Outcome of Integrating Service-Learning in the Medical Curriculum: Towards Development of Community-Oriented Physicians

Polly T. Chua-Chan, MD, FPAFP[1] and Razel L. Kawano, DrPH[2]

ABSTRACT

Doctor of Medicine graduates shall commit to the improvement of society's well-being and public service. In the Philippines, 70% of physicians are hospital-based, only 30% are in the field or community where the need is greatest. One strategy stated in the Philippine Health Agenda 2016-2022 is to harness the power of strategic human resource for health development through curricular revision of health professions directed towards primary care to make it locally and globally responsive. Pedagogically, service-learning (SL) connects academic experience with community service with reflective practice. This paper aimed to determine the outcome of integrating service-learning as the innovation being diffused in the Medical curriculum of Far Eastern University-Nicanor Reyes Medical Foundation (FEU-NRMF) towards the development of community-oriented physicians. Convergent parallel mixed method design was used to describe the design and implementation of SL integration narrated as Institutionalization, Structural Framework and Support, and Campus-Community Partnership.

The crafting of the new Philosophy of FEU-NRMF Education paved the way for integrating SL as a method of teaching for all program offerings of FEU-NRMF. This is "institutionalizing" SL as a means for sustainability. To provide structural framework and support for SL program, the following were done: Orientation and awareness of SL, capacity building, logistic/technical and financial support, Committee on Community Engagement commissioned to be the permanent system for SL program. The Committee on Community Engagement likewise was tasked to partner with communities for Campus-Community partnership.

The SL process was also assessed through faculty's curriculum linking service to the learning goals in at least one course per year level with service-learning project either partly or as a whole of the course. Higher year levels tend to use higher intensity community activities as assessed using the Instructor-Centric Taxonomy of SL. Based on National Youth Leadership Council (NYLC) 2008 standards, projects were evaluated with lower level for projects for basic courses and higher levels for clinical courses commensurate with the length of time of the SL projects. Generally, students attained their course learning goals. Learning is by applying theory in actual practice and/or through reflection and making sense of what was experienced. Retention in the course and passing percentage cannot be attributed solely from SL but believed that community engagement creates and sustains interests that can contribute to retention and passing of the course.

As to the outcome of SL, in general, the impact of SL for faculty is positive since teaching the course reaffirmed the importance of SL to service oriented profession. Faculty had become community engaged to plan and implement a SL course. A total of eighty-eight (88) SL projects were conducted for the whole semester constituting health education, health promotion programs on personal hygiene, prevention of parasitism, financial allocation for health, health system management, community health and the like. For the students, around 84.54% of them across all year levels expressed their intention to practice Community Medicine or Public Health. Comparing influence of SL between the Basic and Clinical courses with their intention for Community Medicine or Public Health practice in the future showed no statistical difference.

[1] FEU-Nicanor Reyes Medical Foundation;
[2] Angeles University Foundation

That means, it was the exposure to the community per se, regardless of the timing that influenced them to have the intention. Possible explanation is the role modeling of community-engaged faculty somehow affects their intention (Social Cognitive Theory). Based on the theories of reasoned action and planned behavior, it is seeing the reality or the need in the community that can influence the students to have the intention, likewise, exposure to the community will increase their self-efficacy (Theory of Planned Behavior) that further intensify the intention.

Around 85% of community participants said that they were helped a great deal by the services rendered to them. Help included additional knowledge, consultations, health screening, etc. None claimed that their rights were violated.

Follow up study among the cohort of students who experienced SL is recommended to determine whether the intention of community practice was actually translated to community or public health practice, hence documenting the success of the intervention of curricular reform in medical education addressing the inequitable distribution of health human resources especially in the community where the need is greatest.

Key words: Service-learning (SL), medical curriculum, community-oriented

The very heart of the medical profession is service, and as such, Doctor of Medicine graduates shall demonstrate an orientation to service in their profession (CMO 18 series of 2016). In the Philippines, as of December 2011, our country had 0.19921 doctors per 1000 population (National Database of Selected Human Resources for Health (NDHRHIS). Human Resources for Health (HRH) are inequitably distributed. Approximately 74% of HRH are in the hospital setting and barely 30% are in the field or community (NDHRHIS 2017). The real need is in the community level where primary care is provided. Among the reasons for such situation include the less attractive working conditions in the community setting, notably in areas which are depressed and isolated, with shortage of supplies and equipment, and lack of cultural stimulation are experienced. In other countries, similar observations were noted such as: fewer opportunities for employment and education for their families; meager income in practice; and lack of growth in terms of training and higher level facilities (Wibulprasert and Hempisut, 2004). Sadly, there are municipalities across the regions that remain doctorless (HHRDB, DOH, 2012).

Specialization would often be the preferred career path of students of Medicine, and less desirous of choosing community work. It is therefore the responsibility of the medical schools to strategically plan on how it could address the challenges in serving the community. Likewise, it is the medical educators' role to nurture medical students and inculcate in their minds the value and commitment to serve the community.

Unfortunately, the Philippine medical curriculum is greatly patterned from western medical education, with orientation towards subject, teacher, crisis and hospital.

A method of education called Service-Learning (SL) combines explicit academic learning objectives in community service, preparation, and arid reflection. Service-learners are expected to provide direct service to the community, to learn about and reflect upon the community context in which service is provided, and to understand the link between their academic course work and the service. Seifer[1] and Dashash[2] remarked that this teaching strategy develops community-responsive physicians.

Integrating SL in the medical curriculum hopes to develop future doctors to be community-oriented. As they appreciate and exemplify the service tenet of their chosen profession, eventually they may have intentions of practicing in the community where doctors are most needed. On the other hand, community engagement as a process of service-learning can address the population's health needs and thus fulfill the social accountability of the medical school.

Influence of Medical Education on Future Community Practice

Role Models, Role Playing Opportunities and Institutional Influences

According to Graduate Medical Education National Advisory Committee (GMENAC) Technical Panel on the Educational Environment, there are three important factors affecting medical practice: Modeling by Faculty that passes values and attitudes that can have long-term impact, role-playing of students to test or practice newly learned knowledge, skills, values, and attitudes and influences of the Institution, in providing resources.[3]

Reflection

Englander[4] defined reflective practice as exhibiting awareness of self in relation to others and of their perspectives. It is engaging in scholarly activity, putting knowledge into action by reframing problems and pursuing actionable solutions. It is keeping the whole in mind, even while focusing on the details. Practicing reflection is an important domain for choice of career.[5] Cultivating this domain, along with modeling, realigns their own behavior to move towards a goal of aspiration.[6]

Synthesis

The following elements in medical education can be put together, to influence future community practice: 1) A socially accountable medical education institution supportive of a curriculum that develops the future community-responsive health workforce; 2) Community oriented faculty serving as role models, linking learning goals with community engagement; 3) Student applying theories to practice by hands-on experience through services to the community that solve real life issues of the community; and 4) Reflective thinking correlating community activities with the learning goals. All of these are features of SL. This, perhaps, may change the landscape of medical education towards development of community-oriented physicians.

Service-learning (SL)

Service-learning is the way by which learners understand and create knowledge through active involvement in community activities (National Community Service Trust Act of 1993). It is the application of what the students learned from the classroom. This is the realization and manifestation of students' learning beyond the theories they gained from the classrooms.[7] On the other hand, Kendall[8] mentioned that service-learning allows people to be engaged and be responsible in doing well for the benefits of the many. It involves people to commit, participate, and take part on the activities. It develops people to be service-oriented. Lastly, learners reflect seriously on the important service experience they had. Furthermore, Furco[9] said that service provider and the benefactor gain equally. Thus, classrooms focus shift from institutional to community-based.

