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Transformative Scale-Up of the School of Health Sciences, University of the Philippines Manila

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RESEARCH ARTICLE

Abstract

Background: The School of Health Sciences (SHS), University of the Philippines Manila, established in 1976 offers a one-of-its kind ladder-type, community-based curriculum in health sciences.
Objectives: This study described the SHS curriculum and how it contributed to the transformative scale-up of the education of health professionals in the Philippines.
Methods: This study is a concurrent transformative mixed method design. Data were collected concurrently through interviews of university officials, faculty, students, alumni, communities, and partners as well as observations of review classes and office activities. Quantitative data were collected from school records and performance ratings of students. From the data emerged the basic principles of primary health care and community-based education and they were juxtaposed to describe transformative learning of SHS students and faculty.
Results: All of the 3,481 students admitted from 1976 came from geographically isolated and depressed areas; more than 95% of the graduates are still in the country and chose to serve the communities. The school's ladder-type, community-based curriculum produced competent midwives, nurses, and physicians. SHS did not just transform its students but also the faculty, communities, its partner local, national, and international agencies, and changed the landscape of community-based education in the region.
Conclusion: SHS produced health professionals who chose to serve the communities. It continues to evolve to institutionalize primary health care and community-based education.

Keywords: *Community-based education, primary health care, competency-based curriculum, ladder-type program, transformative learning*

Introduction

In their analysis of health sciences curricula for the past 100 years, the Global Consensus for Social Accountability (GCSA), Irby, Cooke, and O'Brien, and Frenk, Chen, Bhutta, *et al.* reported that the education of human resources for health (HRH) only became longer and more expensive[1,2,3]. They explained that education in the health sciences was too subject- and teacher-centered, hospital-based, relied more on costly diagnostics and only addressed population health problems to a limited extent. Same sources were echoed by the World Health Organization (WHO) and the US National Academies of Sciences, Engineering, and Medicine and called for transformative scale up in the education of health professionals [4,5].

WHO defined transformative scale up of health professionals' education as "the sustainable expansion and reform of health professionals' education and training to increase the quantity, quality and relevance of health professionals, and in so doing strengthen the country health systems and improve population health outcomes [4]." The call was founded on progressivist philosophy that true reforms in educational institutions should be centered on and driven by population health needs and problems. Scaling up in terms of quantity refers to producing the right number of HRH. This is balanced by the dimension of quality where graduates produced are capacitated with the right competencies. Relevance refers to the effective synergy that schools are able to build with the rest of the other systems involved in health and development [4]. A perennial criticism of Philippine health

science schools is producing too many of the same kind, they could not be absorbed by the local health system and so they eventually leave the country [6]. Another concern is the persistently low performance ratings in the board examinations [7]. Among those already registered as professionals, their geographic and professional maldistributions continue [6]. Despite the HRH deployment by the Department of Health to geographically isolated and disadvantaged areas (GIDAs), there remain many communities with limited access to health professionals [8, 9,10].

To address the misalignment of HRH education and population health problems, Frenk, Chen, Bhutta, *et al.* called for reforms and revisited the theory of transformative learning [3]. Mezirow wrote that "transformative learning is a uniquely adult experience grounded in human communication, where learning is understood as the process of using a prior interpretation to construe a new or revised interpretation of the meaning of one's experience in order to guide future action [11]." Taylor explained that transformative learning is composed of unique elements namely centrality of experience, critical reflection, and critical reflection of assumptions [12]. The first refers to interactions, issues, and challenges that learners actually go through in their class encounters. How learners adopt or cope with these encounters represent their "world view." This is a function of their individual contexts and teachers may disrupt this view to give way to critical reflection. Engaging in continuous critical reflection and of assumptions are uniquely adult traits that lead to changing perspectives. Christie, Carey, Robertson, Grainger used these elements in their post-graduate students composed of women in community public health at a regional university in Australia [13]. They used series of interactive sessions on various dilemmas like what do these graduate students think about "the women's place is in the home," "it is unlawful for women to pursue further study," and "women can file for divorce." Learners did not just complete the program but also presented stable and new perspectives on their role in society. They stood in class and debated against their classmates, articulately fought their views and occupied new roles in their communities. Similarly, Nacabu-an, identified the opportunities to disrupt the perspectives of UP Manila third year pharmacy students during their community internship [14]. Students reported getting bored dealing with people of advanced age and recommended to seize the opportunity to get to know these clients, their conditions, and increase the level of their health literacy.

