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Perceptions of Students, Faculty, and Employers on a General Education Program in Vietnam

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This is to certify that the doctoral study by

Cuong Do

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Walden University
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Abstract

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MS, University of Science HCM City, Vietnam, 1998

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Project Study Submitted in Partial Fulfillment

of the Requirements for the Degree of

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Abstract

Vietnam's higher education institutions have been criticized for producing graduates who are lacking skills required by employers. To address this criticism, the general education program at a university in Vietnam aims to build the broad knowledge and skills. However, it was unknown if students, faculty, and employers perceived the program to adequately provide students with broad knowledge and skills. The purpose of this convergent mixed methods study was to investigate the perceptions of students, faculty, and employers about whether the general education program was providing students with broad knowledge and skills needed for career success. The theoretical foundation for this study was Mezirow's transformative learning theory and Kolb's experiential learning theory. Research questions focused on examining the perceptions of students and faculty regarding broad knowledge and skills needed for students' career success provided by the general education program. Quantitative data were obtained from 419 student responses to a Likert scale survey and were analyzed using descriptive statistics. Qualitative data were collected from eight faculty members and six employers, which were analyzed using inductive content analysis. The findings showed that students perceived that they gained many skills but little broad knowledge from general education; faculty saw the value of the provision of general education but realized that many students did not find value; employers valued the provision of general education but did not share the same emphasis on content and skills as the university. A faculty professional development program was created to help faculty better equip students with general education knowledge and skills, so that students graduating with general education competencies can be change agents in their workplace and the community.

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Dedication

I would like to dedicate this work to my family. Thank you for your love, encouragement, and support that made it possible for me to complete this doctoral project study.

Acknowledgments

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Section 1: The Problem

The Local Problem

One university in Southern Vietnam (SVU), a pseudonym, has embarked on an innovative initiative to transform higher education in Vietnam. The mission of the university is to produce proficient professionals who are able to lead in industrializing and modernizing Vietnam. SVU's general education program was established to help carry out this mission as well as respond to employers' demands for high-skilled graduates in Vietnam. The general education program aims at building broad social and natural knowledge as well as critical thinking, creative thinking, communication skills, problem-solving, teamwork skills, and information literacy skills needed for students to succeed in their study, lives, and careers, no matter their majors. However, it was unknown if students, faculty, and employers consider the general education program to adequately provide students with broad knowledge and skills.

The general education program at SVU is considered an integral part of liberal education; it provides a knowledge base for students to prepare and adapt themselves to complexities, diversities, and changes in the future. The general education program classes make up 22 credits out of the 142 credits required for a bachelor's degree in any major. Students are required to take seven general education courses, including three courses in general knowledge and skills, three courses in political philosophy, and one course in computer skills. For this study, the following educational objectives of broad knowledge were used to examine students' perceptions of the general education program:

- Professional ethics

- Gender and development in Vietnam
- Humans and the Environment
- History of scientific thought
- Cities and urbanization
- Vietnam amidst globalization
- Information technologies
- Vietnamese culture
- Inclusive development
- Intercultural communication
- Psychology—Concepts and Application
- The Vietnamese Diaspora
- Philosophy in practice
- Mass communication and society
- Design thinking
- World's art history

The program, which initially offered only three skills courses, now offers 23 of these courses and is expected to continue adding new courses. For this study, the following educational objectives of soft skills were used to examine students' perceptions of the general education program:

- The ability to effectively communicate orally
- The ability to effectively communicate in writing
- The ability to work effectively with others in teams

- Critical thinking and analytical reasoning skills
- The ability to apply knowledge and skills to real-world settings
- Ethical judgment and decision-making
- The ability to analyze and solve complex problems
- The ability to locate, organize and evaluate information from multiple sources
- The ability to innovate and be creative
- Foundations and skills for lifelong learning

The development of additional general education courses should be in alignment with the goals of general education based on the principles of liberal education. However, lecturers at SVU commented that although the spirit of liberal education has been somewhat reflected in the action plans of the university, it has not been shown in the curriculum, courses, and activities at the university. In addition, according to some lecturers, students might not clearly understand the role of the general education curriculum in their programs (K. Q. Le, personal communication, July 06, 2016), which could lead to students having negative perceptions of general education learning outcomes and possibly lead to passive learners (Thompson et al., 2015).

The development of broad knowledge and skills for students is an urgent societal requirement for universities in Vietnam (Van, 2016). Higher education institutions in Vietnam do not meet the needs of employers by providing graduates who have adequate generic skills (Aring, 2015; Tran & Marginson, 2016). Generic skills are sometimes referred to as soft skills, life skills, or work skills (Nghia, 2017a; Tran, 2015). In the international context, they have also been called interpersonal skills, transferable skills,

essential skills, core skills, key competencies, and employability skills (Bora, 2015; Suleman, 2016). Generic skills such as communication, negotiation, interpersonal skills, and writing skills have been the weakest skill areas of Vietnamese graduates; the graduates have also lacked work attitude, creativity, critical thinking skills, and other generic skills. Bodewig and Badiani-Magnusson (2014) showed that nearly 50% of companies (and more than 60% of foreign companies) in Vietnam stated that the shortage of necessary generic skills is an obstacle to their operations; nearly half of those viewed it as a major obstacle.

The design of Vietnamese university curricula has focused on providing students with professional knowledge and job-specific technical skills rather than developing students' generic skills (Nha & Tu, 2015). Although there is evidence of efforts to improve the skills gap, Vietnamese universities' curricula and teaching methods, as well as students' perceptions of broad knowledge and skills, have not encouraged students to develop these generic skills. Government and educators in Vietnam have called on universities to reform their educational programs in order to develop students' capacities through the curriculum (Tran et al., 2016; Truong et al., 2018).

Students, graduates, and employers from a number of Vietnamese universities have identified the importance of soft skills in employment, but students and graduates perceived that university curriculum did not support them in the development of soft skills, and all employers were dissatisfied with graduates' soft skills (Tran, 2015). Students and graduates have suggested universities providing soft skills subjects in the curriculum, such as communication skills, teamwork, decision making, independent

working skills, and social awareness. Additionally, students did not recognize that those skills are developed through active involvement in activities both inside and outside the classroom. Although most of them have recognized extra-curricular activities organized by Youth Union and Student Association as opportunities to develop soft skills, they indicated a loose connection between those activities and skills development and a lack of interest in those activities (Nghia, 2017a; Tran, 2015).

All curriculum at universities must comply with university outcomes standards stipulated by the government, which prescribes the required knowledge, skills, attitudes, and responsibility students should achieve when completing the program (VMOET, 2015). Required graduates' capacity focuses on in-depth knowledge of their field as well as foundation knowledge of natural and social sciences. In addition, graduates should have essential skills such as the ability to apply theory and practical knowledge into different situations, analytical skills, problem-solving skills, and foreign language skills. Graduates are also expected to have leadership and creativity in their field, the ability to adapt to different working environments, and lifelong learning skills. However, integrating the learning outcomes into the curriculum has been one of the main challenges facing higher education institutions. Universities do not have qualified staff in curriculum development (Nghia, 2017a). Further, there are different interpretations of the concepts of curriculum, curriculum development, learning outcomes, and outcomes standards among academic staff and between faculty and senior administrators (Phan et al., 2016). Therefore, in order to develop an effective curriculum, higher education staff need to have a shared understanding of and a common language in curriculum and

curriculum development and to develop qualified staff in curriculum development (Son, 2015).