SL differs from community service, volunteering, internship or field work. Volunteerism is charity. It is providing service, but with no intentional connection to reflection or learning. This can be an ongoing activity, but usually occurs on a one-time or sporadic basis. Community service programs engage students in activities primarily to meet community needs. It may be more structured and more sustained than volunteering, giving greater benefits to the service recipients. However, it does not necessarily include reflection and may lack academic credibility. Internships are clinical exposures in which students engage to learn more about their area of study and gain practical experience in a potential career field. While field work or field education is generally connected to the curriculum, field work is for enhancement of students' learning in their field of study. Reflection may be an element of the activity. Both internships and field work may address community needs, but they do not necessarily do so.[9]

Bok (1982) mentioned that re-directing education and research to community service curriculum should be a social responsibility of contemporary educational institutions. However, universities often neglect the capacity of communities to provide meaningful education, research and generation of knowledge. He reiterated that application of classroom theories by way of faculty community involvement and community-based researches must be strengthened, supported and developed. For Jacoby[10] the trend of modern education is responding to the call of inclusion of social accountability to academic institutions' curriculum. That is, higher educational institutions need to partner with communities to develop instruction, research and functions of learning.

Elam, et al.[11] stated that service-learning is also equated to community service-learning, academic service-learning, community-based learning, community learning, and experiential learning. It is providing structured educational experiences with definite learning goals directly connected to student lessons. Thus, service-learning students apply their knowledge in support of their neighbors and community. They can gain knowledge and skills from their real community encounter; characters are built and they become active citizens as they join others in school or community; create service projects in areas like education, public safety, and the environment. Service-learning can be applied in all courses and year levels. It may also involve one student or group of students, a class, or the entire school.

The foundation of service-learning is rooted on John Dewey's "learning by doing." This means knowledge plus skills with the addition of experience is the answer to learning; that learning is best acquired by experience; that learning commences with an issue or dilemma and carries on with the use of multifaceted ideas and refined skills to complex problems. Dewey believed that "educative experiences must lead out into an expanding world".[12] For Seifer, the community serves as a laboratory for students to apply their acquired knowledge, discover relationships among ideas for themselves and actively discover new information which will be beneficial for the academic institution and community.

Service-Learning in Medicine Education

Students of the University of the Philippines are regarded as "Iskolar ng Bayan". They are also required to have a two-year return service after graduation. Gray mentioned bonded scholarships, return of-service obligations and availability of rural-based postgraduate training impacts rural practice.[13]

As the Philippines' premier university, UP takes responsibility of shaping the minds that shape the nation. It applies service-learning by providing transformative education, enabling and encouraging students to take creative and constructive action that contributes to the improvement of their community, the nation, and the world. Likewise, to lead as a public service university by providing various forms of community, public, and volunteer health services, as well as medical, scholarly and technical assistance to the government, private sector, and civil society while maintaining its standard of excellence (UP Mission statements 1 and 3). It is not surprising that most graduates of their program end up in Public Health service.

In Mindanao with its poor population has led to the creation of Ateneo De Zamboanga Medical School, which was founded in 1985. The deal was that graduates would return to their villages or small towns of origin where health facilities were rare and with poor health indicators. Its medical curriculum is community-oriented, which includes a Masters in Public Health Education for the medical graduates in their internship stage (Ateneo De Zamboanga web). Hence, majority of graduates of their program stay and serve the country.

Integration of Service-Learning in the Medical Curriculum

Seifer[1] and Cauley[14] suggest the following principles and elements for successful integration of service-learning: Institutionalization, Structural Framework and Support for Action and Reflection, Campus-Community Partnership and Quality Improvement.

Institutionalize Service-Learning

The program should start with the recognition that service-learning is an integral element of the institution, and the service being provided is an essential learning activity for future doctors. The institution formally acknowledging service-learning program will solicit involvement and commitment of faculty, students, and community partners.

Structural Framework and Support for Action and Reflection

Pedagogically, service-learning is learning by way of action and reflection. The program's framework and activities should have a blueprint addressing this dual approach. Initially, students must be adequately equipped by training them for service work. Next, the programs should provide students reflecting and exploring opportunities relating their service and the learning goals. Lastly, permanent systems should be established to raise leadership among students. An office of Service-Learning to coordinate activities and pooling of resources facilitates the engagement of students with the community partners. This also includes time and other resource investments.

The Community-Campus Partnership

The word "community" may not be limited to a group of people living together sharing physical space or by virtue of proximity (geographic community) but may also mean communities of interest or having a peculiar characteristic in common (e.g. LGBT community). A partnership established between faculty and the service site ensures educational training of students and continuous service in response to community-identified needs.

Process of Designing a New Course

Faculty should plan which component of service should be placed in the syllabus. Service should not be merely a segment to the course; rather, the syllabus should explain why such service is essential to the course. This requires faculty to think about the precise link between their module and the objectives of the department, between the mission of the institution and the expectation of the community, and of greatest importance, between the goals and the expectations of learners.

The steps in designing a module or course include four phases (Figure 1–Curriculum Model for Service-Learning).

Taxonomy for Service-Learning Course

Hahn, et al.[15] developed the Instructor-Centric Taxonomy for Service Learning Courses. The course attributes namely: reciprocal partnerships; civic competencies; community projects; diversity of interactions and dialogues; critical reflection and assessment may vary from low intensity to high intensity (Level 1 being the lowest and Level 3 being the highest). The taxonomy can be used to relate with student outcome, faculty and course development, research purposes as well as supporting institutional assessment goals.

Evaluation Method and Quality Improvement

Even at the start of the program, monitoring and evaluation should be in place, providing regular feedback to stakeholders to improve and develop the program as necessary. The evaluation process includes assessing impact on students, academic staff, department and professional disciplines and community.[16]

Impact assessment of the modules at all levels is critical. The faculty needs to determine what indicators and methods to be used to measure impact (Gelmon et al, 2001). A survey using Likert-type response format is a relatively easy quantitative

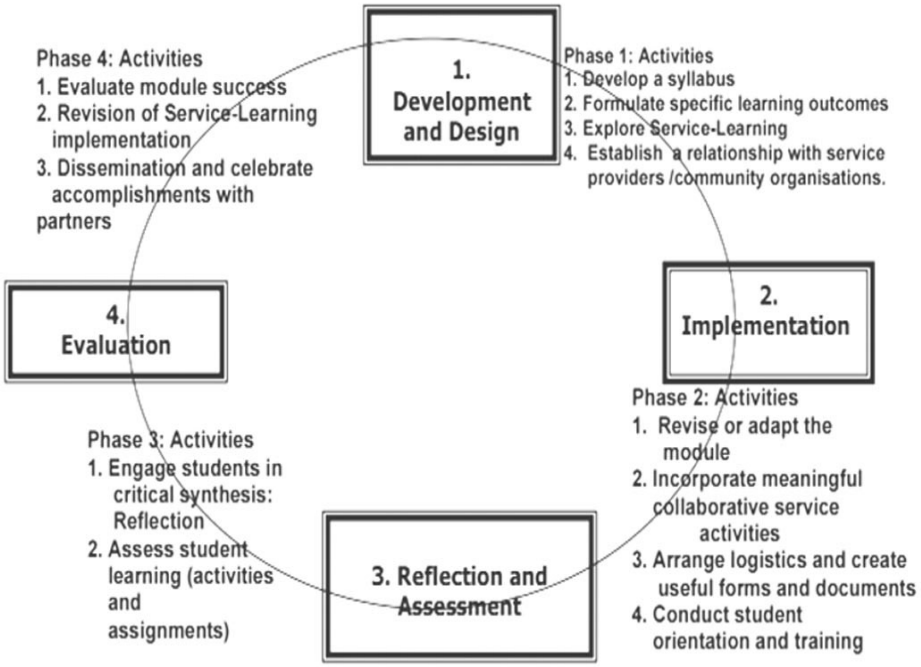


Figure 1. Curriculum model for service-learning.

method to gather mean ratings on various aspects and components of the service-learning experience. This type of survey can be used with students and service providers or community agencies. Focus groups and interviews are qualitative approaches that provide rich information. Likewise, examination of written reflection journals is useful.

