Responsive and Inclusive Education in the New Normal: A Case Study of Adaptive Curriculum Implementation in a Philippine Tertiary Classroom

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Abstract

This article presents a real-life praxis case study in response to disaster in the Philippines. It analyses whether a two-month holistic academic, psychosocial and logistics intervention that uses an outcomes-based education adaptive curriculum can lead to measurable language learning and student easing from displacement. The analysis tracked the English language skills learning progress and social reintegration struggles of ten displaced tertiary-level Filipino students according to the structure of the Narrative of the Fantastic (Todorov 1975). Analytical tools included: a t-test of results of the diagnostic and mastery set, a psychological test, the Neuroticism Scale Questionnaire, and Critical Narrative Analysis to gauge wellness. The findings revealed that grammar performance showed some significance in t-test results. Natural language collocation and initial final methods of error analysis indicated reduction in usage errors. NSQ results showed stable, average levels of wellness from indicators like anxiety and toughmindedness. Critical Narrative Analysis revealed students' emergent drive towards values, actions and goals associated with leadership. Therefore, in the long-term, the intervention could result in success in mainstream English and communication courses. The study points to the value of continuing education in times of disaster provided that holistic material, psychosocial support and an adaptive curriculum design based on customization and responsiveness to learner needs are implemented.

Key Words

Adaptive, curriculum design, education in contingency, responsiveness

Introduction

The strongest typhoon in the history of humankind - Typhoon Yolanda (or 'Haiyan') - [1] hit the Philippines on the 8th of November 2013 (Philippine National Disaster and Risk Reduction Management Council [NDRRMC], 5 Feb 2014). As such, calamities continue in the Philippines, including magnitude 6.5 earthquakes and aftershocks in Mindanao, the Taal Volcano eruption, and the COVID-19 pandemic. The need to study these as examples of contingencies or exigencies which place at high risk present and future education environments, and affect productivity, continues. In

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[1] SitRep: 3,424,593 families/16,078,18 persons affected; 890,895 families/4,095,280 persons displaced and served in evacuation centers; 28,626 injured; 6,201 dead; and 1,785 missing.

shaping learners as human capital, education administration must go beyond the focus on physical survival towards strengthening mind and spirit to produce stable, able industry practitioners.

Students are primary stakeholders at risk of displacement by exigency, particularly in the new normal characterized by irregularities in climate and weather patterns, or widespread demographic movement that can lead to rampant diseases. In the Philippines, the experience with typhoon Yolanda exemplifies how to ensure learners' welfare, including when distance learning is inaccessible. Human and humane teaching vis-à-vis smart education technologies is important to examine, especially when emergencies demand other than what technology alone can respond to. According to Karaca (2007), in emergencies, human leadership is the anchor point of recovery.

This study explores the impact of the education strategy towards developing mentors into education leaders, the rationale, and the effectiveness of continuing education programs for students when exigency strikes. It focuses on ten tertiary level students in English classes in the Philippines, particularly their performance as learners. It posits that education which uses responsive learner-centered frameworks like Spady's (1994) Outcome-Based Education (OBE) must continue despite natural calamities, pandemics and other emergencies that impact the education environment. This rationale, reflected in the UNESCO Guidebook for Education in Emergencies (2010), is achieved through designing an adaptive or modified course curriculum for an English intervention class. This transformational strategy creates more responsiveness, enabling learners to improve skills, sense of wellbeing, and academic and social reintegration, despite contingency-caused displacement. The research explores interdisciplinary, multidisciplinary, and transdisciplinary strategies that mentors can adapt in order to design course curricula, assess positive effects on student learning during intervention, and assess learning outcomes.

Literature Review

The key literature reviewed in this study comes from psychology and education. Using a multidisciplinary and syncretic lens, it structurally examines the phenomenon of English language learning among students within a post-disaster setting.

Maslow (1943) propounds that supplying basic needs leads to the fulfillment of higher needs, including self-esteem and self-actualization. Based on this, the present study explores the possibility of continuing education by appealing to learners' motivation to engage in learning as the means to survive through having their basic needs supplied as resources to support them throughout the period of the pilot English class, allowing easing of their feeling of displacement, engagement to happen, and learning to occur. A responsive and inclusive approach to teaching and learning holistically answers learners' greatest needs at the moment learning is impeded by displacement. Thus, the UN Guidebook for Planning Education in Emergencies and Reconstruction (2010) recommends that education continue in emergencies for up to three months. This study implemented these prescriptions.