An example of variability in curriculum is general education, which in Vietnam's higher education is defined a part of every undergraduate program, known as general education knowledge. This part consists of the compulsory subjects specified by the Vietnamese Ministry of Education and Training (VMOET) for all higher education programs, including courses in political reasoning (10 credits) and non-credit courses in physical education and national defense education. In addition, general education knowledge requires compulsory and elective courses in the fields of social sciences, humanities, arts, math, information technology, foreign languages, natural sciences, technology, and environment (Nha & Tu, 2015). But this group of subjects is diverse and varies according to program learning outcomes and mission of each university.

Broadly, as it was introduced at higher education institutions worldwide, general education was a strong core curriculum that would equip students with skills, abilities, and knowledge (Lewis, 2016). Some universities stated that general education was university requirements that fall outside the major's curricula and focus on skills such as critical thinking, communication, and numeracy (Yang, 2016). The complex cognitive thinking abilities would nourish students' critical and analytical habit of mind so that they able to deeply explore and resolve disciplinary and interdisciplinary issues. The skills-based general education curriculum has been necessary for providing students with skills to cope with the rapid change in the professional world (Shek et al., 2015). On the contrary, others typically defined general education as a series of liberal art courses

offered outside major courses, including literature, history, sociology, the sciences, and the arts (Kirk-Kuwaye & Sano-Franchini, 2015; Zai, 2015). For universities to meet the needs of students and society in the 21st century, it is essential that they assess general education learning outcomes and restructure general education programs (Association of American Colleges and Universities [AAC&U], 2015; Van, 2016). To build an effective general education program, it is essential to establish shared perspectives of the goals of the general education program among faculty and students (Thompson et al., 2015) and identify employers' expectations of graduates' capacity (Yang, 2016). This understanding will allow faculty and administrators at SVU to implement improvements that will help students achieve the essential skills that the 21st century requires.

Rationale

SVU uses two methods to assess the quality of its general education program: (a) a survey of student course evaluations and (b) course-grading analysis. The survey of student course evaluations has been regularly performed for all students at the end of each semester. The questionnaire includes 24 survey questions on a Likert-type scale ranging from 1 (*very poor*) to 5 (*very good*). The survey questions focus on the clarity of the course (course objectives and content), workload, the instructor's delivery methods, and assessment methods. In addition, there are three open-ended questions related to what students like and dislike about the course and what students suggest for better learning support. Course-grading analysis has been performed at the end of each semester to control grade inflation. The results drawn from the student survey and the grade analysis provide important information for improving the quality of teaching and learning and

evaluating faculty performance. However, these methods do not provide sufficient evidence for students' perceptions of the general education program's provision of the broad knowledge and skills needed for students' career success (Kinash et al., 2015).

In addition, according to the report from SVU's Fulbright scholar-in-residence, a specialist in curriculum assessment, general education faculty members were able to discuss their own courses and course goals in terms that reflected the concept of general education; few of them, however, were able to discuss colleagues' courses in this manner or articulate a shared framework for communicating the program or institution's goals for liberal education more broadly. Additionally, students could discuss the specifics of the course or courses they had taken among the general education offerings but seemed unable to connect those individual experiences to a larger picture. Moreover, a survey asking businesses that had taken on interns about those interns' performance did not explicitly reflect on how well students were able to apply generic skills in practical work. Most employers had positive comments about students' generic skills, but the survey results did not indicate which skills students had and which they needed to develop; it also did not indicate which skills each job required. Understanding how educational stakeholders perceive graduates' skills is a prerequisite for curriculum and pedagogical design (Cottrell et al., 2015), and understanding how students perceive their general education curriculum can help the university provide students with opportunities to maximize their experience in the general education program (Omar et al., 2016). Therefore, it is important that SVU understand stakeholders' perceptions as they

restructure the general education program to better meet the needs of students and society.

Studies have also identified shortcomings in developing skills for graduates to meet employers' requirements. According to the International Labour Organization, Vietnamese graduates do not meet employers' requirements for generic skills such as the ability to work independently, the ability to communicate effectively, and the ability to speak foreign languages (Aring, 2015). The report also emphasized the crucial role universities play in equipping graduates with generic skills to deal with changing workforce structures and the changing needs of employers in the present and the future. In Vietnam, universities have not provided students with a positive and supportive environment for skills development. Higher education institutions in Vietnam have made no systemic improvements in their curriculum design and their methods of teaching and assessment; the loose relationship between higher education institutions and companies and students' lack of participation in extra-curricular activities limit students' development of these necessary skills (Nghia, 2017a; Nha & Tu, 2015; T. Tran, 2015, 2016).

Although the higher education reforms have led to achievements, higher education institutions in Vietnam have faced challenges. The primary concern was that the graduates' capacity did not meet higher and stricter requirements of the labor market. This requirement became more urgent when Vietnam officially joined the ASEAN Economic Community at the end of 2015, which started a process of free movement of skilled labor, goods, services, and free flow of capital within the region of ASEAN (bin

Tamuri & binti Othman, 2016). Meanwhile, higher education graduates had a shortage of English and soft skills, especially communication skills (Papademtriou et al., 2015). The lack of high quality of skilled workforce was also a barrier to Vietnam's integration into the ASEAN Economic Community (Trang, 2016). The lack of both quantity and quality of Vietnamese higher education graduates was the main reason for skill shortages in the labor market in Vietnam (Tran et al., 2016).

Besides professional skills, graduates' soft skills required by employers are communication skills, negotiation skills, English, problem-solving skills, and work attitude. However, how to effectively integrate skills into the curriculum of higher education has been a big challenge to universities. In Vietnam, the majority of curricula at universities have been slowly improved due to the influence of the former Soviet Union's program structure and the centralized management of VMOET for a long time (Le, 2016; Truong et al., 2018). The training programs have focused on providing professional knowledge rather than equipping students with the ability to apply knowledge into practice. Teaching methods have been not encouraged students to develop problem-solving and critical thinking skills. Although VMOET has approved the autonomy of the universities in the development of training programs, universities have not taken the initiative in curriculum development. Curriculum development from academic staff at Vietnamese universities is prone to be product oriented, teacher focused, and textbook-driven rather than understanding curriculum as a dynamic process that is student centered (Phan et al., 2016). Obsolete and inflexible curriculum, outdated teaching methods and student evaluation, and the mismatch between employers' needs

and graduates' capacity have been the key challenges facing higher education in Vietnam (Nha & Tu, 2015; Truong et al., 2018).

