator	385.07	2	192.53	37.78	0.00	0.46
		Linear Term	365.07	1	365.07	71.64	0.00	0.44
		Quadratic Term	20.00	1	20.00	3.92	0.06	0.02
	Within Groups		443.33	87	5.10			
	Total		828.40	89				
cycle3	Between Groups	evaluator	6.29	2	3.14	1.05	0.36	0.02
		Linear Term	6.02	1	6.02	2.00	0.16	0.02
		Quadratic Term	0.27	1	0.27	0.09	0.76	0.00
	Within Groups		261.67	87	3.01			
	Total		267.96	89				

For Cycle 1 there was a significant effect of evaluator on levels assessment, $F(2, 87) = 117.73$, $p < .01$, $\eta^2=0.73$ · There was a significant linear trend, $F(1, 87) = 234.36$, $p < .01$, $\eta^2= 0.73$, indicating that as evaluator changes from teacher to peer to self, assessment increased proportionately. As for Cycle 2, there was a significant effect of evaluator on levels assessment, $F(2, 87) = 37.78$, $p < .01$, $\eta^2=0.46$ · There was a significant linear trend, $F(1, 87) = 71.64$, $p < .01$, $\eta^2= 0.44$, indicating that as evaluator changes from teacher to peer to self, assessment increased proportionately. Finally, during Cycle 3, there was no significant effect of evaluator on levels assessment, $F(2, 87) = 1.05$, $p > .05$, $\eta^2=0.02$ · There was no significant linear trend, $F(1, 87) = 2$, $p > .05$, $\eta^2= 0.02$, indicating that as evaluator changes from teacher to peer to self, assessment still the same.

It is worth noting that there was a linear trend across in the first cycle of Module 1 as well as the second cycle. This was clearly depicted in the above tables and figures. At the same time, there was no linear trend in the third cycle which indicates that assessments were not consistently drawn in the same direction compared to those in first two cycles.

When constructing orthogonal contrasts to examine the relationships among treatments within each cycle, the findings suggest that there are significant observations. Notably, teacher and peer assessments throughout the cycles have contrast coefficients with negative signs, while the self assessment has positive signs (see Table 6).

Table 6. Orthogonal contrasts table

		Orthogonal coefficients							
cycle	contrast	teacher	peer	self	Value of Contrast	Std. Error	t	df	p
cycle1	teacher vs students	-2	1	1	13.30	1.04	12.73	87	0.00
	peer vs self	0	-1	1	5.17	0.60	8.57	87	0.00
cycle2	teacher vs students	-2	1	1	6.40	1.01	6.34	87	0.00
	peer vs self	0	-1	1	3.47	0.58	5.95	87	0.00
cycle3	teacher vs students	-2	1	1	1.07	0.78	1.38	87	0.17
	peer vs self	0	-1	1	0.20	0.45	0.45	87	0.66

As the findings indicate in the above table, for cycle1 planned contrasts revealed that having any assessment of students (peer or self) significantly increased assessment compared to having a teacher assessments, $t(87) = 12.73$, $p < .01$, and that having self assessment significantly increased assessment compared to having peer assessment, $t(87) = 8.57$,$p < .01$. As for cycle2 planned contrasts revealed that having any assessment of students (peer or self) significantly increased assessment compared to having a teacher assessments, $t(87) = 6.34$, $p < .01$, and that having self assessment significantly increased assessment compared to having peer assessment, $t(87) = 5.95$,$p < .01$. During cycle3, planned contrasts revealed that having any assessment of (teacher or peer or self) is the same, $t(87) = 1.38$, $p > .05$, and that having self or peer assessment is the same, $t(87) = 0.45$,$p > .05$.

Evidently, the overall findings throughout the various cycles and modules suggest significant trends that underscore the value of multiple modes of assessment that can be integrated in higher education programs. While initially students tended to give themselves high ratings (vis-à-vis peer and teacher assessments) for obvious reasons, they eventually became more conscious about themselves and their achievement levels. Once they were engaged in the process of assessment, they became aware of how to take ownership for their own learning and enhance their self-efficacy. Accordingly, the variations among self, peer, and teacher assessments started to wane throughout multiple cycles. This suggests that the frequency of using self assessments in tandem with peer and teacher assessments would yield eventually the same results.

Notwithstanding the significant trends, implementing such alternative ways of assessment should be carefully planned and implemented. On one hand, students should be oriented and informed about the process and tools used to meet target goals. Providing rubrics and expectations criteria should be frontloaded so that students are clear on what to expect. In addition, the rationale of the process should be clearly delineated in order to foster self-efficacy, team spirit and effective collaboration as participants build their knowledge and skills (Pajares & Schunk, 2001; Tomayess, 2012). On the other hand, the notion that assessment is an integral part of curriculum and instruction should be cultivated. Both students and teachers alike are usually informed by assessment and evaluation outcomes. Once they collaborate in outlining and implementing educational goals and how to reach them, promising learning and teaching outcomes become easily be attained.

6. IMPLICATIONS AND CONCLUSION

Several implications can be gleaned from this study about the place of actionable approaches to assessment, evaluation and curriculum development. First, it is critical that current assessment practices in higher education are examined in terms of their validity, consistency, and benefit to the learners. Given the paradigm shifts in assessment, academic programs should explore more inclusive and engaging tools to allow students participate in taking charge of their own learning. This can be attained by integrating self and peer assessments throughout curricular and pedagogical activities. Also cognitive and social domains should be considered since learning and teaching are both cognitively and socially bound.

Second, students should be enticed to undergo any assessment mechanisms rather than resist them. Self and peer assessments tend to neutralize the apprehension towards value judgments when teachers are the sole agents in the assessment process. Thus students can become better reflective critical thinkers when they participate in the process. Third, while assessment outcomes inform students and teachers about their achievement and need, assessment data should inform curricular and instructional decisions to make necessary adjustments.

Finally, once self and peer assessments become established viable tools, they can be used as alternative ways to enhance learning and teaching as well as better manage large numbers of courses and students.

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