Areas to be evaluated will be students' community-service orientation and intention to practice Community Medicine or Public Health; Engagement of Faculty with the community through their curriculum; and community's satisfaction on meeting their health care needs.

Service-Learning Standards for Quality Practice

In 2008, through convergence of research and practice, the K-12 Service-Learning Standards for Quality Practice was developed by the National Youth Leadership Council. It is composed of the eight evidence-based standards and 35 indicators in simple, attainable, and measurable forms that K-12 practitioners can use to ensure high-quality service-learning practice. The standards are: meaningful service, link to curriculum, reflection, diversity, youth voice, partnerships, progress monitoring and duration and intensity. These standards are used as a tool in achieving educational improvement, community development, and social change. These eight standards are rated from Level 1 to Level 4 describing the service-learning project containing common usual programs to intentional incorporation of student-centered service-learning programs. The overall performance of the students in achieving service-learning goals are rated using the NYLC rubrics assessing reflection, student engagement, ability to apply and articulate knowledge, and measurable assessment is used.

Conceptual Framework

Aim: To determine the outcome of integrating service-learning in the medical curriculum. Specifically, to describe the design and implementation of service-learning in medical curriculum, assess the service-learning process, and evaluate the outcome of service-learning among faculty, students and community partners.

Methods: This study employed a convergent parallel mixed method design wherein both quantitative as well as qualitative data were collected and merged at the same time, to provide complete analysis of the research problem. The information was integrated in the interpretation of the overall results. This study took place at FEU-Nicanor Reyes Medical Foundation, West Fairview Quezon City. The specific program concerned is the School of Medicine.

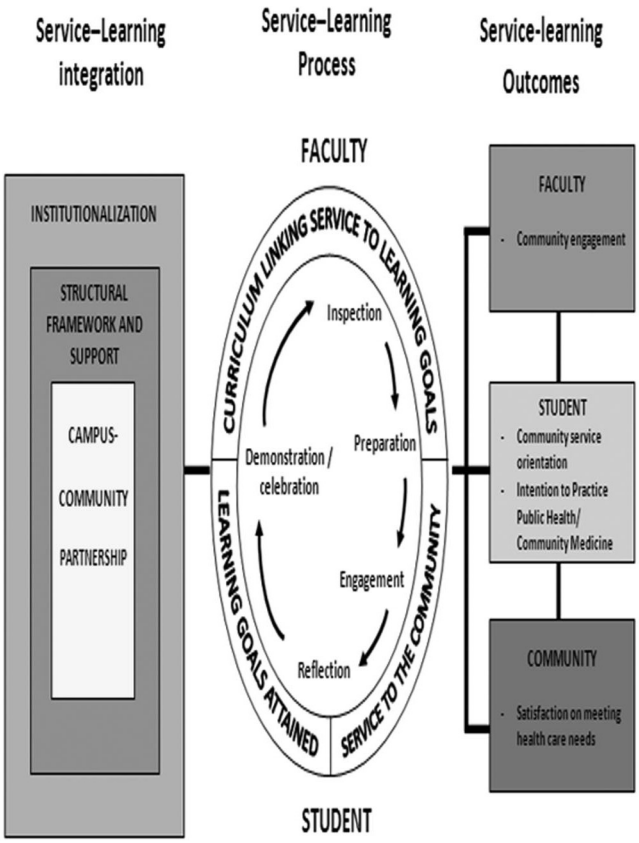


Figure 2. Integration, process and outcomes of service-learning in medical curriculum towards development of community-oriented physicians.

Sample Size

Total enumeration was applied in the study since student evaluation of the course is routinely gathered among all student enrollees. All consenting students enrolled in the four subjects were included in the study. All faculty involved in implementing service-learning projects were likewise included (Table 1).

Research Procedure

Service-Learning Integration

The design and development of service-learning integration into the medical curriculum were described

Table 1. Number of students enrolled and the faculty implementing service-learning projects in different courses.

Course		No. of Students Enrolled	No. of Faculty Implementing Service-Learning Project
Community and Family Medicine I (CFM I)	Basic	633	2
Parasitology	Basic	295	2
Epidemiology and Health Management (EHSM)	Clinical	319	2
Community and Family Medicine IV (CFM IV)	Clinical	34	2
Total		1,271	8

For the community partners - all consenting recipients of the service-learning projects from the adopted communities or communities of interest are 18 years old and up. (Approximately 500)

as to Institutionalization, Structural framework and support and Campus-community partnership. The ACTION PLAN was used for this purpose.

Service-Learning Process

Planning of service-learning project was assessed using the first step on Preparation of the Checklist for Planning Implementing and Evaluation of Service-Learning Experience offered by Jenskin and Sheehey. The instructor-centric Taxonomy for Service-Learning Courses wasadopted from the Indiana University-Purdue University, Indianapolis (IUPUI) Center for Service and Learning, Office of Community Engagement was used to assess the course design.

Service-learning was integrated in one representative course per year level. To assess the service-learning process, each course was evaluated based on the adopted NYLC 2008 evidence-based standards and indicators.

The overall performance of the students' achievement of the service-learning goals were likewise done using the NYLC rubrics assessing reflection, student engagement, ability to apply and articulate knowledge, and measurable assessment.

Service-Learning Outcome

For students and faculty, data were collected by the Health Professions Education Unit (HPEU) staff who are not teaching or do not have clinical interactions with the students and faculty. Likewise, data from the partner communities were collected by the Community Engagement staff.

One-on-one interview with the faculty were done at the semester's end. These were held at the 15th floor Conference Room of the NR Tower. The 8 faculty members involved in the implementation of the service-learning projects participated after securing consent. Pre-determined questions were asked pertaining to the effect of service-learning to faculty, on students' attainment of learning goals through community service. The whole procedure lasted for about 30-40 minutes.

To assess students' learning, quantitative as well as qualitative surveys and reflection focused on the value of service learning as an applied tool for learning course concepts were used. Student surveys included 15 items on whether their attitudes toward community service in the course changed during their service-learning experiences. Each item indicated students' level of agreement via a 4-point Likert scale (strongly disagree to strongly agree). Students were asked to qualitatively reflect on their service-learning project experiences in their evaluation section, particularly focusing on any applied learning gained in the course and intentions to practice Community Medicine or Public Health. This roughly consumed 15-20 minutes to accomplish. Data collection was done one week after the grading of the service-learning project presented so that responses had no bearing on their grades.

After the implementation of the service-learning projects, the community partners were requested by the Community Engagement staff to answer

a self-administered questionnaire after securing consent. Feedback on the things they gained out of the community engagement, their satisfaction on how identified needs were met and how the service-learning experience can be improved were determined using a questionnaire. This took about 10-15 minutes.

A summary of the instruments/tools for data collection in the different phases of the study is shown in Table 2.