Equipping students with a broad knowledge has also been one of the important tasks that universities need to perform to meet the demand for high-quality human resources for the socio-economic development in Vietnam. Some universities integrated a number of general knowledge courses into the general education program or undergraduate curricula (Ha, 2015). The general knowledge courses often relate to multicultural content such as Vietnam and globalization, environment and development, the United States, history of the Western civilization, fundamentals of Vietnamese culture, and introduction to oriental cultures. But alumni from several universities have suggested that universities should provide students with additional general knowledge related to history, humanities, and social issues (Ca, 2015; Duyen, 2016). However, the demand has been a challenge to universities. A minority of faculty have understood the principles and methods of integrating the knowledge courses into the curriculum, although many agreed that the broad knowledge was necessary for students (Ha, 2015). In addition, the lack of faculty teaching general education courses and investment sources is also a challenge for implementing general knowledge courses at universities in Vietnam.

Soft skills for students, such as communication skills, problem-solving, lifelong learning skills, teamwork, and relationship building, play an important role in the students' success (Bora, 2015; Nghia, 2017b; T. Tran, 2015), but shortcomings need to be improved, such as missing students' perception of skills development, the mismatch

between students' perception of their competencies and employers' expectations, allocating institution's resources appropriately, establishing the relationship between universities and businesses, inflexible curriculum, and teaching quality. The ability to adapt to an ever-increasing speed of change is a global challenge to graduates (Becker, 2015). In this context, general education programs must change toward purposeful design in their curricula, teaching methods, assessments, and learning outcomes. A gap exists between the needs of society and students' competencies. Therefore, stakeholders' perceptions of general education programs must be evaluated; understanding stakeholders' needs will help universities find solutions to fill the gap between those stakeholder needs and the skills universities teach. The purpose of this study was to examine the perceptions of students, faculty, and employers about whether the general education program was providing students with the broad knowledge and skills needed for career success.

Definition of Terms

Key terms associated with the problem are defined as follows:

Generic skills: A set of skills that involve cognitive skills (critical thinking, creative thinking, and problem-solving); behavioral skills such as communication, teamwork, leadership, and ability to negotiate conflict; and computing skills (Bodewig, & Badiani-Magnusson, 2014; Nghia, 2017a).

Intellectual and practical skills: A list of skills, which include inquiry and analysis, critical and creative thinking, written and oral communication, quantitative

literacy, information literacy, and teamwork and problem-solving, as essential learning outcomes that all undergraduate students should achieve (AAC&U, 2015).

Job-specific technical skills: A set of theoretical and practical knowledge and skills associated with one's profession (Bodewig & Badiani-Magnusson, 2014).

Knowledge of general education: A part of all undergraduate programs that consists of the compulsory national courses (political reasoning, physical education, and national defense education) and university courses in social sciences, humanities, arts, math, information technology, foreign languages, natural sciences, technology, and environment (Nha & Tu, 2015).

Soft skills: A set of skills necessary for living, learning, and employment, such as communication skills, teamwork skills, emotional intelligence, interpersonal skills, negotiation skills, and leadership qualities (Bora, 2015).

University outcomes standard: A set of the required knowledge, skills, attitudes, and responsibility that students should achieve when they complete the program, which includes foundation knowledge of natural and social sciences, in-depth professional knowledge, and skills such as analytical analysis, able to apply knowledge into practice, problem-solving, and foreign language skills (VMOET, 2015).

Significance of the Study

General education, which is based on the principles of liberal education, has evolved throughout the history of higher education in the United States and has been viewed as an American hallmark: a key to creativity in the economy and to participatory citizenship (AAC&U, 2015). As reported by studies, applying the relevant concepts of

general education and liberal education to developing countries is useful in redesigning their programs of higher education (Lewis, 2016; Thu, 2017; Van, 2016). In recent years, general education has continued to be reformed in order to meet the needs of students, universities, and society in the 21st century (Becker, 2015; Wells, 2016). This study contributes to the understanding of how general education developed in Vietnamese society. This study's research results will be useful for Vietnamese universities applying liberal education and general education in their education to enhance curriculum and improve courses' content linked with requirements of the labor market, increase students experience and equip students with the higher value of professional.

This study is significant because it provides research-based evidence of educational stakeholders' perceptions of the general education program's provision of the broad knowledge and skills needed for students' career success. Understanding the perceptions of the general education program held by students, faculty, and employers will help faculty and administrators at SVU restructure the program to improve students' learning. This general education reform will increase graduates' broad knowledge and skills, which are crucial in navigating a complex and unstable world. Understanding the program's learning outcomes will also guide faculty members in developing course syllabi and choosing pedagogies that tend to increase student participation in the learning process (Bass et al., 2017). Faculty can then develop strategies to enhance the student competencies that are required for their success. This study also serves an important role in the implementation of SVU's 2016–2020 strategic objectives, in which the university emphasizes solutions for achieving their strategic commitment to liberal education. The

evaluation and redesign of the general education program are critical approaches to implementing the university's strategy.

Research Questions

This study was designed to investigate the perceptions of students, faculty, and employers about whether the general education program was providing students with the broad knowledge and skills needed for career success. In alignment with the research problem and the purpose of the study, the following research questions were posed:

Research Question 1: What are students' perceptions, based on Likert scale ratings, of the general education program's provision of the broad knowledge and skills needed for students' career success?

Research Question 2: What are faculty's perceptions of the general education program's provision of the broad knowledge and skills needed for students' career success?

Research Question 3: What are employers' perceptions of the general education program's provision of the broad knowledge and skills needed for students' career success?

Review of the Literature

Theoretical Foundation

Transformative learning theory (Mezirow, 1997) and experimental learning theory (Kolb, 1984) provided the theoretical foundation for this study. Transformative learning theory emphasizes the transformation of perspectives, and experiential learning theory focuses on transforming experience into knowledge and skills. Both theories

strengthened the root meaning of liberal education and general education and closely aligned with the context and the intention of this study.

Transformative Learning Theory

Transformative learning theory provides an explanation for how learning takes place, how learners understand themselves and make meaning of their experiences, and how transformations in meaning perspectives occur (Christie et al., 2015; Mezirow, 1997, 2009). Transformative learning is the process by which learners transform their frames of reference to make them "more inclusive, discriminating, open, reflective and emotionally able to change" (Mezirow, 2009, p. 92). A frame of reference (or meaning structure), in Mezirow's (1997, 2009) theory, is the set of assumptions and expectations that constructs the way an individual interprets experience, and consists of two aspects: habits of mind and points of view. Habits of mind (or meaning perspectives) refer to broad assumptions, habitual ways of thinking, feeling, and acting influenced by one's previous experiences such as cultural, social, educational, psychological experiences. Learners express their habits of mind through their specific points of view (or meaning schemes), which comprise beliefs, judgments, attitudes, and feelings and shape a particular interpretation. Frames of reference transformation occur when learners critically reflect on their own assumptions and this process may take place within both two learning domains, which are instrumental learning or communicative learning. Under the influence of Habermas' (1971) ideas, Mezirow described the frames of reference transformation in instrumental learning as involving in management of environment that helps learners understand how to improve their performance, with meaning being created through empirical testing

(Howie, & Bagnall, 2013; Mezirow, 1997, 2009). For communicative learning, a group of learners' involvement is required to understand what others mean through communication, leading to the establishment of the justification for a belief (Mezirow, 1997, 2009).