The University of the Philippines (UP), founded in 1908, is the country's National University [16]. It is composed of eight autonomous campuses including the University of the Philippines Manila (UPM). In 1979, UP recognized UPM as the Health Sciences Center because it conducts researches and extension services, and offers academic programs in health, social, and allied sciences, as well as post-graduate clinical training at the Philippine General Hospital. In 1976, the UP Board of Regents founded the Institute of Health Sciences which was later named the School of Health Sciences (SHS) in Palo, Leyte, Central Philippines. In 2008, SHS Baler was founded in the north island of Luzon; in 2010, SHS Koronadal in the South Island of Mindanao was established.

SHS aims to produce a broad range of human resource for health (HRH) to serve in depressed and underserved communities in the country. It was expected to design and test models for HRH development that could be replicated in various communities and in other countries similarly situated as the Philippines [17]. Much have been written about the SHS curriculum and how it continues to pioneer in community-based education [18]. But how it is experienced by its students and faculty, and how it affected them after they leave SHS are yet to be told.

This study described how the School of Health Sciences in UP Manila contributed to transformative scale-up of the training and education of health professionals. Specifically, it (1) presented how its recruitment policy addressed the question on quantity of health science students who would be trained as health professionals, (2) established how the actual curriculum inculcated the transformative learning culture that built the character of SHS students, faculty, and alumni, (3) showed how the built-in features of the curriculum juxtaposed with the principles of primary health care and led to an evolving health science curriculum working within the structure of the health care system. The impetus to document this experience originated from the global call made by WHO in 2011 but further pushed forward after the Typhoon Hain completely destroyed the Palo Campus in 2013. The directive from the University was to determine if SHS is worthy to be reconstructed and rebuilt. The commissioned research team was composed of faculty members and researchers outside the SHS.

Methodology

This is a concurrent transformative mixed method research design. Both qualitative and quantitative data were concurrently collected. The design uses a theory or perspective that guides the interpretation of both quantitative and qualitative data in the study [19,20]. Results revealed curricular features that are strongly consistent with the basic theory and principles of primary health care and described

how transformative learning and scale up of the education of health professionals took place at SHS.

The School of Health Sciences Main Campus served as the main locale of the study. Palo Campus housed the 42-year old SHS that the world's strongest typhoon Haian destroyed. The extension campuses in Baler and Koronadal were also included as secondary locales. The research team divided themselves into these three sites.

The faculty, staff, students, alumni, partners, and communities of SHS including the UP administrators composed the population of this study. Complete enumeration of respondents by purposive sampling included 6/6 school officials and 31/32 faculty members. Those enrolled in the second semester of school year 2014-2015 composed of 45/134 midwifery students, 11/45 students in the Bachelor of Science in Nursing (BSN), and 19/27 Doctor of Medicine (MD) students, as well as 71 alumni, 21 representatives from the local government units, 24 from various units and facilities of the Department of Health, 5 non-government organizations, and more than 50 community residents and SHS neighbors were chosen by convenience sampling.

Primary data were collected from 245 interviews, more than 20 focus group discussions (FGDs), site visits, and observations of the three campuses. Duration of interviews and FGDs ranged from half-an-hour to more than 2 hours. Sites visited included two municipal health offices, three for each of the maternity clinics, rural health units, regional hospitals, barangay (local village) health stations, and resorts to meet the alumni and partners conducting their activities, and one provincial hospital. Community residents were observed and interviewed in their actual homes. Secondary data included the curriculum from all academic offerings, description of activities from instruction to research and extension, academic policies, administrative records, publications, artifacts, and photos.