Data Analysis

In the integration phase, narrative was used to summarize and present data on Institutionalization, Structural Framework and Support and Campus-Community Partnership.

As to the service-learning process, planning of service-learning project and the assessment of the course design were described and presented in tabular format. Each service-learning course was evaluated based on evidence-based standards plotted against projects' practices and service-learning experience and programming indicators (NYLC standards and indicators) and compared across courses and year levels. Likewise, the achievement of the service-learning goals was assessed using the NYLC rubrics and compared across courses. Furthermore, qualitative analysis was done on the reflective notes from feedback of both faculty and students on the benefits and values of service-learning.

On the part of the students, attainment of course learning goals was based on feedback on what they

Table 2. Research instruments/tools used for data collection in the different phases of the study

Phase	Instruments/Tool
Service-Learning Integration	
Institutionalization, Structural framework and support, Campus-community partnership	Action Plan Matrix [Records Review, Photo Documentation]
Service-Learning Process	
a. Faculty's curriculum linking service to learning goals	
1. Planning of service-learning project	Checklist for Planning of Service-Learning Project (Stage One: Preparation)
2. Assessment of the course design	The Instructor-centric Taxonomy for Service-Learning Course
3. Assessment of the service-learning project	NYLC 2008 Evidenced-based Standards and Indicators
4. Achievement of service-learning goals	NYLC 2008 Rubrics assessing students achievement of service-learning goals Faculty interview Students' Reflection Papers
b. Students' Course Performance (attaining course learning goals, retention and grades)	Final grade, Reflection Papers, Retention Rate, Passing Percentage
Service-Learning Outcome	
a. Faculty:	
1. Impact of Service-Learning	One-on-one interview using structured questionnaire
2. Community-engaged	
b. Student:	
1. Community Orientation	
2. Intention to Practice Community Medicine/Public Health	Feedback questionnaire on service-learning; Insights and Reflections
c. Community:	
Satisfaction on meeting identified health care needs	Feedback questionnaire

learned, as well as their grades and retention in the course. To examine the effect of service-learning on retention and grades of students in the course, data from the batch of students who took the same subjects before service-learning was implemented were gathered. Independent t-test was used to determine grade differences, and retention rates were compared.

The outcome of service-learning was evaluated by the service-learning impact on faculty and their engagement with the community; Quantitative data on agreement of change in student attitudes toward community service course after service-learning experiences was analyzed using descriptive statistics.

Outcomes on students' community service orientation and intention for future Community Medicine or Public Health career were described and further analyzed to compare year level differences using Chi square test. On the other hand, qualitative analysis was done on the reflective notes elaborated on the value students placed on the community work and their appreciation of community-oriented learning. Reflections were analyzed by careful reading, collecting detailed notes, key initial themes identification, recording quotes and key concepts. Finally, main themes expressed were clarified and reanalyzed to achieve agreement and categorization into prominent themes that emerged.

Qualitative data on satisfaction of the community on meeting their health care needs were likewise described and narrated.

Ethical Consideration

This study gained Ethics Clearance from the Angeles University Foundation – Center for Research and Development (AUF-CRD) Ethics Review Committee on June 4, 2018 with ERC Ref No. 106

Informed consent of participants were secured prior to data collection. The participants were not forced to join, and were also allowed to withdraw anytime without prejudice.

For students and faculty, data were collected by the Health Professions Education Unit (HPEU) staff with no teaching or clinical interactions with the students and faculty. Likewise, data from the partner communities were gathered by the Community Engagement staff. Data collection for students was done after the service-learning project had been presented and graded to bear no influence on grades. One-on-one faculty interviews were done at the semester's end. As a token of appreciation for the participants, students received bookmarks on SL. Celebration of SL output through poster presentations was likewise done. Best SL projects were featured in the official web of the school under Community Engagement. Faculty's community involvement was likewise included as participation in the Foundation Day activities bearing points for faculty promotion. Partners from among the community members were appreciated and given refreshments for their participation.

Reflections and answers to the survey were kept confidential and participants were not identified. Interviewees during the one-on-one interview refused audio recording and this was respected. Survey forms and reflection notes were under lock and key at the HPEU Office, accessible only to the researcher. These will be stored for 5 years (APA, 2010) and will be shredded thereafter.

RESULTS AND DISCUSSION

Service-Learning Integration

Design and Implementation of Service-Learning in Medical Curriculum

Strategies of integrating service-learning pedagogy at FEU-NRMF started with Institutionalization, Structural Framework and Support, and Community and Campus Partnership.

Institutionalization

The Commission on Higher Education (CHED) subscribes to the shift to Outcome-Based Education (OBE), hence, curricula of all FEU-NRMF program offerings were revisited. On January 2016 during its Academic Council meeting, an advisory committee under the Health Professions Education Unit (HPEU) was formed to craft the new Philosophy of FEU-NRMF Education. The Philosophy is anchored on the Institution's mission committed to develop competent and compassionate professionals adhering to the highest level of global standards of healthcare, education and research. The Philosophy espouses the 21st century themes of readiness, responsibility and relevance (3Rs) as well as its learning and innovative skills (4Cs) of Critical Thinking, Communication,

Collaboration and Creativity. The Top down approach was used to keep pace with the call for national relevance and responsiveness. The Curriculum Committee worked on designing the new curriculum to be learner-centered and outcome-based using service-learning to define the service orientation of medical and paramedical graduates of FEU-NRMF In principle, it uses the Diffusion of Innovation Theory with service-learning integrated in the medical curriculum as an innovation in developing community-oriented physicians.

Structural Framework and Support

Under the Vice President for Academic Affairs' Office, an Institutional Development Meeting was initially conducted on June 2016 to pave the way for planning of orientation sessions and awareness on service-learning among faculty members and staff as initiative to establish service-learning capacity. Technical Capacity building like Technical Review Guidelines Workshops, GCP Seminar, Community Engagement seminars, Community-based learning postgraduate course, interprofessional collaboration and Community Organization were done simultaneously, together with faculty and non-teaching personnel development, orientation and awareness were done. Coordination with existing departments and committees (transportation, security, finance) was done for the logistics in preparation for the new learning experience. Community Engagement Committee was commissioned to be a permanent system that allows for ongoing and fluid leadership within the service-learning program.

Community and Campus Partnership

The Committee on Community Engagement was tasked to look for and partner with communities in the locality. Memoranda of Agreement were signed. Community of interests included student population, families of students, non-teaching staff, Faculty Society, patients in the OPD at the FEU-NRMF Medical Center and pharmaceutical partners were likewise tapped, while maintaining relationship with the current community in Barangay Holy Spirit.

Reciprocity is a key value that defines service-learning, in which both parties in the service relationship mutually benefit from the service-learning experience. Students benefit from knowledge and skill development, practical experience, application of theory, and personal development. Community partners benefit from a completed project, increased service to a client population, a research project, outreach, and many more possibilities.[17]

Service-Learning Process

Faculty's Curriculum Linking Service to the Learning Goals

Planning of the Service-Learning Project

The Curriculum Committee started the development of chronological and interdisciplinary courses with service learning in the 2nd semester of SY 2017-2018. Service-learning methodology was incorporated in the instructional design either partly in at least one course content or fully designed as a total service-learning course.

The faculty designed the modules having the service component explicitly connected with the specific learning outcome of the student. Logistics like transportation, scheduling was arranged with the Community Engagement Committee, followed by student orientation.

For the basic courses, service-learning projects are just one segment of the course not exceeding 10% of the total grade, whereas, the clinical courses are for the entire semester or rotation, comprising 50-100% of the total grade.