Critical reflection (or critical self-reflection) on assumptions and critical discourse (or rational discourse) have crucial functions in the transformative learning theory. Critical reflection refers to "critical assessment of the sources, nature and consequences of our habits of mind" (Mezirow, 2009, p. 94), and critical discourse is understood as learners' full and free engagement in dialogue focusing on beliefs and assumptions to confirm a best judgment (Mezirow, 2009). Therefore, through critical reflection and involvement in discourse, learners control their beliefs and assumptions, and gain a new way of thinking, perceiving, deciding, and acting on their experiences (Calleja, 2014; Mezirow, 2009).

Critical reflection can lead to transformations through process of learning, and there are four types of learning process (Calleja, 2014; Mezirow, 1997, 2000). The first type is learning through elaboration on existing points of view. In this process, learners can revise acquired knowledge or add further evidence to their points of view. The second type is learning through creating new points of view that are compatible with existing learners' points of view. The third type is learning by transforming points of view. In this way, learners may use critical analysis or critical reflection to question the content and/or process of problem-solving. The fourth type of learning is transforming habits of mind that occurs when premise reflection happens through questioning the

problem itself or the validity of assumptions. However, as Mezirow (2000) explained, learners can transform their points of view through trying on another's points of view, but can not do this with habits of mind. Therefore, educators need to support learners to fully engage in the transformative learning process by establishing an open and safe environment learning for fostering critical reflection and the free exchange of ideas.

Experiential Learning Theory

Kolb's (1984) experiential learning theory provides a dynamic view of learning, which defines learning as a process of creating knowledge and skills through the transformation of experience. The process of learning involves four cyclic stages: concrete experience, reflective observation, abstract conceptualization, and active experimentation (Kolb, 1984; Kolb & Kolb, 2017; Passerelli & Kolb, 2012). Concrete experience is the process in which students are actively experimenting with the knowledge obtained that leads to the second stage of reflective observation through a process of critical reflection on those experience from various perspectives. Students develop concepts based on the integration of their reflective observations in the abstract conceptualization stage, and in the final stage—active experimentation—students apply those concepts to a new context (Cathro et al., 2017; Kolb, 1984). Through the cycle of experiential learning, students gain knowledge and skills by meaningful transforming experience in a recursive process: experiencing, reflecting, thinking, and acting.

Although all four cyclic stages are a part of learning, students have different ways to learn through the process of experience transformation. Kolb (1984) identified four learning styles, which describe a combination of one from the grasping experience

dimension (including concrete experience and abstract conceptualization stages) and one from transforming experience dimension (involving reflective observation and active experimentation stages). The diverging learning style presents dominant learning abilities through concrete experience and reflective observation stages. Students with this learning style tend to work with others towards receiving personal feedback, listening with an open mind, and have creative abilities (Kolb & Kolb, 2017; Kolb et al., 2001). The assimilating learning style describes learning abilities using abstract conceptualization and reflective observation. Students with this style have the ability to develop theoretical models and prefer lectures, reading, and inductive reasoning. On the other hand, students with converging learning style have abstract conceptualization and active experimentation as strong learning abilities. They have the ability to solve problems and experiment with practical applications. Students with an accommodating learning style prefer using concrete experience and active experimentation during learning process. They tend to work with other to solve problem, and to involve themselves in new experiences (Kolb & Kolb, 2017; Kolb et al., 2001). Learning styles are influenced by early educational experiences; however, students may change their learning approach by using combined dimensions in learning cycle to adapt their learning style to the learning situation (Passerelli & Kolb, 2012).

Transformative learning experiences have been seen as central components of contemporary liberal education, general education's provision of broad knowledge and skills needed for students' success, which was the basis of this study's approach (Nitkin et al., 2016; Scott, 2014). Transformative learning is the essence of adult education that

helps individuals become more autonomous and responsible thinkers (Mezirow, 1997). The central role of autonomous learning is recognized through the identified learning needs of the workforce (Mezirow, 1997). The employers' requirements include skills and competencies such as working with others and in team, understanding complex interrelationships, using cultural understandings, solving problems, and using, analyzing, and interpreting information (Mezirow, 1997). Experiential learning emphasizes the need to link higher education and employment (Kolb, 1984; Kolb & Kolb, 2017), and broadly aligns with levels of reflective practice in transformative learning (Mezirow, 2009). In addition, the last two types of transformative learning directly relate to the attributes of the transferable skills such as problem-solving skills, creative thinking, critical thinking and teamwork as well as to the broad and foundation knowledge that needed for students' success (Hoggan, 2016).

In this study, based on the transformative learning theory and experiential learning theory, the broad knowledge base and those skills were explored through the research questions focused on the perceptions of students, faculty and employers about whether the general education program was providing students with the broad knowledge and skills needed for career success. The theory principles were used to integrate the data analysis in order to gain a comprehensive picture of how different stakeholders (students, faculty, and employers) perceive general education provision of broad knowledge and skills for students, and to provide recommendations for redesign strategies for the general education program at SVU and future research on general education.

Literature Overview and Search Strategies

This section provides background information related to general education programs addressing broad knowledge and skills. The first segment examines the general education addressing adequate provision of broad knowledge and skills needed for students through perceptions of students and faculty. The next segment discusses skills and broad knowledge valued by employers.

Several search databases on the Walden University Library website, such as Thoreau Multi-Database Search, ERIC and Education Research Complete, Google Scholar, and Dissertations were used to find resources related to the research problem. In searching peer-review sources and seminal works, subject terms such as *liberal education, general education, and core curriculum* were used and combined with keywords such as *soft skills, generic skills, broad knowledge, learning outcomes, perception, student, faculty, and employer*. Google scholar and Google search were primarily used with Vietnamese terms such as *giáo dục khai phóng (liberal education), giáo dục tổng quát (general education), chuẩn đầu ra (learning outcome), kỹ năng mềm (soft skill), and kỹ năng tổng quát (generic skills)*. Some websites, such as the AAC&U (www.aacu.org), Lumina Foundation (www.luminafoundation.org), and National Institute for Learning Outcomes Assessment (www.learningoutcomesassessment.org), were also used. Conditions on the time of publication (within the last 5 years) and document type (peer-reviewed, academic journal) were set to ensure that reliable sources for research were obtained. Some earlier sources were included because of significant relevancy to this topic.

Broad Knowledge and Soft Skills

General education has been implemented at many universities to equip students with both broad knowledge and fundamental competencies, which integrate with multiple disciplines so that they can succeed in study, life, and career (AAC&U, 2015; Chan, 2016). Students, faculty, and employers have had various perceptions of the broad knowledge and generic skills provided by general education.

Student Perceptions. By effective design, as perceived by students at many universities, the set of general education courses helps students acquire broad knowledge and generic skills. As most students at Hong Kong Polytechnic University perceived, well-designed general education courses effectively helped them develop generic skills such as critical thinking, communication, problem-solving, interpersonal and lifelong learning skills, and expanded their knowledge base. The general education courses were designed to incorporate compulsory and elective components that helped students improve their ability to apply knowledge and skills in handling practical issues (Shek et al., 2017a). Students at a university in Malaysia perceived that they had benefited greatly from the general education program (Cheong & Ong, 2015). The learning outcomes of the general education program specified the gaining of generic skills required by employers. Thus, the program helped students enhance generic skills needed in the job market. These skills involved thinking and interpersonal skills, teamwork skills, communication, and information technology skills.

