

# UGNAYAN: A Proposed Knowledge Sharing Model for Senior High School Work Immersion Program

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**Abstract** This study developed a proposed knowledge sharing model for senior high school work immersion program, which employed qualitative developmental design in two phases: phase 1 (foundation), and phase 2 (development). The research team used convenience and purposive sampling techniques to recruit a total of 96 participants for the written-response interview, focus group discussion, and round table discussion. The team used coding system to analyze the qualitative data generated in both phases. In addition, the team triangulated the main data with observation notes, pertinent documents, and artifacts to establish validity. The themes that evolved are in adherence to standard, bound readiness, guaranteed commitment, discernment of proper action, and verity of fulfillment. These results established the foundation and basis for the second phase of the study, (model development), The researchers employed analysis-feedack method in finalizing the developed model. Lastly, the team recommends the use of a quantitative research design in future studies to measure the generalizability of the model called *Ugnayan*.

**Keywords:** developmental research, knowledge sharing, work immersion

## **Introduction**

The changing trend in the education system around the world is inevitable. This is due to the continuous search to improve the teaching-learning process to respond to the demands and needs of the society. Banks (2009) claims, “the school should help students to...function effectively in their community culture, mainstream national civic culture and community, and between other cultures and subsocieties” (p. 29). Today, education institutions migrate from teacher-centered approach to student-centered mindset because learners of today are understood as the key participants in the knowledge creation process, and are not only mere receivers of information and knowledge shared to them. This concept is strengthened by Vygotsky’s (1978) idea “that human development is socially situated and knowledge is constructed through interaction with others” (Mckinley, 2015, p. 184). The Department of Education (DepEd) sees the importance of student-centered approach in improving the learning process. Hence, in the K-12 curriculum, experiential learning (learning by doing) is emphasized especially in the terminal level of basic education. The process involves “first-hand experience, active learning, experimentation and adaptation in new environments, and reflection” (Kolb, 1984; Moon, 2004; in Kenyon, 2017, p. 98).

The implementation of the K to 12 program in the Philippines, through Republic Act No. 10533, “Enhanced Basic Education Act of 2013,” aims to prepare learners for the demands of the 21<sup>st</sup> century and beyond. This 13-year basic education program, which aims to improve the education system of the country, to be in sync with other Asian countries; and be at par globally, has replaced the 10-year basic education curriculum. With this, the new structure of basic education in the Philippines encompass: Kinder, one year; Elementary, six years (grades 1-6); Junior High School, four years (grades 7-10); and Senior High School, two years (grades 11-12).

The Senior High School (SHS) program has four tracks: (1) Academic—ABM (Administration and Business Management), HUMSS (Humanities and Social Sciences), STEM (Science Technology, Engineering and Mathematics), GAS (General Academic), and Pre-Baccalaureate Maritime; (2) Sports; (3) Arts and Design; and (4) Technical/Vocational (Technology-Livelihood Education, TLE; Technical-Vocational Track, TVL). At this level of the curriculum, students are introduced to applied track, and specialized subjects. Moreover, the curriculum provides students with effective learning paradigm that will synthesize theoretical concepts and praxis, through work immersion or on-the-job training, a prescribed terminal specialized subjects of the program. The work immersion program is designed to engage students in real work situation with, the following aims: (1) appreciate the importance and application of the principles and theories learned in school; (2) enhance their technical knowledge and skills; (3) enrich their skills in communications and human relations; and (4) develop good work habits, attitudes, appreciation and respect for work (DepEd Order No. 30, s. 2017, Guidelines for Work Immersion, p. 2).

### ***Work Immersion***

The Coalition for Change (2018) reported that the work immersion program of SHS students (grades 11 and 12) emphasized the following lessons learned: “(1) the industry as an agent of education and human capital development; (2) creating opportunities for the government and industry to coordinate; and, (3) strong local leadership and partnership are critical to moving national policy” (p. 10). Relatively, Verecio (2014) recommended that: (1) supervisors must be practitioners and educators; (2) appropriate training guidelines must be established; and (3) collaboration between host and industry must be established. This scheme is seen to promote the consistency of the effectiveness of the program, and to

ensure the quality of work immersion experiences of SHS students. Moreover, Kirkpatrick (1976), in Tismal, Awais, and Shoaib (2016) mentioned that “Reaction, Learning, Behavior, and Result” (p. 7) are important in understanding the types of interactions in the macro/national level, meso/institutional level, and micro/personal level of the work immersion program. Embedded in the different types of interactions is the process of knowledge sharing.