Spady's (1994) OBE framework primarily focused on ensuring teaching output-outcomes are met through constructive alignment and implementation of an integrated learning improvement management process of Plan-Do-Check-Act [PDCA] (Deming 1950). This should guide course design and implementation of class. For education services to be inclusive, curricula are adapted and modified, enabling everyone to learn at their own pace. OBE proves to be a natural pathway to ensure

the learning of every student, such as was the focus of this project, because it takes as a starting point the Philippine Basic Education's Understanding by Design (UBD) curriculum (Wiggins and McTighe 2005). Furthermore, OBE is currently implemented by the University and the Philippine Commission on Higher Education (CHED).

Koga et al. (2004) assert that curriculum modification and adaptation are interchangeable rather than distinct concepts, are not just for basic education special needs learners and should enable continuity at tertiary levels with varying curricula. Ignacio and Perlas (1995) find that adaptive/modified curricula indeed serve various learners' needs under unusual circumstances like exigencies. This paper considers tertiary learners as potentially having 'special' needs redefined by physical, emotional, and psychological displacement occasioned by disaster; but these may be neglected in adult-age tertiary learning, where the focus is on content delivery and skills, rather than learner welfare. Adapted curricula are therefore interventions with learning outcomes that are in accordance with the approved curricula requirements, while adapting schedule, length, intensiveness of engagement and teaching methods to achieve measurable learning outcomes and ensure learner welfare.

As a responsive approach to learner engagement, including preparing learners for writing to help themselves process experiences towards easing displacement, this study drew from Corey's (1990) findings that for adults in particular, creative and collaborative thinking as and in a group helps students learn better and solve real-life problems towards survivorship. De Bono's "Six Thinking Hats," (1985), used as a tool for processing real-life problem-based learning, helps learners reflexively understand how to reconstruct their learning, lives, and locale.

Furthermore, Sixsmith and Daniels (2011) suggest that socio-cultural phenomena like contingencies are best analyzed through action research. Thus, the pilot class studied English and research as praxis-on-the-ground. The main evidence of learning studied in the respondent group is English grammar and writing improvement.

Theoretical Framework

Todorov's Narrative of the Fantastic (1975) is used in this study to examine the teaching-to-learn (Spady 1994) phenomenon when displacement by calamity occurs. Structuralism, as propounded by Levi-Strauss (1958), subsumes Todorov's more contemporary critical approach. The roots of Todorov's formula may be traced to the argumentation method and structure of Socrates and Plato, later modified by Kant and Hegel (1807) in reformulating the dialectical method. This research references Todorov to study the ensuing dynamics between directly opposing factors resulting in a definition and description of the structure of a 'meaningful unit', which in this project is the university English language student's pilot adaptive curriculum English class.

Todorov's Narrative of the Fantastic is used in attempting an interdisciplinary critique from linguistic-literary critical approaches of Structuralism, Critical Narrative Analysis (Goodley 2011), Maslow's hierarchy of needs (1943) (psychology), and management tools and approaches (Deming 1950). The paper analyzes education delivery and performance innovations within negatively disruptive contexts, while studying measurable output-outcomes on learners.

The narrative of the fantastic formula rationalizes inexplicable experiences and changes in life, as Todorov himself expressed, thus: "x + y = z." Explained in qualitative terms in the concrete reality of the study, a society in status quo (x) is altered by change element (y)'s incursion, resulting in a transformed or mediated reality (z). Element (y) is considered a fantastic element altering the equilibrium into a new normal, with z reflecting element(s) and the impact of change.[2]

However, the narrative of the fantastic, mediated and transformed by this study into $x + (y^1 + y^2) = z$, reflects responsiveness. As conceptualized, students and teachers in the education environment's status quo (x) impacted by exigency (y^1) use an adaptive curriculum design (y^2) addressing displacement. Social capital supports operational capital or resources enabling continued learning in resituated or relocated classrooms. The adaptive curriculum as intervention (y^2) addresses multidimensional psychological, intellectual-moral, social, and physical learner needs. Learners are strengthened by strategic responsiveness (y^2) to these needs. Adaptiveness to change results in a three-dimensional experience of teaching-learning, thereby developing skill or stabilizing learner personality. Victims attain survivor prevalence after having experienced change (z).

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[2] See conceptual framework diagram: directly (binarily) opposed y^1 (negative change factor) and y^2 (positive change factor) are exemplified by the initial Philippine K-12 program implementation, and the ASEAN Integration toward standardization of education design, implementation and assessment frameworks, etc. These examples function either as y^1 or y^2, depending on the phenomenon's historical-material context, e.g., instead of being mitigating fantastic element y^2, K-12 implementation may be seen as negative change element y^1 as analyzed from other critical perspectives, like private school owners disenfranchised by K-12's free tuition scheme.