Similarly, the majority of students at Grand Valley State University perceived the importance of broad knowledge and multicultural competencies provided by the general

education curriculum (McClinton & Schaub, 2017). They were also satisfied with the general education program, which helped them gain a broad knowledge and those skills. Students at Saudi Arabian universities perceived that they were more confident about the general education curriculum than about the overall university curriculum in preparation for their professional (Alghazo, 2015). General education curriculum promoted students to acquiring sufficient development in generic skills and a broad knowledge base. This, the literature generally showed that students had positive perceptions of the general education provision of broad knowledge and generic skills because of the effective general education course structure and contents.

In addition to good design general education courses, students having teaching experiences and university experiences has had a significant effect on their soft skills development, as students perceived gains at a number of Vietnamese universities. Curriculum emphasizing integration, project-based teaching methods, employing experiment teaching approach, and engagement in-class activities are significant factors that have influenced students to enhance their teamwork, computer skills, creativity, autonomous learning, and self-regulated learning (Canh, 2017). Meanwhile, participation in social service of co-curriculum, multimedia teaching methods, and exchange issues with others for science and technology events are the main factors that impact the way students enhance their communication skills (Duong, 2016). Students' awareness of practicing skills is the most important role in shaping skills for students. A large number of students have expected skills classes taught by universities or skill training centers, instead actively participate in-class or extra-curricular activities to develop necessary

skills (Tran, 2015). The extra-curricular activities include social and charitable activities, career fairs, club activities, and skills classes such as communication, CV writing, job interview, teamwork, and presentation skills classes. Vietnamese universities have used extra-curricular activities, coordinated by Youth Unions, as a primary or additional measure to support students develop generic skills in addition to some skill courses that universities have made an effort to add into curricula (Nghia, 2017a). However, many students disregard such activities compared with major classes; some activities are not involve all students besides insufficient resources for these activities. Thus, the insufficient skills practicing awareness of students is a major reason that led to a lack of skills in students (Tran, 2015). Skills development is the responsibility of universities, but students should acknowledge their own responsibility in the process.

Students' dissatisfaction with general education programs has been a concern of universities. A number of students see general education as irrelevant to their professional success (Jing & Wei, 2015; Lowenstein, 2015), perceive that the general education courses do not relate to their major courses (Kirk-Kuwaye & Sano-Franchini, 2015), and complain that general education courses do not contribute to generic skills such as communication skills (Omar et al., 2016) and their professional expertise (Kirk-Kuwaye & Sano-Franchini, 2015). Students do not find the meaning of general education and opportunities to develop skills from general education courses (Thompson et al., 2015; Wells, 2016). Students also have identified the need for additional general education courses related to general knowledge, such as natural science, history, humanities, and social issues, and skills, such as critical thinking, communication, and

problem-solving skills (Alghazo, 2015; Duyen, 2016). One of the main reasons for those complaints is that in general education courses, faculty members tend to focus on their disciplinary and research interests rather than on the knowledge and skills that students needed. In addition, most students do not receive enough information about general education requirements as well as the important purpose of general education courses. Understanding why students are dissatisfied with general education program will help faculty effectively design the general education curriculum and promote the role of faculty in helping students acquire maximum benefit from general education curriculum.

Faculty Perceptions. The positive perception of faculty towards general education plays an important role in promoting the effective involvement of lecturers and students in the implementation of general education program. Most faculty members value general education for providing students with broad knowledge and skills needed for students' success. A survey was conducted at departments of agricultural education at universities in the United States to examine faculty perception of general education and its outcomes focusing on the use of high-impact practices in general education courses and programs (Murphrey et al., 2016; White, 2018). Most of faculty agreed that general education curriculum lays the foundations for students to achieve broad learning goals, which based on the intended essential learning outcomes designed by AAC&U (2015). Students were best able to develop intellectual and practical skills, integrated their learning and increased social and personal responsibility through practicing challenging projects, application knowledge and skills to new and complex situations, and active participation in multicultural communities. Faculty also agreed that the design of general

education knowledge courses with focusing on student engagement in big questions and high-impact practices activities was an effective approach to help students gain broad knowledge of physical and natural world. This teaching approach was consistent with the best teaching practices that faculty used to develop generic cognitive skills and provide broad knowledge for students, which were identified from Shek et al. (2017a) research on students' perception of general education. The best teaching practices included setting high standards for learning in general education courses, encouraging students to seek links between general education courses and between those courses and courses in their majors and to search for commonalities between courses.

Faculty perceptions of how general education courses affect student learning differ between faculty who teach general education courses and those who do not. Although both general education and non-general education faculty at West Virginia University perceived that general education courses had a positive influence on students' ability to analyze and solve a problem, to think critically, to synthesize information and apply knowledge and skills to new settings, faculty who taught general education courses perceived that these courses had a greater impact on those students' ability than those who did not teach general education courses (Cottrell et al., 2015). This condition is also found in the previous study conducted by Laird et al. (2009), in which general education faculty had a tendency to emphasize the development of intellectual skills and personal and social responsibility in their courses. Non-general education faculty focused on practical skills, such as solving complex real-world problems, working effectively with others and acquiring work-related knowledge and skills, to greater extent than in general

education courses. Non-general education faculty perceived the value of practical skills as essential skills for students, but they deferred to major courses in order to students have the necessary knowledge and skills. To deal with this issue, both general education and major courses should promote the acquisition of all essential learning outcomes, including practical skills, intellectual skills, and individual and social responsibility, to ensure that all students meet general education requirements.

Many faculty members have positive perceptions of general education program and have positive experiences in teaching general education courses. A series of evaluation studies on the implementation and effect of general education program, which was conducted at The Hong Kong Polytechnic University, indicated that most faculty members perceived general education courses as important and beneficial to the development of students' broad knowledge and generic skills (Shek et al., 2017b). A large percentage of faculty perceived that the content and structure of the general education courses helped students improve their abilities to think critically, communicate effectively, solve problems innovatively, and develop lifelong learning skills and ethical leadership. Interactive teaching methods, such as group work, experiential learning and visual aids, engage students learning actively and effectively impact on the development of required competencies for students, such as literacy information, problem-solving, teamwork, communication, and real-world application skills (Kim, 2019). Using active teaching and learning activities in teaching general education courses increases students' motivation, excitement, and depth of learning (Hyun et al., 2017), improve interpersonal skills, analytical skills, and general and professional knowledge (Smith et al., 2018),

improve students' overall learning skills and students' employment outcomes (Nghia, 2017b), and provide opportunities for students' engagement in transformative learning (Nitkin et al., 2016). Faculty also share their recognized significant students' changes in competencies, moral characters, attitudes and knowledge base; and they fell greatly satisfied with well-designed general education courses content and teaching general education courses (Shek et al., 2017b). Although faculty have positive perception and impression of general education program, they indicate their concerns about a lack of motivation for some students' participation in general education courses, and in selecting suitable teaching methods for large-class general education courses.