### ***Sharing of Knowledge***

Knowledge sharing is a common activity of man. Cultural traditions is one concrete output of knowledge sharing. Nonaka and Krogh (2009) claimed that knowledge sharing is the process of transferring and spreading knowledge to others. “It is the bridge for a durable partnership and inseparable friendship, which is the main way leading to skills transfer, which has been preached for a long time” (Gonondo, 2017, p. 25). Knowledge sharing influences the trust, rewards, culture, and open and interactive communication (Tan, 2015) between and among persons or groups. The possibility to engage in the process is strong among people working in the same environment or people with similar work descriptions (Abbas, 2017). However, effective knowledge sharing would depend on the organization’s or community’s priorities and constraints (Chouikha & Dakhil, 2012) as well as the working culture, attitude, and motivation of the people involved (Sohail & Daud, 2009). In sum, knowledge sharing is about quality, and purpose of interacting with others.

## **Framework of the Study**

Knowledge sharing is an encompassing term that includes data and information sharing, skills and expertise in communication, and ideas exchange (Gonondo, 2017) among people. This process is evident in situations where a mother is asking another mother how to go about a cake recipe or a student asking another student

how to go about a certain school project in science. The exchange of thoughts between two individuals in examining the process of baking a cake or doing a science project involves knowledge sharing. There are two types of knowledge being shared: tacit knowledge involving, ideas and experiences—and explicit knowledge (involving learning resources and instructional materials) (Santosh & Panda, 2016). Tacit knowledge is difficult to transfer, since this kind of knowledge needs to be imbibed by the person. For example, the acquisition of the value of being respectful, like the attachment of “Opo (a Filipino word for YES to exhibit respect) in Filipino utterances, especially when speaking to an older person, is a tacit knowledge. The sharing of opinions of two mothers on raising a child is also a tacit knowledge because it is an imbibed understanding. Collins (2011, p. 2) explains that “tacit knowledge is tacit because it is tied to the human body.” This means that its retrieval is easy because it has become part of the person’s culture. Knowledge like cooking skills, singing, driving (when captured), becomes almost permanently a part of a person, which could explicitly be shared to others. An example of tacit knowledge being made explicit is when an inventor documents the processes and findings of his/her own invention or discovery. Hence, explicit knowledge is the articulation of tacit knowledge.

Santosh and Panda (2016, p. 248) believed that “attitude and willingness, lack of communication skills, lack of time and trust” are barriers to knowledge sharing. Recognizing these barriers, Gonondo (2017), suggested the that following practices should be developed: (1) be aware of the value and benefit of possessed knowledge to others, (2) have the intention to share knowledge; (3) cultivate self-worth through knowledge sharing, (4) share knowledge reciprocally, (5) surmount differences, and (6) demonstrate openness.

Knowledge sharing allows individuals and organizations to build knowledge and produce new knowledge (Pangil & Nasurdin, 2013). Hence, knowledge sharing practices are important to

groups of individuals, communities, organization, and institutions because “interactions between individuals who possess diverse and different knowledge enhance the organization’s ability to innovate, far beyond what any one individual can achieve” (Abbas, 2017).

Figure 1 synthesizes the concept of knowledge sharing. The center circle is the area of knowledge sharing, the main concept where factors like tacit and explicit knowledge, mentoring and coaching, attitude and willingness, and building and producing new knowledge permeate. This main overview leads the researchers to the importance of what-is-to-be-shared and how-it-is-shared by people involved in knowledge sharing. Recognizing the significance of this concept, this study looked into discovering the foundational elements involved in knowledge sharing before embarking on model development.



Figure 1. Schematic diagram of factors involved in knowledge sharing

## **Purposes of the Research**

This study developed a knowledge sharing model that would serve as one of the many options to assist schools and partner agencies in implementing SHS work immersion program. The following research questions served as guides to the researchers:

1. How do stakeholders, documents and artifacts, and observation results, from four schools of Tanauan, Batangas, describe knowledge sharing?
2. What model could be developed for work immersion program?