Conceptual Framework

Figure 1: Narrative Structure of Adaptive Classroom Learning

Methodology

This qualitative study of ten displaced university students in a pilot intervention, aimed at bridging English skills, used Outcomes-Based Education (OBE) as a framework for designing adaptive strategies. The class ran from mid-December 2013 to mid-February 2014. Outputs used to gauge English skill improvement included English language use in student essays and journals put through error-analysis and Critical Narrative Analysis (CNA). Wellness was gauged using the Neuroticism Scale Questionnaire [NSQ] (Schier and Cattell 1961) and student expressions in their writing and in the Teacher's Log.

Using Burman and Whelan's (2011) qualitative ethnographic sampling method, the random call for student participation yielded a convenience sample from among University of the Philippines Visayas-Tacloban Campus. The displaced students comprised of ten students with the following characteristics: 5 males and 5 females; 17-21 years old (average age 18.2); 1st-4th year; all from the Southern Philippine Waray ethno-linguistic group. Only one student was officially classified by the University as holding high socioeconomic status. (Figure 2) The total number of students who were affected by the typhoon was 275. Thirty (30) students out of 275 students were with critical needs - not able to go home, find any foster family or seek sponsor housing during the Christmas break, after being evacuated to UP Diliman Campus. The sample size, ten students, represents one third of those students who were with critical needs.
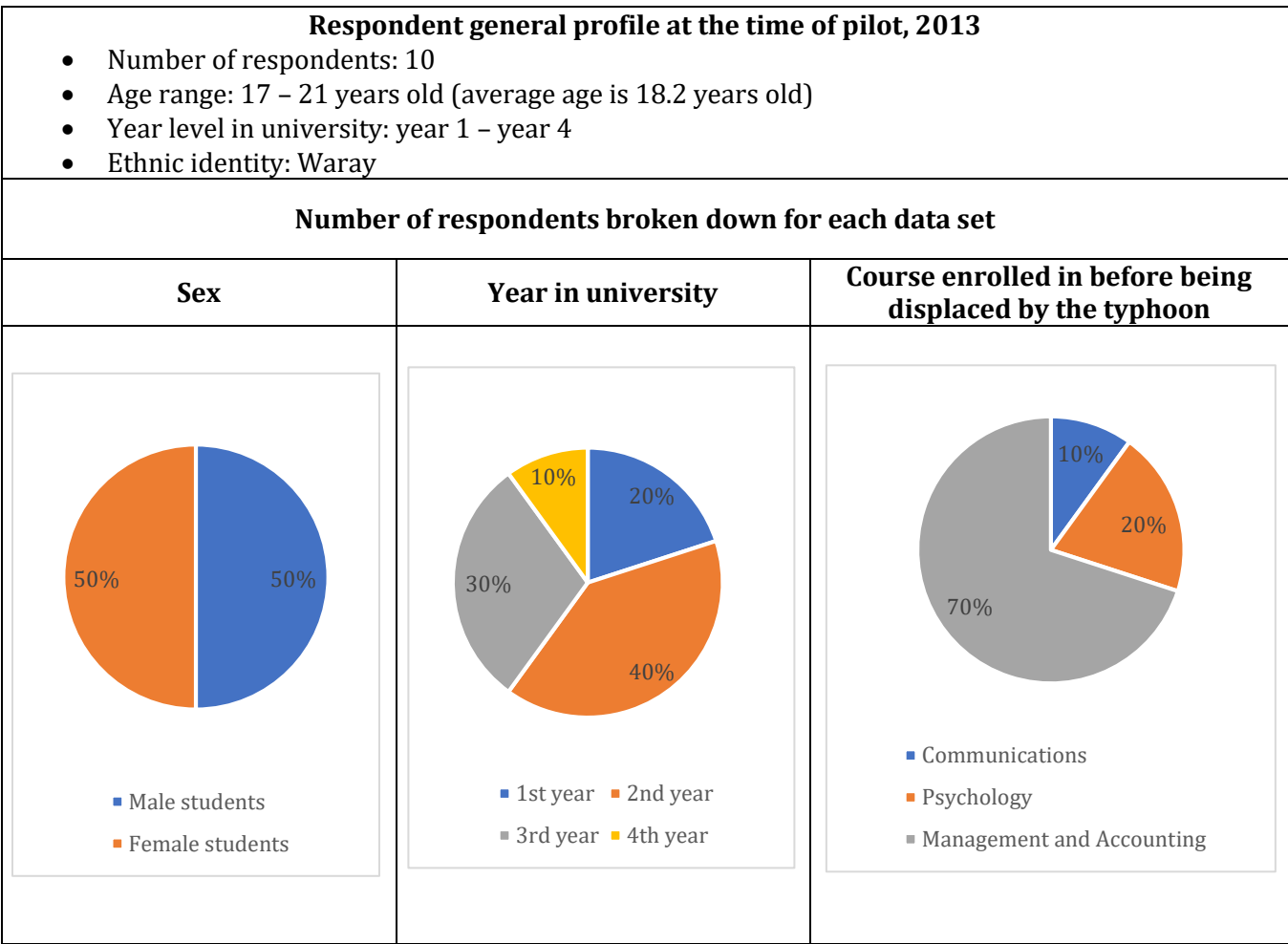
Respondent general profile at the time of pilot, 2013
• Number of respondents: 10
• Age range: 17 – 21 years old (average age is 18.2 years old)
• Year level in university: year 1 – year 4
• Ethnic identity: Waray