Employer Perceptions. Given the necessary broad knowledge and skills for students, it is important to understand what graduates' broad knowledge base and skills are most required by employers. Studies on employers perceptions of graduates' ability and skills need to be aimed at addressing the mismatch between employers' requirements and the ability of graduates, which has been the issue worldwide (Li, 2015; Oliveri & Markle, 2017). Skills across a large number of job requirements commonly required by employers are communication skills, critical thinking, creativity, teamwork and problem-solving. These skills are ranked as the most important skills for graduates as perceived by faculty, students and graduates; however, employers perceive that graduates have been deficient in the skills required by the workforce (Ho, 2015; Li, 2015; O'Leary, 2017). Therefore, higher education institutions should articulate these skills with student learning outcomes, and integrate the skills into curricula and across teaching and assessment practices.

In Vietnam, understanding of what soft skills employers expect from graduates has been one of important tasks of universities in order to adequately equip students with soft skills competencies. Several studies were conducted to address this issue. Truong et al. (2018) identified 19 essential soft skills necessary for business graduates based on research of employers' perceptions of essential soft skills needed for graduates' career success from local and international companies in different business sectors in Vietnam. Communication skills and teamwork were the most important and necessary for business graduates' success. The next essential soft skills included flexibility skills, customer service skills, interpersonal skills, negotiation, critical thinking, marketing, positive attitudes and responsibility. Besides, employers also required graduates have business ethics and other skills such as time-management, market research, problem-solving, self-management and leadership skills. Hanh (2015) and Lan (2020) conducted studies to explore employers' perspective of graduates' soft skills. Communication skills, teamwork and lifelong learning skills were the most important soft skills required by employers from all business sectors. Other skills most required by employers included interpersonal skills, decision-making skills, self-management, planning and organizing skill, and creative thinking. Although there was a difference in skills competency of students from different majors, students' skills competency, except for teamwork and self-management skills, generally did not meet employers' expectation. These results were consistent with Bodewig and Badiani-Magnusson's (2014) report, which indicated that employers in Vietnam highly valued cognitive skills and social and behavioral skills needed for multiple occupations. These skills included problem-solving, creative and critical

thinking, communication skill, teamwork, leadership, interpersonal skills, analytical, independent work, time management. In addition, conscientiousness, openness to new experiences, self-discipline and decision-making skill were also important soft skills required by most employers. Moreover, employers from a number of universities required graduates have general knowledge related to history, humanities and social issues (Ca, 2015; Duyen, 2016). Given the identification of essential soft skills and broad knowledge base considered by employers, universities should upgrade their undergraduate curricula to sufficiently provide students with these essential soft skills.

Several studies examined gaps in perception of graduates' skills between employers and faculty, employers and students, faculty and students, but a few studies investigated all views in one paper. Li (2015) suggested that different stakeholder groups should understand perceptions and needs of one another; and conducted a survey to prioritize required graduate's skills among employers, faculty, graduates and students in Hong Kong. The results showed that there was a difference in perceptions of the importance of several graduate's skills among the stakeholders. Employers perceived work attitude; students perceived English language proficiency; faculty and graduates perceived problem-solving abilities as the most important graduate's skills. Employers and faculty ranked comprehension and expression in written English the first five most important attributes, while students and graduates did not. Employers, faculty and management sciences graduates at a Namibian university had different perspectives on skills needed for career success (Shivoro et al., 2018). Employers and graduates emphasized management skills; however, faculty considered IT skills as the most

important skills needed for career success. Additionally, employers and faculty perceived that graduates need additional training in almost all skills needed for job performance such as critical thinking skills, literacy and numeracy skills, leadership, system thinking, management skills and work ethics. However, graduates perceived that the most needed additional training was interpersonal and information technology skills (Shivoro et al., 2018). Variations in perceptions of the graduates' skills among employers, teaching staff and graduates from three programs at a large university in Australia were recognized (Ferns, 2018). All stakeholders from all programs had an agreement on skills and broad knowledge perceived as more important to career success, such as communication, critical thinking, teamwork, personal code of values and ethics, problem-solving, and self-reliance. However, there was a big gap in achievement of those skills and broad knowledge among graduates. This result raised the questions on the curriculum structures, teaching methods and assessment strategies for assisting students to acquire skills and broad knowledge needed for professional performance.

In the United States, the majority of employers believed that the acquisition of broad knowledge and cross-cutting skills was important for higher education graduates to succeed in long-term careers (Hart Research Associates, 2018). The most highly valued skills perceived by employers included verbal and written communication skills, teamwork, critical thinking, decision-making skills, problem-solving, and applied knowledge in real-world setting. They also expressed their dissatisfaction with those skills possessed by graduates and suggested universities increase educational practices that engage all students in developing the key skills required by workforce and gaining a

broad range of knowledge. According to Henschel et al. (2018), those findings and other evidence from employer surveys showed that general education had been a comprehensive approach to higher education learning in order to help students gain a broad range of knowledge and skills as well as specific field knowledge and skills in their majors. Such an education provides students with strong foundation for long-term professional success.

Implications

General education based on the liberal education philosophy has been viewed as an effective approach to reforming higher education. The purpose of the general education program is to help students achieve broad knowledge and skills that society needs in the 21st century. The perceptions of general education program and skills development from students, faculty and employers are diverse. One of the major challenges of designing an effective general education program is how to integrate general education outcomes into the entire university education process. Studying the perceptions of students, faculty and employers on the development of broad knowledge and skills could contribute to addressing that challenge.

The results of this study were used to make recommendations to improve the general education program. A detailed examination of the perceptions of students, faculty and employers about the broad knowledge and skills provided by general education program at SVU revealed the mismatch between employers' expectation and graduates' competencies obtained from the university. Based on the findings of the study, I suggested a possible project on professional development workshop for academic staff

and administrators, especially general education faculty members. The workshop focused on a shared understanding of the broad knowledge and skills provided by the general education program. The findings of the study were evidence used to improve general education curriculum and integrate skills into entire undergraduate curriculum. An effective general education program is a program that has a cohesive structure, integrates with major courses, and ensures that classes are consistent with the university's mission. The workshop may help faculty identify aspects of curriculum and educational activities that need improvement to maximize student experiences and success.

Summary

The purpose of this study was to examine the perceptions of students, faculty and employers about whether the general education program was providing students with the broad knowledge and skills needed for career success. The review of literature supported different perspectives on the general education provision of the broad knowledge and skills from students, faculty and employers. Students and faculty perceived that general education effectively helps students develop skills and expand the broad knowledge base. Well-designed general education courses, interactive teaching and positive experiences in teaching and learning general education courses were effective approaches to successfully implement general education. Employers perceived that gaining a broad range of knowledge and developing skills required by workforce was important for higher education graduates to succeed in a long-term career. Although there were various positive perspectives, studies revealed the limitations in the development of competencies

needed for students and the mismatch among stakeholders' perception of the general education provision of broad knowledge and skills.