Quantitative data were obtained from school records and publications. These included lists of alumni and their present employment, students currently enrolled, performance of graduates in the licensure examinations, and roster of faculty members. All quantitative data were summarized and processed according to frequency and percentage distributions using the Statistical Package for the Social Sciences version 21. Qualitative data were analyzed using NVIVO version 10. All variables were grouped and described, compared, contrasted, and analyzed in corroboration with other sources of data. These were converted into nodes that reveal how SHS contributed to transformative learning. These nodes were converted as joint displays. Guetterman, Fetters, and Creswell defined joint displays as a graphical or tabular way of bringing the data together to draw out new insights beyond what quantitative and qualitative information give [21]. Joint displays provide a method and a cognitive framework for integration and this was facilitated by data that emerged and pointed to the basic principles and theories of primary health care and community-based education. The study was registered with the University of the Philippines Research Grants Administration Office and was identified as RGAO 2015-NTTCHPCO12. The Office of the Chancellor through the National Institutes of Health provided research funding. Being a commissioned paper, the research team requested that ethics approval be waived as the research timeline was only for four months.

Results

The succeeding discussions present the main features of the SHS curriculum that reflect the theory of transformative learning and the global call for transformative scale up of the education of health professionals.

Quantity: Equitable admission criteria and "universal health coverage"

SHS' admission policy reflects its stand to address the health and social disparities. Given below are criteria in admitting new students beginning with the midwifery program [27]:

1. High school graduate
2. Must not have more than one year of college experience
3. If out of school youth, preferably for not more than 3 years
4. Preferably 16-25 years old upon admission
5. Comes from depressed community in dire need of health workers; distant from health facilities
6. Parents and scholars are permanent residents of their endorsing communities
7. Must have resided in the sending community for at least one year prior to nomination
8. Nominated by the community through a Barangay Resolution signed by 75% of the household heads
9. Annual family gross income of PhP 80,000.00 or lower (roughly equivalent to US$1,600.00)

10. Physically and mentally fit
11. Committed to stay and serve in underserved areas in her/his municipality, province or region
12. Qualified, accredited Barangay (village) Health Workers (BHWs) or their dependents maybe sponsored by the Department of Health (DOH) under the Training and Education and Career Enhancement Program incentive or the One-Child scholarship benefit as provided for in R.A. #7883
13. Willing to sign a Return Service Agreement of two years of service for every year of training

Since 1976, SHS has been admitting students using the first 11 criteria. The last two are recent criteria. As soon as the qualifying criteria are met, applicants are screened according to five processes. Table 1 shows these recruitment processes from the school's Recruitment and Admission Committee (RAC). Faculty members in RAC analyze the geographic distribution of HRH at given prospective periods in collaboration with agencies like the Department of Health Human Resource Development Bureau and the Department of Interior and Local Government (DILG). Based on their identified regions needing specific health professionals, RAC will contact the Provincial Recruitment Committee (PRC).The PRC is composed of the provincial governor, the provincial health officer (PHO), and a representative from the DILG, the Department of Education (DepEd), and a non-government organization (NGO) working in the community. The Municipal Screening and Nominating Committee (MSNC) is composed of the municipal health officer (MHO) and representatives from DILG, DepEd, and the Barangay Health Worker (BHW). Final result of this process ends with the screening of applicants from the municipalities identified to be in most immediate need initially for a midwife. As a joint accountability, the LGUs are expected to provide the students scholarship to support their studies in SHS.

Since 1976, SHS admitted a total of 3,481 students, spread across the regions of the Philippines. Students were admitted from the original Community Health Worker (CHW), and progressed to the Bachelor of Science in Community Health (BSCH), Community Health Nursing (CHN), the regular BSN program, the combined CHN and BSN, and the Doctor of Medicine (MD) Programs. The table 2 shows that SHS was