## **Methodology**

### **Research design**

This study employed developmental research design in crafting the work immersion model. Mueco (2017) mentioned that Richey, Klein, and Nelson (2004; 2005) classified model use, model validation, and model development as types of developmental researches. These researches follow the order of development that include the researchers as main participants of the study. Phase 1 (case study phase), include visit to the four participating schools, the administration of questionnaires, interview and focus group discussion. The focus group discussion was recorded, transcribed and later validated by each participant. Phase 2 (model development phase), follows the input, process, output stages.

### **Research Locale, Participants, and Sampling**

The study identified the research locale using the following conditions: (1) the research locale must have schools offering Senior High School (SHS) program of varied tracks and strands, and (2) the schools must be willing to participate in the study.

The research locale was Tanauan, Batangas where four schools offering Academic Track (HUMSS, STEM, and ABM) and TVL Track (Agri-Fishery, Home Economics, ICT, and Industrial Arts) participated. The team employed convenience sampling and purposive sampling to recruit participants who were willing to participate, and at the same time had the information needed for the study (Maxwell, 1996, in Taherdoost, 2016; Etikan & Bala, 2017). The team administered consent forms to all the participants. The informed consent form encapsulated the purpose, procedures, risks, benefits, and confidentiality of the study. The researchers explained and emphasized to the participants that termination of involvement in the study needed no explanation or approval; hence, a participant could withdraw anytime on his/her own volition.

A total of 96 participants engaged in the study. The breakdown of the number of participants per data collection strategy is presented in Table 1.

Table 1. Participants for written-response interview (WRI), focus group discussion (FGD), and round table discussion (RTD)

Schools	Number of Participants			Total
	WRI	FGD	RTD	
SHS 1	27	2	1	30
SHS 2	11	2	1	14
SHS 3	21	2	1	24
SHS 4	25	2	1	28
Total	84	8	4	96

*Legend: WRI (Written Response Interview), FGI (Focus Group Discussion) RTD (Round Table Discussion)*

## **Instrument and Data Collection**

The researchers collected data using WRI, FGD, MTD and scanning of artifacts, documents, observation/field notes (ADO/FN). The semi-structured interview protocol was validated



by five experts (a college professor, a basic education teacher, a school principal, a medical practitioner, and an on-the-job-training supervisor). The WRI, FGD, and RTD each consisted of the following open-ended questions: (1) How would you describe the teaching and learning process in SHS? (2) What influence the process of those processes to occur? (3) What actions did you take in response to the process? (4) How did you deal with those processes? (5) What outcomes or effects happened as results of those actions? (The WRI was answered in written form using the language the participants were comfortable with in expressing themselves, while the FGD and RTD were audio recorded). The research team used data triangulation (the WRI, FGD, and RTD results were compared with each other) as a technique to establish validity. A shelf storage accessible only through the lead researcher, stored all the data. Upon completion of the project, the team obliterated all data.

### **Data Analysis**

In analyzing the data, the research team did manual coding. The researchers employed the constructivist lens to allow varied viewpoints to surface as they review the data (Gill, 2016). The team used analysis-feedback technique (an interactive systematic method engaging a group of investigators in a series of iterative discussion to arrive at a result based on the group's consensus) to ensure that all gathered data were examined thoroughly, and that analysis of data was free from monopoly. Hence, (1) the entire research team read the data several times before commencing the coding; (2) the sub-groups analyzed the data assigned to them, and presented the result to the entire research team for further discussions; and, (3) the entire research team deliberated and came to an agreement in finalizing the results.

During the coding process, each sub-group of the research team assigned tentative labels to significant ideas. Then, the team fused labeled ideas to establish categories. Finally, the team established the core variables to produce the themes. Moreover, to facilitate analysis that would allow triangulation, the team

grouped, reviewed, and compared the results of the collected data to facilitate triangulation and establish validity (Holasca, 2018). Furthermore, the research team developed the model by adopting the paradigm: (1) input stage; (2) process stage; and (3) the output stage. The input stage included the survey of existing ideas and concepts and existing materials related to the development of the model. The process stage dealt with structuring of the visual description of the model. Lastly, the output stage presented the final product of the study.