The next section provides detailed information about the mixed methods design approach that was used in this study. The section contains the setting, the sampling procedure, data collection strategies (including both quantitative and qualitative data collection), data analysis methods, and data analysis results.

Section 2: The Methodology

This section presents the methodology that was used in this study, which is divided into five parts. The first part introduces the study's mixed methods design and approach. The second part presents the setting and sampling procedures. Data collection strategies and the process of data analysis are described in the third and fourth parts. The final part presents the results of data analysis, including quantitative and qualitative findings as well as a combination and interpretation of the results.

Mixed Methods Design and Approach

The methodology for this study was a mixed methods approach. This approach uses both quantitative and qualitative methods to better understand the research problem and questions (Creswell, 2012). In this study, the mixed methods approach was used to develop a more comprehensive understanding of the general education program's provision of the broad knowledge and skills needed for students' career success from multiple perspectives including students, faculty, and employers. Quantitative methods were used to investigate students' perceptions of the broad knowledge and skills needed for career success provided by the general education program with a Likert scale survey. Qualitative methods were used to explore the faculty's and employers' perceptions of the broad knowledge and skills needed for students' career success through personal interviews.

For the design, a convergent mixed methods design was used. In using this design, the quantitative data and qualitative data were collected separately at the same time, and then each set of data were analyzed independently. The findings of both

databases were merged, and results were then interpreted. This design is a strategy to determine whether the results support or contradict each other (Creswell, 2012). A researcher selects the convergent design when they want to use quantitative findings with qualitative results, synthesize complementary findings and to develop a complete See checklist2011).

Setting and Sample

According to an SVU report, SVU is a comprehensive university with approximately 9,000 undergraduate students: 85% bachelor's degree students and 15% associate's degree students. There are five associate's degree programs: accounting, international commerce, business administration, office management, and hospitality. Three fourths of bachelor's degree students majored in one of seven programs of study in economics and commerce or in three programs of hospitality management. The remaining bachelor's degree students were in seven programs of technology and environment (14%), the English studies program (6%), or in three programs of art and design (5%). Approximately 70% of students came from urban areas, and most students were between 18 and 20 years old. In the academic year 2016–2017, 63% of students were women, and the bachelor's degree student body consisted of 30% freshmen, 27% sophomores, 25% juniors, and 18% seniors.

Quantitative Sampling Strategy

This study focused on the general education program that was required for all students at SVU; therefore, the target population for this study was all undergraduate students at SVU. The sampling frame for quantitative data collection was all bachelor's

degree students studying at SVU. Appropriate sample size for populations of 5,000 or more is in the range of 350 to 500 individuals (Lodico et al., 2010). Thus, more than 1,000 invitation letters were sent to students to invite them to participate in the survey, and 419 complete responses were obtained. A simple random sampling technique was applied to select the sample for this study. Before sending out invitations to participate, permission was obtained from the Registrar's Office and the Information Management Department.

Qualitative Sampling Strategy

In the qualitative strand of this study, a maximal variation sampling technique, which is a purposeful sampling strategy, was used (Creswell, 2012). This sampling strategy, which allows the researcher to select participants who differ on some characteristics and are therefore likely to hold different perspectives on the research phenomenon (Creswell & Plano Clark, 2011), requires the selection of interview participants who can provide rich information relevant to the research questions and come from different groups.

An approximate sample size range (Robinson, 2014) was used for the decision of sample size in this qualitative strand. Many studies showed that the sample size ranges of six to 12 interviews would generate enough data for saturation (Galvin, 2015; Marshall et al., 2013; Tran, 2015). Therefore, eight faculty members and six employers were invited for interviews. Faculty participants taught general education courses at SVU for at least two semesters and came from different general education program departments. The faculty sample selection included those from other major programs who participated in

teaching general education courses. In addition, six employers were those who recruited SVU graduates in the 2015–2016 academic year. Three of the employers were human resource directors, and the others were a general director, director, and deputy director. The types of company employers had worked for included different sectors: private, joint-venture, limited liability, and joint-stock companies as well as varied in business fields: fashion and garment, hospitality, finance and banking, reproduction energy, and information technology.

Measures Taken to Protect Participants' Rights

To protect research participants' privacy, only I received the list of potential participants from the study site to select the sample for the study. I used Walden's email account to send invitation letters and informed consent letters to potential participants. The survey was conducted anonymously using the online survey software SurveyGizmo. Interviewed participants were assigned letters and randomly selected numbers instead of names. The collected data did not include participants' names or anything else that could identify research participants in any study reports and were stored in a locked file with password access.

All participants in this study were over 18 years old. The participants signed the informed consent before the beginning of the study. The informed consent forms provided participants with information about the purpose of the study, their right to withdraw from the study at any time without repercussions, their voluntary participation in the study, and the confidentiality of the collected data and the participants' identifiers. The informed consent letter also explained the separation of my dual roles as the

researcher of this study and the former lecturer and administrator at the research site. The participants received no personal benefits and compensation from this study.

Data Collection Strategies

In a convergent mixed methods study, the quantitative and qualitative data are collected concurrently. In this study, a survey was used to collect students' perceptions of the general education program's provision of broad knowledge and skills at SVU using Likert scale questions. At the same time, interviews with faculty and employers were conducted to collect in-depth information about their perception of broad knowledge and skills needed for students' career success. Surveys and interviews are effective tools for the exploration of educational stakeholders' perception of broad knowledge and skills provided by general education programs (Kuh et al., 2014; Thompson et al., 2015). In mixed methods research, data collection must comply with rigorous quantitative data-collection procedures and persuasive qualitative data-collection procedures (Creswell, 2012; Creswell & Plano Clark, 2011).

Quantitative Sequence

A Likert scale survey was used to gather quantitative data on students' perceptions of general education. This type of Likert scale survey was developed by researchers such as Johnson (2010) and Saadeddine (2013). Johnson developed his student survey to study students' attitudes toward and perceptions of general education requirements at career-focused institutions. The survey was modeled after the previous surveys deployed at Central Michigan University, University of Louisville, and Weber State University. Johnson used 4-point and 5-point Likert scales for the survey items.

Saadeddine similarly developed a Likert scale survey that was adapted from two common indirect-assessment tools: the College Student Experience Questionnaire and the Cooperative Program Instructional Research Freshman Survey. Saadeddine used her questionnaire as a quantitative component in an explanatory mixed methods study to examine the various undergraduate student groups how different undergraduate student subgroups perceived the general education program, their learning in the program, and their experiences with the program. Saadeddine used a 3-point Likert scale for all of her survey questions. In addition, the College Student Report of the National Survey of Student Engagement is a common assessment tool that universities have used to collect how students perceive their participation in learning activities related to institutional learning outcomes and to their own development (Fosnacht & Gonyea, 2018; Pascarella et al., 2010; Pike, 2013). The National Survey of Student Engagement also includes questions that assess students' perceptions of general education learning outcomes; its results were used to assess, revise, and redesign general education curricula (Fosnacht & Gonyea, 2018; Pascarella et al., 2010).