Table 1. *Admission Procedure of New Students in SHS*

Designated Committee	Composition	Roles and Functions
SHS Recruitment and Admission Committee (RAC)	College Secretary, four faculty members	Identify target municipalities, inform them about the RAC
Provincial Recruitment Committee (PRC)	Provincial Governor (Chair), Provincial Health Officer, Representatives of the Department of Interior and Local Government (DILG), Non-Governmental Organization (NGO), and Superintendent of the Department of Education (DepEd)	Inform the mayor about the SHS RAC recommendation; provide scholarship
Municipal Recruitment Committee (MRC)	Mayor (Chair), Municipal Health Officer, DILG Rep., DepEd Rep., Barangay Health Workers (BHW) Federation President	Select barangay in need of health worker, instruct barangay about SHS RAC, PRC, screen applicants
Barangay Screening and Nominating Committee (BSNC)	Barangay Captain, DepEd Rep., 3 community members elected at large who are not directly related to the prospective nominee	Recruit applicants, orient the barangay with the MRC
Barangay Assembly	Household heads	Recruit deserving applicants, formulate Barangay Resolution signed by 75% endorsing the scholar, ensure scholarship

able to recruit the most number from Region VIII where the home campus was. All admitted students came from geographically isolated and depressed areas (GIDAs). Only six came from the National Capital Region. The lone foreign student admitted in 1977 hailed from Bangladesh who satisfied the same admission requirements but was very strongly recommended by his community coursed through an international non-government organization.

Further analysis of data on admission procedure reveals that this curricular element is most instrumental in giving applicants from underserved communities access to UP education. Table 3 presents excerpts of a joint display describing the SHS admission procedure as a contributory factor to the transformative scale up of the education of health professionals in SHS. By giving chance to be in SHS, indigent students are guaranteed access to quality education. This is the same principle as universal coverage reform to improve health equity espoused in primary health care.

Quality: universal educatibility and transformative learning

SHS students are academically disadvantaged because previous excellent academic records are not part of the

Table 2. *Total students admitted by SHS, by region and academic programs, 1976 -2014 (Source: Office of the College Secretary, 2015)*

Region	Community Health Worker	BSCH	CHN	BSN regular	CHN&BSN	Medicine	TOTAL
I: Ilocos Region: Northwest Luzon	12	0	0	3	3	0	18
II: Cagayan Valley: Northeast Luzon	42	3	6	7	5	3	66
III: Central Luzon	42	4	7	1	3	1	58
IV-A: Cavite, Laguna, Batangas, Rizal, & Quezon [CALABARZON] (Southeast Luzon)	19	3	3	3	2	2	32
IV-B: Mindoro, Marinduque, Romblon, Palawan [MIMAROPA] (Southwest Luzon)	165	6	23	18	34	4	250
V: Bicol	71	4	12	14	18	7	126
VI: Western Visayas	56	3	10	6	7	5	87
VII: Central Visayas	64	1	7	14	14	3	103
VIII: Eastern Visayas	1174	116	351	73	103	79	1946
IX: Zamboanga Peninsula	58	1	4	10	8	2	83
X: Northern Mindanao	61	3	8	6	6	3	87
XI: Davao	19	0	1	2	2	0	24
XII: South Cotabato, Cotabato, Sultan Kudarat, Sarangani & General Santos (SOCCSARGEN)	59	2	9	5	6	8	89
XIII: CARAGA	145	13	35	10	13	9	225
Cordillera Administrative Region	93	8	15	10	2	2	130
Autonomous Region of Muslim Mindanao	96	5	13	0	12	24	150
National Capital Region	6	0	0	0		0	6
Foreign	0	0	0			1	1
TOTAL	**2182**	**222**	**504**	**182**	**283**	**153**	**3481**

Table 3. *Sample joint display used for the first theme: Universal health coverage (UHC) in the SHS curriculum*