## **Findings and Discussions**

### **Knowledge sharing in Senior High School Immersion**

Knowledge sharing practice for SHS 1 emanates from the concerted efforts of the school head, coordinator, faculty, and students. The initial implementation of the immersion program has challenged their resourcefulness and creativity while adhering to the content and performance standards set by the Department of Education (DepEd). Initial outputs of students are documented, analyzed, and shared to the other three national schools and the partner industry. Feedbacks are solicited and used to improve the outputs. The positive attitude of the teachers and students to be trained gave them the opportunity to learn and improve their skills. The teachers feel that they are duty-bound to train the students to be work-ready and are able to utilize their skills in life situation.

For SHS 2, knowledge sharing is evident when the SHS teachers who are enrolled in the Master's program share their learnings to the other SHS teachers within the division. In addition, these teachers never missed any in-service trainings conducted by the division, region, and DepEd central office. Communicating with colleagues is easier through Facebook, email, and after-class sharing of experiences similar to what the school heads do after a long day of school activities. Their quest for more learnings are

likewise evident as they share the material resources they got from trainings by the education agency, partner industry, and parents who are likewise excited in their children's activities in SHS. Students boast that their family are happier now because what they are learning from school are utilized at home in their daily activities, and that they become more responsible and resourceful in dealing with issues and concerns at home. Just like the other three SHS in the division, SHS 2 offers their venues for in-service trainings, conferences, and inter-school student activities.

SHS 3 knowledge sharing practices between and among teachers and students based on the coded responses, interview, FGD, and RTD can be described by the feelings of joy, pride, and fulfilment. Stakeholders take pride of the accomplishments of the students in the Tec-Voc and Livelihood Track in the immersion program. Students' outputs are utilized for the improvement of the school (grills for the newly constructed building), and safety of the students as well as its properties. The recycled water bottle filled with sand were used as substitute for hollow blocks in the construction of restrooms, and old school vehicles. Computers were restored and become functional. Amidst the dearth of instructional and learning materials, the SHS faculty see to it that the competencies of students are developed. Reproduction of learning activities, improvisation of teaching materials, the use of available technology are observed, presence of monitoring/observation checklists and scoring rubric to assess students' output are prepared and utilized to ensure that concepts and skills are learned and utilized in the practicum work.

Recognizing the challenges of the new curriculum, SHS4 teachers attended the training, workshop, and orientation programs in preparation for the implementation of the program. Criteria for faculty recruitment and hiring are set by DepEd and utilized in the selection of the thirteen (13) SHS faculty. Responses from faculty show their positivity in facing situations that beset the implementation of the program starting from their willingness to attend trainings and workshops to better prepare them for SHS

teaching. On the part of the students, responses range from their adjustment and improvement in study habits and cooperation with classmates to accomplish a task. The data gathered speaks of the teacher’s role in the teaching-learning process. The efforts exerted to fulfil their function as teachers/facilitators to deliver effectively the concepts to be learned by the students, and utilized their skill learned in life situation.

Table 2 shows the summary of the knowledge sharing practice that exists between and among the school heads, coordinators, teachers, students and partner industry of the four national high schools in the Division of City Schools-Tanauan City. Stakeholders of the four senior high schools see to it that they all adhere to the standards set by the Department of Education (DepEd); that they share human and material resources to be bound-ready to face the program’s limitations and other challenges; that they have strong commitment to their academic endeavors; that they collaborately determine the kind of action to be taken to respond appropriately to the needs of the situation; and altogether as one division take joy and pride in their accomplishments. The immersion program was never easy for them, but because of their knowledge sharing practices they were able hurdle the barriers in its initial implementation.

Table 2. Summary of results from WRI, FGD, RTD, and ADO/FN

General Themes	Coded Response					Description of Themes
	SHS1	SHS2	SHS3	SHS4	Total	
Adherence to Standard	77	25	63	41	206	This theme represents the shared knowledge of stakeholders of the four senior high schools to adhere to the standards set by the Department of Education (DepEd).
Bound Readiness	69	11	54	36	170	This theme represents the stakeholders shared knowledge regarding the preparedness of their school community particularly on how to face limitations and other challenges.