Number of respondents broken down for each data set		
Sex	**Year in university**	**Course enrolled in before being displaced by the typhoon**

Figure 2: Respondent Profile

Pilot planning, implementation, and data generation used OBE as the required University education framework, entailing constant objectives-methods-expected output-outcome alignment. This was combined with cycles of Planning-Checking-Doing-Acting (PDCA (Deming 1950), drawn from the discipline of Management. These two approaches were used for the purposes of: redesigning existing syllabi according to OBE; generating and mobilizing resources and social capital, including for makeshift classrooms; reflexive realigning of lesson objectives-strategies during and after daily classes towards responsiveness to learners' needs, while recording progress in the Teacher's Log, including trial-and-error instances of adaptiveness.

The study applied Todorov's (1975) Structuralist framing of the calamity as a Narrative of the Fantastic, then applied Structuralist bricolage (Levi-Strauss 1958) to assess and validate learning output-outcomes. Following Structuralist syncretism, it used such emergency modes of available learning and wellness measurement tools, such as: grammar diagnostic and mastery exams (Learn Inc 1991) scores' t-test and qualitative comparison (Jacobs 1991); journal and essay CNA as a language and discourse analysis method (Goodley 2011), and observation of conduct and behavior. NSQ (1961) assessed the easing of displacement using post-intervention scores for depression, anxiety, and overall wellbeing.

The effectiveness of the modified contingency curriculum and syllabus was assessed using Jacobs (1991). Language items for error analysis parsed structures according to a sense of collocated or 'natural language'. Initial and final entries of discourse were evaluated, but medial output was treated as mentor-mediated throughput towards learner improvement. Goodley's (1991) Critical/Creative Narrative Analysis looked at students' essays as discourse and writing in their journal as narratives to qualitatively identify expressions valuing effective teaching-learning.

Findings

Students initially showed: edginess/nervousness; absentmindedness, staring blankly (1 student response); erroneously entering personal data (2); emotiveness (2), contentiousness and suspicion (1). The students also needed clothing and other material equipage (4).

As an initial strategy, following Maslow (1943), basic needs for food, housing, clothing and school materials were assuaged, simultaneous with teaching-learning; after-class counseling; individual medical, dental, and optometric services managing an eye going blind, mitral valve prolapse, poor vision incapable of reading print (2), dental work, and dermatitis. The co-instructor counseled five students with repressed shame and guilt for looting (1); recurring nightmares (2); insomnia, and the fear of staying at temporarily assigned UP dorms (2).

Students, warned by their English teachers of likely failure in mainstream English Communication classes, improved post-intervention and passed these classes. It is important to address that the findings do not include the result of one student who had lost her notebook and paper before submitting the results. Learners' grammar scores' t-tests showed some improvement. Jacobs' (1991) error analysis method showed 18 points and 25 points improvement from initial versus final entries (discourse samples), except for one respondent (Figure 3).

Results of language skills improvement (method: Jacobs 1991)

Table of numerical test results of eight students (correlated scores per student)