Admission criteria	Phases of Selection of Students	Educational Philosophy	Excerpts from Key Informant Interviews	Findings in the Lens of Transformative Learning
Endorsement of at least 75% of all household heads where applicant lives	From SHS Recruitment & Admission Committee To Provincial, Municipal, and Barangay Screening and Nomination Committee	Universal educability; academic achievement is not a selection criterion	We are 12 in the family and our parents could not send us to school; I learned about the UPM scholarship thru SHS I walked several kilometers to get the 75% of the household signatures	Universal Health Coverage applies in the SHS admission procedure and curriculum
Annual family income of ≤P80,000.00		Grading is only either Passed or Needs Tutorial		
At least high school graduate		Pervasive tutorials to all		

admission criteria. One faculty said that the school once admitted a student with reading comprehension equivalent to a Grade IV pupil. To meet the same professional standards required by law for midwives, nurses, and physicians, SHS adopts the principle of "universal educability." SHS uses only two grades in assessing student performance for formative and summative purposes. "Passed" means the students are able to perform according to standards. "Needs Tutorials" (NT) refers to performance below the standard and therefore needs intervention to pass. Faculty members explained that the tutorials continue until the student reaches the grade of Passed.

Alumni respondents explained that tutorials served as regular after-dinner activity, whether or not examinations were scheduled the next day. The activity became a way to discipline everybody since those who chose not to join and did not perform well were admonished by the class. Faculty members, peers, upperclassmen, and selected students do tutorials. Students explained that tutorials are assigned depending on the available tutors and the proximity of their boarding house with those needing tutorials. All respondents explained that tutorials covered many areas. At the start, tutorials dealt with helping students get adjusted to college life at SHS, settling in the dormitory or boarding houses, improve study habits, and maintain personal hygiene. Tutorials served to fill in the gaps in students' cognitive and attitudinal developments. Those needing remediation in Mathematics and English were tutored either individually or in groups. As the groups became closer and mature, tutorials progressed into extension of classes in professional courses.

Tutorials were held outside regular class hours. Faculty members stressed that no matter how long the sessions took, tutorials must be done especially to those needing extra attention. Students appreciated the tutorials as reflection of teachers' dedication to their learning. A faculty shared that she once requested her husband who was not an SHS personnel to tutor her students in basic numeracy.

SHS graduates passed their respective academic programs and the national licensure examinations. Table 4 presents the performance ratings of midwifery graduates from November 2007 to 2014.

The same pattern is seen among graduates of nursing. Table 5 presents the performance ratings of SHS graduates in the licensure examination.

As of the close of 2015, more than 95 percent of all SHS nurses and midwives continue to serve in the Philippines. They work in Regions VIII and other provinces distant from the urbanized cities. Table 6 presents where the 153 medical graduates work showing that 100 percent chose to work and remain in their respective communities.

Table 7 presents the frequencies of their designations. Some do not work as physicians and perform their other roles signifying the continuous relevance of the ladder-type program.

All students enrolled in SHS in school year 2013-2014 were in Palo when Haian struck the country. All of them were in their respective boarding houses while a few sought

Table 4. *Performance of SHS Midwifery Graduates in the Licensure Examination*

Examination date	Number of examinees	Number who passed	Passing rate	National Passing rate
November 2007	36	37	97.36%	52.59%
November 2008	26	25	96.15%	53.22%
November 2009	54	40	74.07%	55.22%
November 2010	33	24	72.72%	40.00%
November 2011	41	35	85.36%	45.29%
April 2012	38	30	78.95%	45.26%
April 2013	24	17	70.83%	50.50%
November 2013	57	51	89.47%	46.04%
Baler	21	20	95.24%	
Koronadal	31	29	93.55%	
Palo	5	2	40.00	
April 2014	22	21	95.45%	46.22%
Baler	3	3	100.00%	
Palo	19	18	94.74%	
November 2014	50	50	100.00%	50.61%
Baler	20	20	100.00%	
Koronadal	26	26	100.00%	
Palo	4	4	100.00%	

refuge in the houses of their teachers. After the worst storm surge, they immediately went to SHS. They saw other students arriving one after another. They exclaimed in tears "Buhay tayo!" (We are alive!), "Thank You Lord, buhay pa kami" (we are still alive). They group hugged and shed tears upon seeing the two-building campus completely destroyed from the roof to the ground. They shared in tears "Waray na kami eskwelahan" (We don't have a school anymore).