Guaranteed Commitment	41	16	29	27	113	This theme represents the shared knowledge of the stakeholders regarding their strong connection to their academic endeavors.
Discernment of Proper Action	54	37	51	73	215	This theme evolves from the shared knowledge of the stakeholders regarding their awareness on the kind of action to be taken to respond appropriately to the needs of the situation
Verity of Fulfillment	104	26	101	42	273	This theme represents the shared knowledge of the stakeholders that the state of fulfillment comes in different forms (awards, joy and satisfaction, improvement, etc.).

The themes that evolved are the foundation of the proposed model called Ugnayan. The 206 coded data that founded the theme *Adherence to Standards*, represents the shared knowledge on the standards set by DepEd between and among the participants of the four schools. The 170 coded data generated the theme *Bound Readiness* represents the preparedness of participants in SHS immersion program to face limitations and challenges. The 113 coded data shaped the theme *Guaranteed Commitment*. That shows the solidity of the engagement of participants to pursue the success of their undertakings. The 215 coded data established the theme *Discernment of Proper Action* which represents the full awareness of the participants to respond appropriately to the kind of situation at hand. The 273 coded data grounded the theme *Verity of Fulfillment* which represents the participants; accomplishments.

The results of this study variate with the findings of other studies on knowledge sharing. This findings could be due to the differences in research objectives and research designs however, relationship of results could be established. Partnership, working environment and culture, trust, rewards, motivation, priorities and constraints, and attitudes the evolved in the studies of Gonondo (2017), Abbas (2017), Tan (2015), Chouikha and Dakhil (2012), and Sohail and Daud (2009) are connected to the themes that

evolved in this study. First, the themes *Standard*, *Readiness*, and *Discernment* require awareness and understanding of the trust, attitudes as well as priorities and constraints. Second, the theme *Commitment* is attached to motivation. Third, the theme *Fulfillment* is related to rewards. Lastly, combining all themes together would relate to working culture and environment.

The findings of this study, though not conclusive, contribute to the research literature on knowledge sharing. Knowledge sharing is viewed as a culture where participants actively exchange ideas to produce new ideas for better results. Hence, in relation to the report of the Coalition for Change (2018) regarding the coordination between the government and the industry with regard to work immersion of SHS, as well as the recommendations of the study of Verecio (2014), effectiveness of the process and better outcomes could be ensured by building a culture founded on the aforementioned themes.

### **Proposed Model for Work Immersion Program**

Figure 2 presents the proposed UGNAYAN model for SHS work immersion program. *Ugnayan* is a Filipino word which means “connection” or “interaction.” The proposed model is composed of four circles that overlap each other, two of which are solid lines while the other two are broken lines. The solid line circle P1 and the solid line circle P2 merge, creating a closed area. This same area is shared with the broken line circle P3 and the broken line circle P4. The enclosed area at the center contains the core elements: (1) *Standard*—the knowledge of what is official, accepted, and regulated; (2) *Readiness*—the knowledge pertaining to preparedness, capacity, and enthusiasm; (3) *Commitment*—integrity and the knowledge of the level of endurance to pursue and accommodate responsibilities and endeavors; (4) *Discernment*—the understanding of the consequences of an action or proposition; and, (5) *Fulfillment*—the knowledge of the value of accomplishments that could come in the form of awards and/or contentment. Moreover, P1, P2, P3,

and P4 stand for participants. Participants could be any member of the school community and/or person/s, organizations, institutions outside the school community that engage in knowledge sharing. Solid line circles represent direct involvement while broken line circles represent partial involvement. The overlapping of lines, producing closed areas, represents the connection and interaction of participants.