Assessment of the Course Design

Prior to the start of the semester, the faculty using service-learning as teaching methodology planned out with the community partners what was intended for the course. In general, the faculty designing a service-learning course would use a lower intensity community service activity in the lower years progressing into a higher intensity community service activity in the higher year levels commensurate to the time allotted by the course.

This was understandable since basic courses are fundamental courses and other teaching methodology like lectures and small group discussions may be preferred to be used. Clinical courses also entail greater need for hands-on exposure hence a higher intensity exposure is warranted. The crucial thing would be the reflections, where students would critically think of the things that are supposed to be gained from the experience.

Assessment of the Service-Learning Project

To assess the service-learning project, the faculty utilized the NYLC 2008 evidenced-based standards and indicators and rated them according to levels 1-4. The basic courses mostly used basic and beyond basic practices of service-learning programs (Levels 2 and 3) as far as service activities, instructional approach in meeting learning goals, reflective thinking, community partnerships, progress monitoring and length and intensity of service-learning activities. Clinical courses used levels 2 to 4, and mostly maximizing service-learning experience for students (Level 3). However, it is common to both basic and clinical courses that the learner would have a strong voice in plan, implementation and evaluation of their project activities maximizing their service-learning experiences.

Achievement of Service-Learning Goals

The overall student performance of achieving service-learning goals were rated using the NYLC rubrics assessing reflection, student engagement, ability to apply knowledge, ability to articulate knowledge, and measurable assessment.

Ratings of faculty across basic and clinical subjects as to achievement of service–learning goals ranged from good to exceptional in reflection, student engagement, ability to articulate knowledge and measurable assessment, while ability to apply knowledge was evaluated as good to excellent. In almost all areas, faculty in the clinical courses assessed their overall student performance higher than that of the basic faculty, which may be accounted for by the difference in the manner of the service-learning projects implemented during the clinical years, as well as the time allotted for the service-learning projects.

As far as academics, the experience allowed them to apply knowledge and skills to "real life" problems. They were able to use higher level thinking skills (critical thinking, problem solving), skills in learning from experience (e.g. asking questions, observing, synthesizing), communication skills (listening, providing feedback, articulating ideas).

Along with that, social skills were developed such as concern for the welfare of a broader number of people, understanding and appreciation of people with different culture and backgrounds, skills in caring for others, involvement with community, and career development. There was also realization of sense of personal worth or competence, self-understanding, belief that one can make a difference and openness to new experiences.

Students' Course Performance

Attainment of Learning Course Goals

A total of 1197 out of 1270 (94.25%) students took part in the survey. There were 616 out of 622 or 99.03% first year students; 2nd Year 277/295 (93.9%); 3rd Year – 270/319 (84.64%); and 100% from fourth year or 34/34 participated.

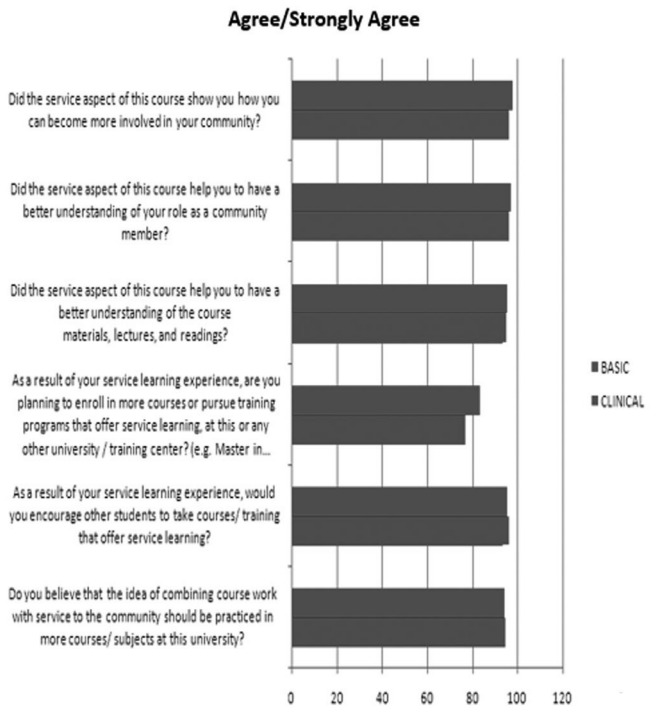
All in all, there were eighty-eight (88) service-learning project activities done. The basic courses did health education by way of short audio-visual presentation on wellness topics for target audience (e.g. Proper hand washing to school-aged children or Immunization to adults, Prevention of parasitism), while the third year course did health system management projects (e.g. Financial allocation for health among maintenance personnel of the institution, Developing interprofessional collaboration among the health professionals). Fourth year course had actual patient consultation, family health care and diabetic club in the community.

The figure shows students' responses to questions regarding service-learning. In both basic and clinical courses, there is high degree of agreement (Agree or Strongly Agree) on how service learning makes them involved in the community (97.92%), how to have a better appreciation of their role as a community member (97.16%). The service aspect of the course helped them better understand the course materials, lectures, and readings (95.49%).

However, when asked after experiencing service-learning, nearly 20% disagreed on plans to enroll in courses or pursue training programs offering service learning. Though the great majority (82.28%) still agreed or strongly agreed to do so.

As to encouraging other students to take courses/ training that offer service learning, the degree of agreement is still high (95.90%). The idea of incorporating service in course work to be practiced in other courses/ subjects in school also got high degree of agreement (94.66%).

All faculty agreed that students learned the course content with the use of service-learning (100%). Knowledge gained was consistent with the intended learning outcomes of each course. Aside from the intended learning outcomes, life skills learned were



Distribution of Student Responses to Service Learning

communication skills, creativity, resourcefulness and critical thinking; leadership skills like advocacy; civic skills like community engagement and collaboration, and various attitudinal skills (initiative, participation, discipline, time management, mindfulness, non-discrimination).

This was consistent with the reflections gathered from the students. Participating in service-learning helped almost all (99.25%) students learn or understand Health Education, Parasitology (Life cycle, Mode of transmission, Prevention and Management of Parasites), Health System Management (Situational Analysis, Project Planning, Implementation and Evaluation) and Community and Family Medicine (Patient-centered, family-focused, community-oriented care). These are the foundational knowledge of each course.

Service-learning provides students with experiences that can be linked back to course content, so that they gain both the "knowledge that" which are the knowledge of facts, rules, procedure and the "knowledge how" which are the learned skills and abilities (Hussey and Smith (2002). It is documented that there is a connection between service learning and student learning.[8]

Service-Learning made students understand the course content. According to Fink's (2013) taxonomy, these are the foundational knowledge which is subject-specific information learners need to understand and remember. It improves student learning through gaining, analyzing and synthesizing data and using it to do community evaluation vis-à-vis concepts and theories taken in class. This is a demonstration of the relevance of community experience to the course content.

Moreover, learning does not necessarily come from the experience of service but from the meaning and the sense that reflection on the experience provides.

The faculty affirmed that service-learning caused students to learn the course content, consistent with the intended learning outcomes of each course. Aside from the intended learning outcomes, life skills learned were communication skills, creativity, resourcefulness and critical thinking; leadership skills like advocacy; civic skills like community engagement and collaboration, and various attitudinal skills.

Retention in the Course

To assess students' retention in the course, end of semester status of students who took service-learning and the previous batch of students with the same course which did not have service-learning were compared. Based on records, most students stayed and the usual number of those who dropped the course was almost the same as the previous semester (Table 3). It would be hard to say that it was because of service-learning that made them stay, since these are all required subjects, not electives. Nonetheless, it is believed that service-learning increases or develops their interest in the subject matter and redound to influence the community.