Haian gave the students and faculty another reason to be united in their commitment to serve. As the local government started to clean up the surroundings from debris and thousands of dead bodies, the SHS studens immediately grouped themselves and participated in the activities. They shared while in tears:

"We were still wearing wet clothes and were not able to change in four days. We just continued to help. We survived by just water from donations. On our first day, we were already so hungry and thirsty but gave up our bottled water to the children and the elderlies as there were not enough supplies yet."

All the students who were interviewed also shared the heroic act of Naimah Cale Nagad, a midwife who was finishing her BSN. Ms. Nagad helped deliver a baby amid the fury of Haian on November 8, 2013. Her story can be accessed at

http://www.gmanetwork.com/news/story/388839/lifestyle/peopleandevents/watch-pinay-midwife-who-helped-deliver-baby-amid-yolanda-s-fury-tells-story-on-mtv. The Municipality of Palo released a resolution expressing the deep appreciation and heartfelt gratitude to SHS.

Figure 1 presents another joint display showing transformative learning and scale up of the education of health professionals in the SHS curriculum. The collective

Table 5. *Passing rate of SHS graduates in the Nursing Licensure Examination compared with the National Passing Rate*

Examination date	Number who took the licensure exam	Number who passed	Passing rate	National Passing rate
December 2007	26	24	92%	42.71%
November 2008	1	1	100%	44.51%
June 2009	17	14	82%	42.70%
November 2009	4	4	100%	39.73%
July 2010	19	17	89.47%	41.40%
July 2011	15	14	93.33%	48.10%
July 2012	17	13	76.47%	45.69%
June 2013	7	5	71.43%	42.81%
November 2013 Palo	12	10	83.33%	30.94%
May 2014				38..45%
Baler	10	7	70.00%	
Palo	13	10	76.92%	
December 2014	12	12	100%	57.29%
Baler	10	10	100.00%	
Palo	2	2	100.00%	

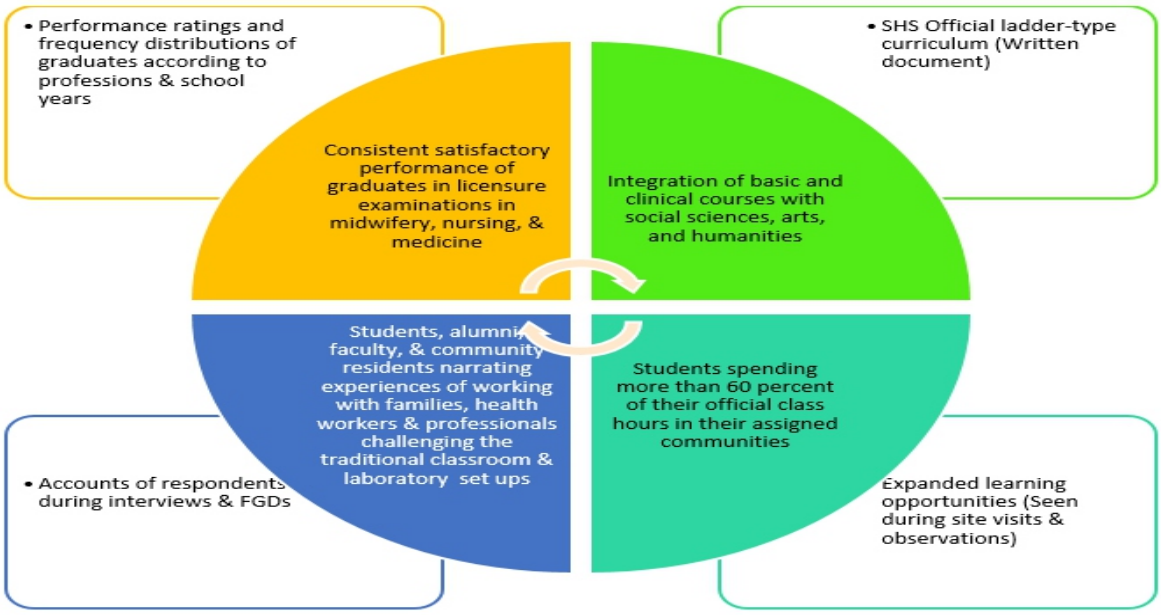

Figure 1. *Joint display of built-in elements of transformative learning and scale up of the education of health professionals in the SHS curriculum*