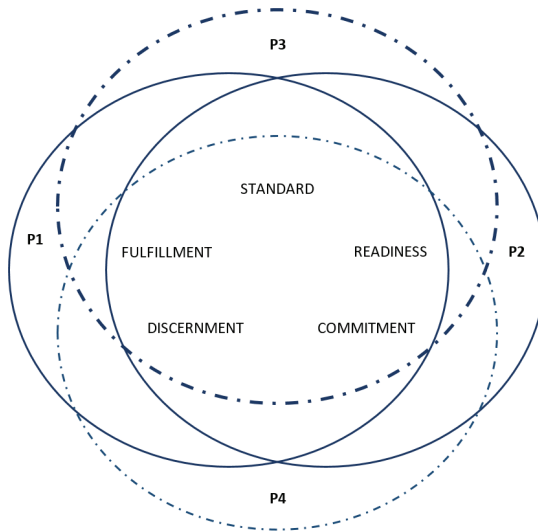


Figure 2. The Ugnayan Model

The proposed Ugnayan Model is a paradigm for knowledge sharing in SHS work immersion program. What the proposed model is positing is that the core elements are the basis for establishing a sound and productive knowledge sharing that could be used in the micro/personal level, meso/institutional level, and macro/societal level of interactions.

In the micro/personal level, knowledge sharing is between a mentor from an industry and a trainee, a SHS student. Knowledge sharing of the core elements of the proposed program could lead to a more viable working relationship between participants. At

this level, *Standard* refers to a host school’s requirements and policies, based on DepEd, and a partner industry’s expectations. *Readiness, Commitment, and Discernment* guide the participants on the action to be taken. *Fulfillment* is realized by external recognition and/or personal contentment. In the meso/institutional level, the core elements of the proposed model could guide the participants in providing a clearer and more mutual understanding of the benefits and constraints involved in a work immersion program. In addition, it could also help in establishing stronger partnership and commitment. In the macro/societal level, the core elements of the proposed model could guide policy makers of the Department of Education, in consultation with the leaders of participating industries, in enhancing policies and guidelines for the implementation of the SHS work immersion program. Table 4, presents the summary of action for the participants of different levels.

Table 3. Summary of action for the participants of different levels

<b>Level</b>	<b>Participants</b>	<b>Action</b>
Macro (Societal)	DepEd policy makers in consultation with leaders of participating industries	- Enhance the national policies and guidelines of the work immersion program, establishing a more sound collaborative environment between a host school and a partner industry.
Meso (Institutional)	Host and Industry partner	- Establish a stronger partnership and commitment on the implementation of the work immersion program.  -Enhance guidelines and operational procedures to guide and help mentors and trainees about their roles, responsibilities, benefits, and constraints.
Micro (Personal)	Mentor and trainee	- Be oriented and use the guidelines and operational procedures of the work immersion program to ensure a more productive, efficient, and effective outcomes.



## **Future Research Direction**

This study's main objective was to develop a proposed knowledge sharing model for SHS work immersion program. The implementation of K to 12 Curriculum provided a venue for this study to commence because of the absence of a prescribed framework. The researchers found no literature available discussing knowledge sharing, specifically for SHS work immersion. The study adopted the qualitative developmental design which came in two phases: foundation phase and development phase. The result of data analysis, following Corbin and Strauss' method (1990; 1998), in Creswell (2012), rendered the five themes which became the core elements of the proposed model.

A sound knowledge sharing in the different levels would respond to the call of Verecio (2014) and strengthened the claim of the Coalition for Change (2018): (1) to improve mentoring practices in the micro/personal level, mentor and trainee; (2) to enhance collaboration of participants in the meso level, host school and industry partner; and (3) to strengthen to the partnership of participants in the macro level, government and industry. Furthermore, what the proposed model is trying to build, implicitly, is a culture and environment founded on integrity, honesty, respect, prudence, generosity, authenticity, and excellence. Hence, future studies regarding knowledge sharing could focus on investigating the culture and environment of knowledge sharing practices in the different levels of work immersion: micro, meso, and macro. Such researches could bring light to the fast changing dynamics of interaction between and among the people involved in work immersion due to the advancement of technology. In addition, since the nature of the research design employed by the researchers in this present study is qualitative design, the proposed model has a considerable degree of limitations with regard to generalizability and applicability to other sets of population. Hence, the team recommends follow-up studies that would test the generalizability of the model:

qualitative evaluation research, quantitative evaluation, or mixed methods. Lastly, it is imperative to see the points of convergence and points of difference of two or more fields of discipline with regard to knowledge sharing, hence, in this sense, the team recommends a multiple-case study design to uncover these aspects.

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