The faculty believed that students stayed in the course because these courses are required courses and may not be attributed to service-learning. However, learning in a non-conventional way, as in doing projects in the community, engaged with the community may improve their interest in the subject, making them perform better in the subject, hence they persisted.

It is believed that student engagement, better self-efficacy because of the concept of learning by doing and increasing interest would increase desire of students to stay in the course, thus, decreasing drop outs.

Table 3. Effect of service-learning on student performance as to retention in the course and grades

Subject	N	Retention	Dropped (AW/UW/LOA)	Mean Grade	Std. Dev.	T test for grades	
CFMI							
Without*	636	634 (99.69%)	2 (0.31%)	75	6.28	p = 0.00	Sig.
With	633	630 (99.53%)	3 (0.47%)	77.07	3.62		
Parasitology							
Without*	357	354 (99.16%)	3 (0.84%)	79.02	8.51	p = 0.06	Not Sig.
With	295	29 (98.64%)	4 (1.36%)	80.09	8.44		
EHSM							
Without*	283	283 (100.0%)	0 (-)	74.79	3.13	p = 0.00	Sig.
With	319	319 (100.0%)	0 (-)	77.25	2.73		
CFM IV							
Without*	36	36 (100.0%)	0 (-)	83.5	0	p > 0.05	Not Sig.
With	34	34 (100.0%)	0 (-)	83	0		

*Data coming from the batch of students who took the same subject before service-learning was implemented.

Passing Percentage

Similarly, differences in the grades of students who took service-learning and the previous batch of students with the same course who did not have service-learning were compared. As shown in Table 3, grades yielded differences in student performance almost consistently favoring the "service-learning" students, although not all reached conventional levels of statistical significance. Nonetheless, interest and engagement in the field might contribute to it as well.

Outcome of Service Learning

Faculty

The eight faculty members (100.00%) did not have any formal training on service-learning, but all had varying degrees of exposure to service-learning from just attending a seminar on service-learning (1 out of 8 or 12.50%), minimal exposure (4 out of 8 or 50.00%) during graduate school or engaging in field practice (3 out of 8 or 37.5%).

Impact of Service-Learning on Faculty

One faculty stated: *"Teaching the course made me realize the variety of how subjects in Community Medicine and PublicHealth are being taught in medical institutions in the Philippines. It was a challenge for me because appreciation for such courses truly depend on the exposure given to students. I needed to make it interesting and also challenging for the students."*

Two faculty (25.00%) felt fulfilled since service-learning is people-centered, and knowing that doing something good to people gives a nice feeling inside.

However, one faculty felt overwhelmed and was uncomfortable initially since this was his first time to use this teaching style. He felt anxious that the school and the faculty carries a lot of responsibilities when students go out to the field. But seeing the fruit of service-learning for both students and the community allay his fear.

In so many ways, the faculty changed their perspective on students. One faculty claimed that students are appreciative of the relationships they established with the community partners (affective). Another faculty said students have potentials since they are creative and have hidden talents. Some are like clay that can be molded to what they have to become (transformative). According to one faculty, learners of today are very different. They are technologically savvy, very adaptive and can multi-task. They are differently "wired", hence their learning styles should also fit the way faculty should teach, and service-learning surely has a role in it.

Generally, the impact of service-learning for faculty is positive since teaching the course reaffirmed the importance of service-learning to service oriented profession. Another comment was the benefit the

community gets from the learning process of students, which is indeed fulfilling to the teacher.

Benefits of Service-Learning

The faculty's assessment of the benefits of service-learning includes the following: Experience dealing with community and engaging with the community. It helps in developing the future health professionals to be community-oriented by instilling the value of community service and compassion. Generally, projects are designed to apply the theories learned in class and utilize these in the community by way of health promotion and education with emphasis on prevention. In a way, it reduces the gap between the academe with the real life issues of real life situations. It is important that the experience of the students must be pleasant for them to have likings on the course, and eventually finding meaning with what they are doing.

This was substantiated by what students claimed on what they gained from service-learning – Awareness of community, involvement with community, commitment to service, career development, self-awareness, sensitivity to diversity, sense of ownership, communication, critical thinking and appreciation of the teaching methodology.

Value of Service-Learning

According to the faculty, the value of service-learning lies in community engagement since the perception /pulse of people cannot be learned through any other means. Learners see the actual situation in the community. As they analyze the needs the community, together, they can plan with the community, work out a solution, and implement and evaluate a project for health development. The reflective component of the course brings them into realization and that is where the learning comes. However, it is essential that the community and the learners are ready for it to work together.

Community Engagement of Faculty

Developing service-learning courses is highly dependent on the faculty. With service-learning, faculty would design, develop and implement community-engaged courses incorporating community or public service activity with academic instruction, giving emphasis to critical, reflective thinking and enhancing civic responsibility.

The faculty would plan out with partners in the community what is intended for the course making sure that community activities augments academic content, course design, and tasks. Civic competencies and critical reflections are well meshed into student learning outcomes.

A faculty will not develop a tedious service-learning course unless he is a community-engaged faculty. All agreed that after experiencing service-learning. They become more community engaged, from the time they plan out the course design for a particular topic or be it the whole course itself, and during implementation up until the end, they have to be community-engaged for a successful learning experience for students.

On the part of the faculty, this is a learning process to involve themselves with the community, to provide the modeling of how to address the community health needs, a venue to teach, to learn and to serve.

Students

Students' Community-service Orientation

Based on the reflections and students' responses regarding service-learning, having a high degree of agreement on how service learning makes them involved with the community (97.92%), and a better appreciation of their role as a community member (97.16%) and their high degree of agreement of combining course work with community service to be practiced in more courses/ subjects in school showed their community-service orientation.

Service-learning brings students into the field and the community to the school. In this way, students develop a sense of oneness and responsibility, and communities view learners as valuable assets.

Aside from understanding the course content, students develop awareness of community. They also develop increased sensitivity to major aspects, independent and related factors. Involvement with community by increasing student interactions improves students' attitudes toward involvement.

Lastly is commitment to service, through improvement of students' attitude toward service; make life-long commitment to civic responsibility; removing barriers to future service; instill positive reactions to the challenges of service; Learn to value personal involvement in community; and demonstrate concern for welfare of others. This part is Fink's taxonomy of "Application" which refers to learners

taking the knowledge they have learned and turning it into action.

Intention to Practice Community Medicine or Public Health

After undergoing service-learning, majority (84.54%) would intend to practice Community Medicine or Public Health (Table 4). The average probability gathered were the following: 1st Year – 58.96%; 2nd Year –52.90%; 3rd Year – 55.72%; 4th Year -65%. Comparison between the Basic and Clinical courses as far as influence of service-learning with their intention for Community Medicine or Public Health practice in the future showed no statistical difference.

Generally, students appreciate the project activities done in the community. Some did find Community Medicine or Public Health relevant. Based on their reflections, some expressed their intentions for Community Medicine or Public Health practice in the future.