Table 6. *Where the SHS medical graduates work (As of 2014)*

Region	Region of Origin	Current Workplace
I: Ilocos Region: Northwest Luzon	0	0
II: Cagayan Valley: Northeast Luzon	3	2
III: Central Luzon	1	2
IV-A: CALABARZON (Southeast Luzon)	2	2
IV-B:MIMAROPA (Southwest Luzon)	4	4
V: Bicol	7	6
VI: Western Visayas	5	3
VII: Central Visayas	3	3
VIII: Eastern Visayas	79	86
IX: Zamboanga Peninsula	2	3
X: Northern Mindanao	3	1
XI: Davao	0	0
XII: SOCCSARGEN	8	7
XIII: CARAGA	9	7
Cordillera Administrative Region	2	2
Autonomous Region of Muslim Mindanao	24	24
Foreign	1	1
TOTAL	**153**	**153**

experiences of faculty and students are continuously being challenged in the community creating in them the primary health care competencies and attitudes.

Relevance: learning within the primary health care system

The SHS curriculum evolved according to the needs of the community. The table below presents the SHS ladder-type curriculum. Classes are held for eight hours from Mondays to Wednesdays or sometimes until Thursday mornings. Students proceed to their assigned communities for practicum from Thursdays to Sundays. During regular class days, faculty members meet students in the classrooms and laboratory, and engaged them in lectures with handouts, role plays, simulations, and group discussions. During their practicum, students live with their foster families and perform duties assigned to them by SHS and community.

Service leaves refer to a period of time ranging from 18 days to one month where students are obliged to return to their respective communities and render health care services for free. In the case of those enrolled at the time of Haian, students rendered service leaves from November 2013 until February 2014 because classes and offices were suspended due to the destruction of the whole campus.

During service leaves, students join their barangay's (local village) health center or rural health unit (RHU). They participated in various programs such as immunization of children, micronutrient supplementation and feeding program, and conducted various health education activities for mothers and children. Medical students commented that in the community "part of the work is acting as municipal health officer, community organizer; talking to barangay captains and officials trying to find out the problem in the community, we try to help empower the community. We also do health education." Whatever theories and concepts they were taught in the first three days, they had to apply immediately. They clarified from "Monday to Sunday, there is no time wasted, everything we learn in didactics has to be immediately applied either in the hospital or community settings."

Table 7. *Official Designations of SHS Medical Alumni (as of March 2014)*

Official Designations	Number	Percent
Municipal Health Officer (MHO)	43	28.10
Doctor to the Barrios (DTTB)	17	11.11
Medical Specialists	8	5.23
Resident Physicians	14	9.15
Representative, Regional Officer, Department of Health (DOH)	6	3.92
Private Practitioner	8	5.23
Public Health Nurse / School Nurse	5	3.27
Staff Nurse	4	2.61
Medical Technologist	1	0.65
SHS Faculty	4	2.61
Vice-Mayor	1	0.65
UNICEF Consultant; epidemiologist	4	2.61
Business	1	0.65
Abroad	13	8.50
Just passed the licensure examination	11	7.84
Preparing for the board examination	2	1.31
Not specified	10	6.54
TOTAL	**153**	**100.00**

The SHS constantly collaborates with various agencies and institutions in implementing its community-based education (CBE). In 2008, SHS joined six other health science schools around the world and founded the Training for Health Equity Network [29]. Administrators said that since its founding, SHS has been working with the DOH, local governments, communities, and partner agencies in training a broad range of health professionals for the country. They said that SHS transformed the overall landscape of CBE and healthcare system in the Philippines. To SHS graduates, learning in the real community setting prepared them adequately for their workplace. The 2015 annual reports of the Municipalities of Oras, Biliran Provincial Hospital, and the Maharlika Inter Local Health Zone I Eastern Samar, as well as local health information boards from all the BHWs, RHUs, and birthing facilities visited present impressive achievements of the Millennium Development Goals. They reported that their healthcare team was actively involved in implementing all DOH programs such as strict implementation of facilities-based deliveries, regular pre-, ante-natal, and post-partum care, expanded immunization, feeding and Oplan Timbang (Weighing Program), Tuberculosis Control using the Directly

The next table presents the frequencies of their designations. Some of those who do not work as physicians perform their other roles as nurses signifying the continuous relevance of the ladder-type program.