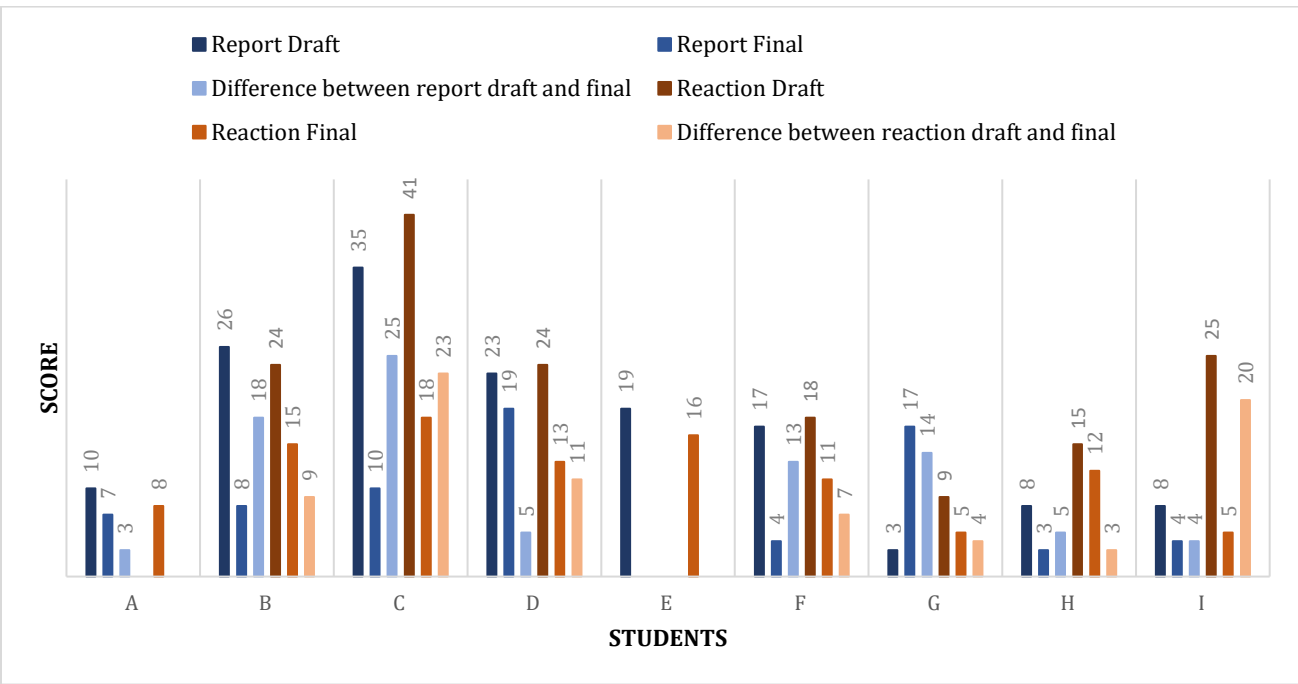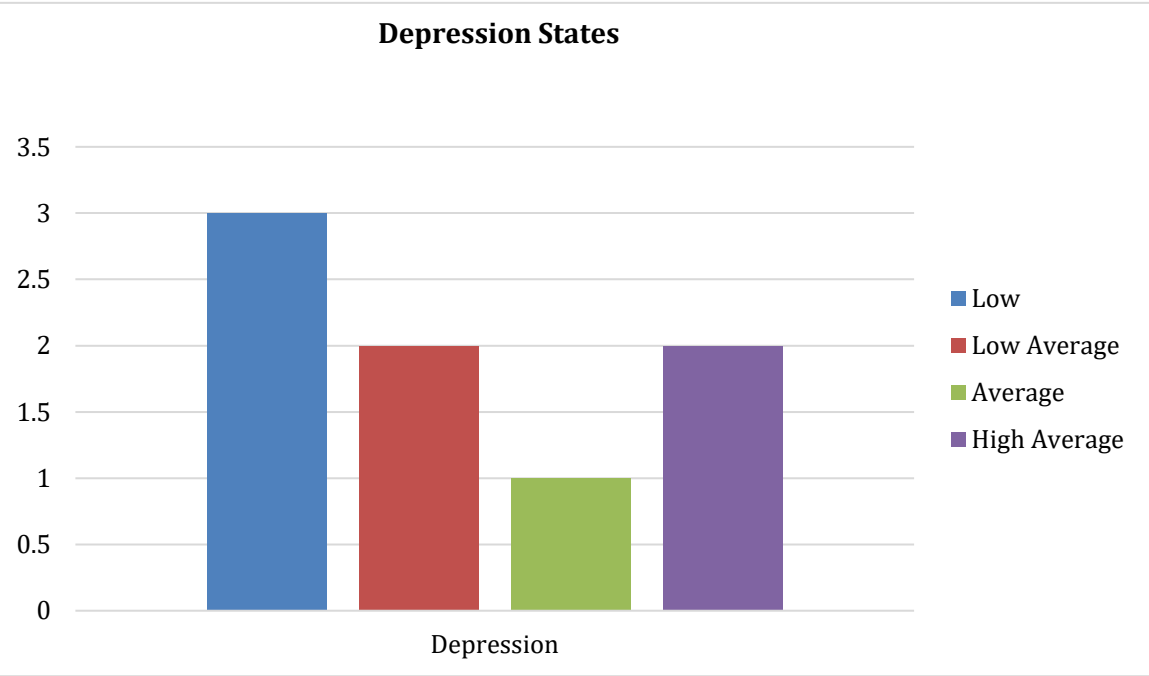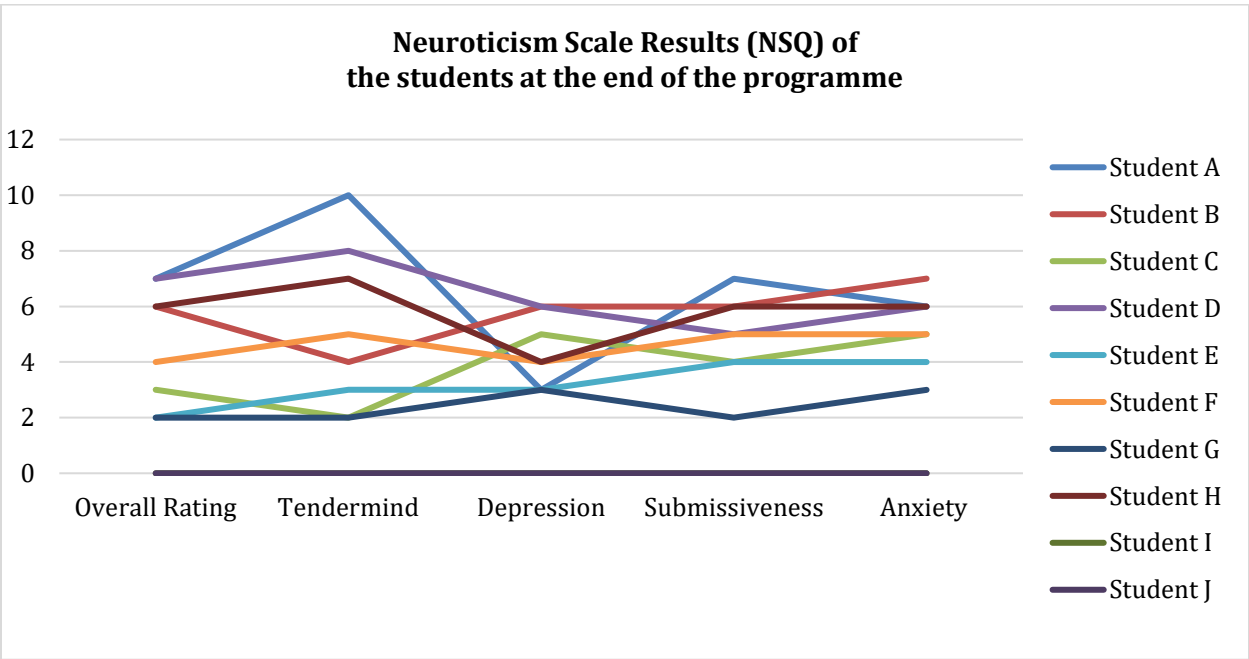| Diagnostic Scores	Mastery Scores	Differences (D)	Square of Differences (D^2)
53	65	12	144
63	64	1	1
51	57	6	36
43	43	0	0
60	50	-10	100
45	49	4	16
52	48	-4	16
44	53	9	81
Total=411/Mean=51.375	Total=429/Mean=53.625	$\sum D$=18	$\sum D^2$=394
			t = 0.8964