"It has become an eye opener."
(Common response for all year levels)

"It crossed my mind, for I learned that this practice is morally fulfilling, and you are able to help a great number of people, for you are not only treating a patient but the whole community as well." (CFM IV student)

"Honestly before my community rotation I have no plan to be a community practitioner but as we have rotated in community, I really had fun especially with patient interaction and giving preventive education." (CFM IV student)

Some developed the liking of Community Medicine/Public Health after service-learning:

"As a medical doctor, we have our own responsibilities and duties towards our community whether we are a community medicine practitioner or not. We can still be able to practice our specialties in our community through rendering our services to patients by co-managing with community medicine practitioner." (EHSM student)

"Yes, I definitely see it as a viable option or career choice, I found my time in Barangay Narra and Holy Spirit fulfilling, and I would like to be able to help other communities in the future." (CFM IV student)

"At first, I was not interested on becoming a community medicine practitioner but after my rotation, I am now more interested in becoming one. I have seen and experienced more cases that I would not see in the hospital setting." (CFM IV student)

"Being a community medicine practitioner is very challenging. It is a very fulfilling task to properly serve the community. The demand is great for community medicine physicians, as we have seen and observed. It would be one of the possible future fields I will be choosing when I become a licensed physician." (Parasitology student)

These are expressions of students who do not intend to be in Community Medicine or Public Health:

"No, even though I find it interesting and I have enjoyed my stay in the community. It was always my dream to become a cardiothoracic surgeon." (CFM IV student)

Table 4. Intention to practice community medicine or public health in different year levels

Intention to Practice Community Medicine Public Health	Basic 1st Year No. (%)	Basic 2nd Year No. (%)	Clinical 3rd Year No. (%)	Clinical 4th Year No. (%)	Total	Basic vs Clin
Yes	544 (88.31%)	217 (78.34%)	255 (83.33%)	26 (76.47%)	1012 (84.54%)	X^2 = 0.26 911663
No	47 (7.63%)	56 (20.22%)	39 (14.44%)	6 (17.65%)	148 (12.36%)	p>0.05
Uncertain	25 (4.06%)	4 (1.44%)	6 (2.22%)	2 (5.88%)	37 (3.09%)	Not Sig.
Total	616	277	270	34	1197	

"No. I prefer specializations that are surgical." (CFM IV student)

"No because I would like to become an Internist and have a subspecialty rather than a generalized field." (CFM IV student)

Comparison between the Basic and Clinical courses as far as influence of service-learning with their intention for Community Medicine or Public Health practice in the future showed no statistical difference. That means, it was the exposure to the community per se, regardless of the timing, which influenced them to have the intention. Perhaps the extraneous variable of seeing the commitment of the faculty (community-engaged faculty as role models) somehow affected their intention. Based on the theories of reasoned action and planned behavior, it is seeing the reality or the need in the community that can influence the students to have the intention, likewise, exposure to the community will increase their self-efficacy (Theory of Planned Behavior) and further intensify the intention.

Furthermore, Stewart[18] claimed that the value of engagement from service-learning is that medical students may learn vis-à-vis cognitive-emotional development. As one critically reflects on his assumptions, the frames of reference can also be changed, which can result in a fundamental change in the basic premises of thoughts, feelings and actions. Educators understand through information processing models that "in meaningful and sustained learning, the intellect and emotion are inseparable".

It has been proven that pride plays a key role in the development of identity and self-esteem, especially in the context of experience of success. Therefore, students may be predisposed to act positively toward learning and seeking similar experiences in the future. Continued engagement by students can advance the call for more community-centered models in which healthcare professionals adopt a population perspective and advocate for the health of the community.

Community's Satisfaction in Meeting Health Needs

A total of 568 members of the community answered the survey forms after the project activities. A little less than half were patients at the out-patient department (48.06%), from the adopted communities [Barangay Holy Spirit (12.85%); Barangay Narra (4.4%); West Fairview Elementary School (4.4%)], the student body (10.74%), Non-teaching staff (10.39%) and families of students (9.15%).

There were 85 (14.96%) who said that the community project helped them in some ways, while 479 or 84.33% said that they were helped a great deal. Such help includes added knowledge in different diseases, financial allocation for health, consultations, health screening, etc. Generally, the community members were satisfied with the health or health-related benefits they gained from the project activities. None claimed that their rights were violated.

When asked if they were given the chance to participate in the community activities, 333 (58.63%) said that participation was limited and 206 or 36.27% said they were able to participate fully.

Service-Learning is directly in line with the core public health value of social justice and serves as a venue to strengthen community–campus partnerships in addressing health disparities through sustained collaboration and action in vulnerable communities.

SUMMARY

Muller[19] stated that medical training and medical practice have wandered away from their original focus on the human condition and the social obligation of medical schools. Medical schools must produce graduates of Doctor of Medicine with service orientation and be placed where they are most needed. However, in the Philippines, the problem of Human Resource for Health (HRH) is maldistribution. Most physicians want to practice in the hospital setting and only a third in the community.

The Philippine Health Agenda 2016-2022 strives to strategize human resource for health development through curricular revision of health professions directed towards primary care, making it locally and globally responsive. Hence, redesigning the curricula to serve population's health needs would be necessary.

One key factor that enhances the relevance of education to the needs of society is to encourage applied learning in tertiary institutions. The main goal is to strengthen development of deep skills and workplace competencies among students to better prepare them for the workplace.[20]

To influence medical students to choose Community Medicine or Public Health practice in the future, the following elements in medical education can be put together: 1. A medical education institution supportive of a curriculum that develops

the future community-responsive health workforce; 2. Community-oriented faculty linking learning goals with community engagement; 3. Students applying theories to practice by hands-on experience through services to the community that solve real life issues of the community; and 4. with reflective thinking correlating community activities with the learning goals. All these are features of service-learning.

SCOPE AND LIMITATION OF THE STUDY

The scope of this study is only within the current semester. This is the initial design and integration of service-learning in the medical curriculum involving only one subject per year level.

The difference in attaining learning goals, passing percentage, and retention in the course among students who experienced service-learning and those who have not undergone service-learning cannot be assessed with great certainty since only the data from the batch of students who took the same subjects before service-learning was implemented served as the surrogate control, which did not run parallel to this study. Similarly, a priori experience of service-learning during their undergraduate years, students' family background, interests and other undertakings may in any way affect students' attitudes and intentions.

The service-learning activities were done only in urban communities, which may not be reflective of the entire scenario in the field, knowing that different communities may have different cultures, resources and needs. Nevertheless, the concepts applied using service-learning in the community would likewise be the same.

The impact of service-learning integration in the Medicine curriculum in the long run, among the students and the community cannot be assessed immediately, since this can only be measured after the first cohort of Medicine graduates experiencing the integrated service-learning finishes medical schooling, take the licensure examination and have chosen their career. That will take 5 years at the very least.

As far as the effect on community development partly as the consequence of service-learning, this can only be known after five or ten years after implementation. However, it is believed that with full integration of service-learning in all courses and year levels, having more community engagement coupled with critical reflective thinking might transform learners to be community-oriented and thereby offer a solution to the country's lack of community health workforce.

CONCLUSION

1. Integration of service-learning is the innovation being diffused in the Medical curriculum of FEU-NRMF.
2. The design and implementation of Service-Learning integration was described and narrated as to Institutionalization, Structural Framework and Support, and Campus-Community Partnership.
3. The crafting of the new Philosophy of FEU-NRMF Education paved the way for integrating service-learning as a method of teaching for all program offerings of FEU-NRMF. This is "institutionalizing" service learning as a strategy for ensuring sustainability.
4. To provide structural framework and support for service-learning program, the following were done: Orientation and awareness of service-learning, capacity building, logistic or technical and financial support, Committee on Community Engagement commissioned to be the permanent system for service-learning program.
5. The Committee on Community Engagement likewise was tasked to partner with communities for Campus-Community partnership.
6. The service-learning process was also assessed. Faculty's curriculum was designed linking service to the learning goals in at least one course per year level with service-learning project either partly or as a whole of the course. Higher year levels tend to use higher intensity community activities as assessed using the Instructor-Centric Taxonomy of Service-Learning and vice versa. Based on NYLC 2008 standards for service-learning, projects were evaluated with lower level for projects for basic courses and higher levels for clinical courses commensurate with the duration of the service-learning projects. Both service and learning goals were achieved.
7. Generally, students attained their course learning goals. Learning is by linking theory to practice and/or through reflection on and creating meaning from the experience. Retention in the course and passing percentage cannot be attributed solely from service-learning, but believed that community engagement creates and sustains interests that can contribute to retention and passing the course.