Discussion

The ladder-type community-based curriculum of the School of Health Sciences was especially designed to provide the Philippines an alternative health science schools where admission, retention, promotion, and completion requirements towards specific degrees will be completely dependent and responsive to the needs of the

Table 8. *The SHS Step-Ladder Curriculum*

Certificate of Community Health Work (CHW)	Bachelor of Science in Nursing	Bachelor of Science in Community Health Work (under review)	Doctor of Medicine
Duration: 1.5 years	Duration: 2.95 years	Duration: 3.20 years	Duration: 4.58 years
Total units: 91 composed of: General Education (GE)*: 36 units (Physical Education (PE)*: 4 units & National Service Training Program (NSTP)*: 6 units: no credit) Community Health courses: 22 units Major & Foundation courses: 33	Total units: CHW (91) + 70 = 161 units composed of: GE: 45 units Legislated: 6 units (PE: 4 units & NSTP: 6 units: no credit) Community Health courses: 28 units Major and foundation courses: 78 units	Total units: BSN (161) units + 28 units = 189 BSN units and Basic Medicine and Therapeutics: 14 units Chemistry, Biophysics & College Physics: 6 units Community Health: 8 units	Total credits: 7, 524 hours spread across 20 quarters; averaging 376.2 hours per quarter. Human Anatomy, Biology, Diseases, Perspectives in Medicine, and Human Behavior
Service Leave: 660 hours (~1 month)			
Return Service Agreement: 2 years to stay and work in the country for each year of scholarship			

*Refers to courses legislated for all students in the Philippines to complete.

communities. Respondents reported that the school has been faithful in keeping up with this vision. The school has produced more than 3,000 competent health professionals who continue to serve the poor and underserved communities.

Results show that the collective experiences of students with the faculty and school have inculcated in all of them the values of resilience, service, heroism, and voluntarism. From being financially and academically disadvantaged, these students from poor families and communities embraced the basic principles of healthcare, primary health care, health sciences, and how they could be applied to the communities. The immediate transfer of these knowledge, skills, and attitudes from the traditional classrooms to the real-life communities, hospitals, health clinics, and other work-based settings led them to choose the community, reflecting transformative learning. From concrete experiences, to the not-so-receptive attitudes of the community at the beginning of their interactions, they are able to apply appropriate organizational and sociological approaches to connect with the communities and led them to a change in their world views.

Resutls obtained yielded strong features of the theory of transformative learning. The SHS curriculum has built-in components that provided both students and teachers opportunities to have collective experiences that challenged their respective comfort zones. These experiences disrupted their views of things, and continuous exposures contributed to their development of completely new perspectives.

Aside from the theory of transformative learning, results further point to the consistency of the SHS written and experienced curricula to the basic principles of primary health care (PHC) and transformative scale up of the education of health professionals. These basic principles are very strongly

palpable within the SHS teaching-learning experiences. Results juxtaposed the features of SHS curriculum with primary health care making it in the end, the response of the school towards transformative scale up of health professions education.

Conclusion

The School of Health Sciences is a model program and is highly appreciated by all its stakeholders for its innovativeness, relevance, and responsiveness to help solve the communities' health problems.

The school remains as the most active implementer of the past and present programs of the Department of Health and its partner agencies. Its selection, retention, promotion, and graduation policies reflect the basic principles of primary health care. As the population health concerns change and the programs of DOH, the SHS continues to evolve and contributing to transformative scale up of the education of health professionals in the Philippines.

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