Figure 3: Individual Students' Grammar and Written Output Results

Measurable improvement in learning may be attributed to curriculum modifications. Multidisciplinary and tandem teaching were part of adaptive lesson design within an OBE framework that banked on customized learning and mentor, external peer, classmate and professional counseling/coaching including follow-on, monitoring and feedback sessions graduating to less intensity after the two-month intervention. Language learning incorporated group therapy through creative interpretations, role-play, games, and real-life problem-solving, often involving community support for venues, resources, and so on, and extension of learning-cum-earning opportunities in English language skills practicum.

Throughout the intervention, as suggested by Ignacio and Perlas (1995), psychosocial support (counseling, security, housing, materials, services, allowances) likely contributed to students' performance in daily social interaction. Students became positive, trusting, communicative, and cheerful. Anxiety, tendermindedness and toughmindedness, as well as depression scores registered high-to-low average, indicating general wellbeing. (Figure 4)

Neuroticism Scale Results (NSQ) of the students at the end of the programme

Legend: Student A, Student B, Student C, Student D, Student E, Student F, Student G, Student H, Student I, Student J

Categories: Overall Rating, Tendermind, Depression, Submissiveness, Anxiety

Depression States

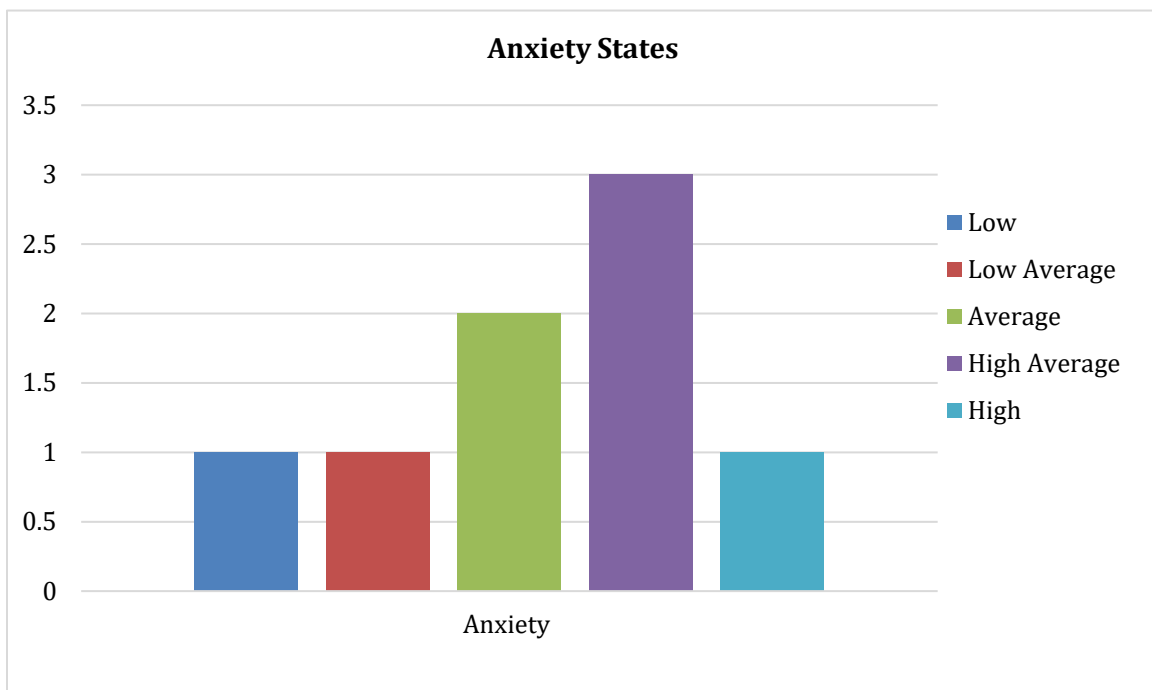Legend: Low, Low Average, Average, High Average

Anxiety States

Figure 4: Students' NSQ Results

Respondents' journal CNA revealed the unintended outcomes of expressions of budding leadership traits and responsibilities. Such expressions included: *"I will do the same for others." "I promise to pay it forward." "I realize I am better off and others are more unfortunate." "I look forward to living every day." "I will never forget what was done for us." "I promise to work hard and be a leader who can serve people someday."* Frequent oral expressions of gratitude, hopes, and dreams are recorded in the Teacher's Log.

All except one (showing consistency with intervention performance) gained transfer and graduated on time from UP Diliman's high-demand quota courses (Engineering and BS Psychology) requiring higher admission and retention grade. After the intervention, as a Customer Service Responsibility (CSR) response to the emergency, the British Council employed all our research participants as exams invigilators, but they were first required to display good communication skills (shown through their application letters, resumes and oral interviews in English as part of the recruitment process). (Figure 5) Administrative work in front and back offices is expected to have further developed oral and written stakeholder communication, clerical, supervision, ethical, and life skills (e.g., filing for tax identification numbers and returns). Four served in student or church socio-civic groups in their community rebuilding efforts, attained medical school admittance (1), passed at one go CPA (2) and Engineering (2) boards, and earned nationally-recognized Junior Philippine Institute of Accountants' best presenter and best paper awards (2). Except for the medical student and the 2018 graduate, all were employed in Manila within 6-8 months of graduation, one within a week of graduation. Five continue part-time work with British Council.

Passed courses during Yolanda sem	Transfer: UPD "quota" courses (2014)	Service to Family and School (non-transfer, 2014)	Graduates as of 2017-18/19	Further Education	Employment (part and full time)	Professional certification (2017 -2018)
10 students	6 students	4 students	10 students	1 student	10 students	4 students
As cross registration students in a campus with traditionally higher GPA requirement for entrance	1 Psychology 2 Engineering 1 Socio-Civic 1 Comms 1 CSWD	1 Psychology 3 Accountancy/ Accounting management Back to community to serve (faith and student organisation based)	2 Psychology 1 Socio-Civic 1 CSWD 2 Accountancy 1 Accounting management 1 Comms 2 Engineering	Medical school	9 part-time employment in British Council exam by 2014 1 in Academic tutoring 1 full-time professional employment within 1 month of graduation (2015) 2 already full-time employed after boards (SGV)	2 CPA 2017 1st attempt 2 Board passers, engineers, 1st attempt, 2018 Others: NA

Figure 5: Summary of Students' Post-Intervention Milestones

Discussion

The intervention strategies implemented yielded improved learner response, as observed in their oral and written language use, and in reflexive analysis of their wellbeing and aspirations.