8. The outcome of service-learning was evaluated. Generally, the impact of service-learning for faculty is positive since teaching the course reaffirmed the importance of service-learning to service oriented profession. It is contingent for a faculty to be community engaged to plan and implement a service-learning course.
9. A total of eighty-eight (88) service-learning projects were conducted for the whole semester constituting health education, health promotion programs on personal hygiene, prevention of parasitism, financial allocation for health, health system management, community health and the like.
10. Around 84.54% of students across all year levels expressed their intention to practice Community Medicine or Public Health. Comparison between the Basic and Clinical courses as far as influence of service-learning with their intention for Community Medicine or Public Health practice in the future showed no statistical difference. That means, it was the exposure to the community per se, regardless of the timing, which influenced them to have the intention. Perhaps the extraneous variable of seeing the commitment of the faculty (community-engaged faculty as role models) somehow affects their intention (Social Cognitive Theory). Based on the theories of reasoned action and planned behavior, it is seeing the reality or the need in the community that can influence the students to have the intention, likewise, exposure to the community will increase their self-efficacy (Theory of Planned Behavior) that further intensify the intention.
11. Around 85% of community participants said that they were helped a great deal by the services rendered to them. Help included additional knowledge, consultations, health screening, etc. None claimed that their rights were violated.

RECOMMENDATIONS

The following are the recommendations given based on the results of the study:

Community

1. Long-term commitment to community partnerships and trust building with existing and upcoming communities and partners.
2. Promote interaction with people from diverse backgrounds
3. FEU-NRMF as an institution would join other institutions implementing service-learning for sharing best practices
4. The impact of the service-learning projects done at the community may be studied at a future time to evaluate the social accountability role of the medical school with the community.

Faculty and Staff

1. Incentives and recognitions to Faculty who engages in community activities to encourage other faculty members to join the pool of faculty who would be community-engaged
2. Staff development and training - It is also imperative to continue faculty development and capacity building on the area of service-learning, through the development of service-learning instructions (Social Cognitive Theory)
3. Encourage faculty to form mentoring relationships with students
4. Remind faculty to put community in the center of teaching
5. Collaboration through linking faculty across academic disciplines using a shared approach to teaching
6. Giving importance in betterment of the human condition in school assemblies
7. Providing exciting new ways to teach familiar material
8. Engaging faculty with the community at large

Students

1. Explore possible career paths

Structural Framework and Support

1. Provide venue for enhancing the sense of social responsibility through civic engagement (curricular or non-curricular) during special occasions like Foundation Week, Christmas or during calamities.
2. Establish a day of celebration for service-learning accomplishments

Future Researchers

1. A study can be done to check intentions of those who did not undergo service-learning to better

compare the difference in intentions of those who experienced service-learning.

2. A follow up study may be done among this cohort of students who experienced service-learning and determine whether the intention of community practice while they were in medical school would actually translate to community or public health practice in the future, hence documenting the success of the intervention of curricular reform in medical education addressing the inequitable distribution of health human resources especially in the community where the need is greatest.
3. With the many benefits of service-learning, it is recommended that this teaching pedagogy be applied across all subjects and year levels of the medical curriculum. As one student said, "We just wish we had this early on. We would certainly look at things and act on it differently."

REFERENCES

1. Seifer, SD, Hermanns K, Lewis J. (Eds): Creating Community-Responsive Physicians: Concepts and Models for Service-Learning in Medical Education.AAHE'sSeries on Service-Learning in the Disciplines. 2000
2. Dashash M. Community-oriented medical education: bringing perspectives to curriculum planners in Damascus University. Educ Health 2013; 26: 130-2.
3. Community Oriented Primary Care New Directions for Health Services Delivery Conference Proceedings. Edited by Eileen Connor and Fitzhugh Mullan Division of Health Care Services, Institute of Medicine, National Academy Press, Washington, D.C. 1983 http://www.nap.edu/catalog/1917.html
4. Englander R, Cameron T, Ballard AJ, Dodge J, Bull J, Aschenbrener CA. Toward a common taxonomy of competency domains for the health professions and competencies for physicians. Acad Med 2013; 88(8):1088-94. https://doi.org/10.1097/ACM.0b013e31829a3b2b.
5. Longenecker R, Wendling A, Hollander-Rodriguez J, Bowling J, Schmitz D. Competence revisited in a rural context. Fam Med 2018; 50(1): 28-36.DOI: 10.22454/FamMed.2018.712527
6. Leach DC. Competence is a habit. JAMA 2002; 287(2): 243-4.
7. Robert A, Rhoads J, Howard PF. (eds): Academic service learning: A pedagogy of action and reflection. New Directions for Teaching and Learning, No. 73. San Francisco: Jossey Bass.
8. Kendall JC. Combining service and learning: An introduction. Combining Service and Learning: A Resource Book for Community and Public Service, Volume 1 Raleigh, NC: National Society for Experiential Education. 1990
9. Furco A. Service-learning: A balanced approach to experiential education." Expanding Boundaries: Service and Learning. Washington DC: Corporation for National Service 1996; 2-6.
10. Jacoby B. Service-Learning Essentials: Questions, Answers, and Lessons Learned, November, Jossey-Bass. 2014
11. Elam C, Sauer M, Stratton T, Skelton J, Crocker D, Musick D. Service Learning in the Medical Curriculum: Developing and Evaluating an Elective Experience Teaching and Learning in Medicine 2003; 15(3).
12. Seifer SD. Service-learning: Community campus partnerships for health professions education. Acad Med 1998; 73(3): 273-7.
13. Gray JD, Steeves LC, Blackburn JW. The Dalhousie University experience of training residents in many small communities. Acad Med 1994; 69: 847-51.
14. Cauley K, Canfield A, Clasen C, Dobbins C Hemphill S, Jaballas E, Walbroehl G. Service Learning: Integrating Student Learning and Community Service Education for Health 2001; 14(2): 173-81.
15. Hahn TW, Hatcher JA, Price MF, Studer ML. IUPUI Taxonomy for Service Learning Courses. Retrieved from: https://rise.iupui.edu/resources/course-development/taxonomies/ 2016.
16. Stephenson M, Wechsler A & Welch M. Service-Learning in the Curriculum: A Faculty Guide. University of Utah: Lewell Bennion Community Service Center. 2003
17. Pigza J. Community Partnerships:POWERful Possibilities for Students and Communities, New Directions for Student Leadership, No. 150, John Wiley & Sons, Inc. 2016; 49-59.
18. Stewart T &Wubbena Z. An overview of infusing service-learning in medical education. Int J Med Educ 2014; 5: 147–56.
19. Muller D, Meah Y, Griffith J, Palermo AG, Kaufman A, Smith KL, Lieberman S. The role of social and community service in medical education: The next 100 years. Acad Med 2010; 85: 302–9.
20. Ee J and Cheng A, Preparing Youths for the Workplace, World Scientific Publishing Co, Pte.Ltd. 2015