Teaching over a shortened period across longer, sustained engagement hours (UNESCO 2010) makes learning more probable. This strategy, necessitated by both time and constraints on learners' conditions, intensifies and deepens the experience. Learning inquiry or content placed within real-life problem-solving situations and contexts enables social (re)integration and immersion in reality, as part of course strategy and lesson objective (see Sixsmith and Daniels, 2011). Corey (1990) and Ignacio and Perlas (1995) show that engaging themselves in grappling with their problems and trauma through group and collaborative learning eases learner displacement and builds resilience. Mentors are encouraged to ask and clarify, as well as get feedback and confirmation to be responsive to traumatized students' needs, in keeping with the UNESCO Guidebook (2010). Tracking Perlas and Ignacio (1995), the research and intervention were contextualized within the students' experience and around supplying basic human needs to enable higher, further development towards self-actualization (Maslow 1943). The intervention program functioned as a supplies-distribution conduit for psychosocial and academic survival, without making these appear as dole-outs, following an empowering "Learn-and-Earn Program" design. Ways of "teaching to fish" made learners survive in class and academe, in functional contact with society, and at work. The short-term intervention

built self-reliance (UNESCO 2010). The provision of holistic in- and out-of-classroom support beyond food extended into counseling/coaching, on practically 24/7-teaching duty. This puts into practice Maslow's (1943) theory on supplementing needs and Corey's (1990) work on the value of problem-based, real-life collaborative learning.

Real-life learning used familiar themes in reading materials and activities to create cultural anchoring and stability. Honoring traditions and celebrating national and personal milestones including birthdays give more stability to aspects of personality and reinforce integration. UNESCO's (2010) directives scaffold survival of displaced or disadvantaged learners on family and community as integrating theme, content, and support mechanism in collaborative teaching and counseling. (Corey 2011) Creative material and strategies including games, poetry with content and themes related to learners' issues and needs (Spady 1994, De Bono 1985) were springboards to gradually (re-)orient perspectives. (UNESCO 2010)

Conclusion and Recommendations

This study on the practicability of continuing teaching learners in an emergency, such as a natural calamity, showed that an adaptive curriculum providing learner material, psychosocial and intellectual support resulted in a measurable improvement in the English skills of ten displaced tertiary level students from the Visayas campus of the University of the Philippines. It also showed the unexpected outcome of the expression of emergent leadership aspirations within their discussions, journals and essays. The continuing conduct of their bridging class helped towards their academic and social reintegration.

Exigencies necessitate revaluation of the responsibility to continue teaching by using more responsive modified or adaptive approaches to ease learner displacement. Designing and implementing adaptive curricula put both learners and teachers on a formative track towards responsiveness, awareness of responsibility, and inclusiveness in the learning process. This creates learner awareness of incipient leadership within their own circles of experience.

For Curriculum Studies, examining tertiary-level teaching-learning contingency-classroom dynamics using multicultural and transdisciplinary approaches, counterintuitively proves learning is possible at more intensive levels yielding higher learner output and response, given a modified/adaptive holistic approach including provision for physical needs, and higher-order intellectual, social, and psychological needs. This contingency-classroom helps identify, document, and validate strategies towards implementation of best practices in responsive and transformative teaching into Education 4.0, building resilient, success-driven, 21st century and future workforces with leadership. The way forward is to have further research validate this paper's findings, including translating strategies for group learning (with or without internet access) especially within contexts of isolation and containment, in pandemic-related emergencies like the current corona virus (COVID-19) outbreak. The situation of containment might show the necessity of continuing education programs, but through the use of other alternative systems. This development was unanticipated by the study's design limited to its context. Education responsive to a range of human conditions and dilemmas becomes the driver towards education policy emphasizing the continuity and support at all cost of education, despite contingency, through adequate reform measures. Education 4.0's smart technology use should be underpinned by a policy of inclusive human-driven and humane

contingency response, while reducing risk to learners' and mentors' groups. For school and local and national governance, this indicates education reform directions.

Socially responsible initiatives show learners benefit from extended service mitigating displacement. Educators have a critical emancipatory role as social change-agents championing ethical, more responsive, and inclusive roles in nation/world building, now and into the future.

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