These previously developed Likert scale surveys served as references for the development of the Likert scale survey for this study. The Likert scale survey that was used in this study was developed based on the purpose of the study and its research questions, on essential learning outcomes proposed by the AAC&U (2015), and on the general education learning outcomes determined by SVU. The survey consisted of two parts: Student Background Information and Students' Perception (Appendix B). The first part obtained demographic information such as gender, age, enrollment intake, college

year, GPA, major, and general education courses completed. The second part included four closed-ended questions that utilize the 4-point Likert scale (Leung, 2011), ranging from 1 (*very little*), 2 (*some*), 3 (*quite a bit*), to 4 (*very much*).

Question 8 on the survey measured how students perceive the general education program's provision of the broad knowledge needed for their career success. Question 9 measured how students gained or made progress in the broad knowledge from their participation in the general education courses. Both Questions 8 and 9 included 17 items, which were general education courses related to broad knowledge provided by SVU. Question 10 measured how students perceive the general education program's provision of skills needed for their career success. Question 11 measured how students gained the skills from their participation in the general education courses. Questions 10 and 11 included 11 items, which were 11 skills extracted from SVU general education program learning outcomes, university outcomes standard prescribed by VMOET (2015), essential learning outcomes proposed by AAC&U (2015), and most important skills required by employers from the literature review.

The survey was translated into Vietnamese to use for students. The Vietnamese version was checked by the head of SVU's English department to ensure that it is an accurate translation. The Vietnamese version was then translated back into English by another faculty member in the English department, and it was checked to see if it is the same as the original version.

A codebook was also designed, which contained a list of variables representing all the items on the survey, and each variable was assigned numeric scores. The codebook

was used to set the variables while designing the survey on online survey-administration software SurveyGizmo. The codebook is described in Appendix F.

A pilot test of the survey was conducted with 16 students from the five groups of bachelor programs as determined in the sampling process to ensure the validity of the survey. The students completed the survey and provided their feedback on the clarity of questions and items and the accuracy of the scales, along with any suggestions, comments, and questions they have about the survey. Most of the respondents agreed that the content of the survey is clear and understandable, and the questionnaire was well-organized and easy to follow. Most of them also agreed that the questionnaire content covered most of the broad knowledge and skills needed for student career success. None of the respondents suggested revising the survey.

In the approved proposal, I intended to use structural equation modeling to calculate reliability coefficients to check the survey's reliability (Cho, 2016; Cho & Kim, 2015). However, this approach required a large sample (at least 50). When I used this method with 16 cases, KMO and Bartlec's Test did not run and produced bad data for analysis. Therefore, Cronbach's Alpha coefficients of reliability were undertaken and appeared to be 0.93. This rate suggested that the items covered in this question have relatively high internal consistency. A check question was integrated into the survey to ensure the accuracy of the collected data. The data used for analysis included only those respondents' surveys that were both fully completed and that had correctly answered the check question.

After obtaining permission from Walden University Institutional Review Board (approval # 05-24-18-0354300, including the request for change in using Cronbach's Alpha coefficients of reliability) and the SVU Research Office, the quantitative data were collected via a SurveyGizmo online survey. Walden email was used to send emails to selected students inviting them to participate in the research and providing a link to the online survey. The letter of informed consent was translated into Vietnamese and included in the emails. The Vietnamese version of the informed consent letter was checked by the head of the SVU English department, and it was translated back into English to check its accuracy. The informed consent form provided students with information about the purpose of the study, their voluntary participation in the study, and their right to withdraw from the study. Other emails were sent to thank respondents, and the email reminders were sent two weeks after the distribution of the survey. The survey responses were recorded in raw data files, which were later used for data analysis. The survey was anonymous, and the collected data were kept confidential and stored in a safe place.

Qualitative Sequence

Qualitative data were collected through one-to-one, semistructured interviews with eight faculty members and six employers. Each interview lasted about 30 to 45 minutes; it was audiotaped, and notes were taken. All interviews were conducted in Vietnamese. The faculty members' interview protocol (see Appendix C) and employers' interview protocol (see Appendix D) were translated into Vietnamese and used during the interview to conduct a good interview. These Vietnamese translations were checked

through the same steps used for the translation of the student survey. The interview protocols contained instructions for the interview process and the questions that would be asked. There were six main interview questions for faculty and six questions for employers. The protocol forms included probing questions that were used to encourage the interviewees to elaborate on their ideas. An interview-procedure checklist (see Appendix E; Creswell, 2012) was used to follow good interviewing procedures.

The faculty and employers' interviews began at the same time as administering the students' Likert scale survey. The invitation to schedule an interview and the informed consent letters (Vietnamese versions) were sent via Walden email account to potential participants. The Vietnamese translations of the informed consent letters were also checked through the same steps used to translate student survey. The informed consent letters provided participants with information about the purpose of the study, their right to withdraw from the study, and their voluntary participation in the study. The interviews were conducted in a private meeting room at SVU or at the employer's workplace if that were more convenient for them. The recordings were kept in a locked file.

My role as a researcher was to coordinate and contact potential participants and collect and analyze data. I worked at the university for 21 years and served as a lecturer in information technology, dean, and vice-president. I was involved in the general education program development as a committee member. Starting from April 2017, I no longer worked at the university but continued to pursue this study. I was not in direct or indirect charge of the interview participants. My current and past roles had no impact on

data collection. The participants understood their voluntary participation in this study and their right to withdraw from the study at any time without repercussions. I paid particular attention to preventing researcher bias from my experiences at the university by using interview protocols and an interview-procedure checklist for interviews. I also used member checking by asking the participants to review the initial research findings to represent their perceptions accurately.

Data Analysis

In this study, the data used for analysis consisted of both quantitative and qualitative data. The Likert scale survey given to students collected the quantitative data that address the research question on what students perceived SVU general education's provision of broad knowledge and skills needed for their career success. An Excel file contained all the raw quantitative data. Qualitative data collected via interviews with faculty and employers addressed the research questions on faculty members' and employers' perceptions of the broad knowledge and skills needed for students' career success. All interviews were audiotaped, and they comprised the qualitative data that were used for the analysis. The analyses of the quantitative data and the qualitative data were conducted independently, and the findings of both data sets are presented separately.

Quantitative Analysis

The quantitative analysis process began with the preparation and organization of the collected data. The raw data were cleaned by removing the unnecessary information generated by online survey software (e.g., IP addresses, time started, and date submitted).

The data set was also checked to ensure that the data used for analysis contains only fully completed questionnaires and questionnaires that correctly answer the quality-check questions.

After the data cleaning and checking process, the data set was imported into the IBM SPSS version 21.0 software package to perform the data analysis. Descriptive statistics (percentage and/or frequency) were primarily used to analyze the demographics of the participants and the overall trends of students' perceptions of the broad knowledge and skills provided by the SVU general education program. ANOVA was used to find a statistically significant difference in students' perceptions of general education between independent variables, based on student demographics, and a dependent variable, which was the overall summed score of each survey question. The results are presented in writing and in the form of tables.

Qualitative Analysis

In this study, qualitative data consisted of the data collected from interviews with faculty members and employers. Data collected through interviews were transcribed in Vietnamese for data analysis. The information used to present data analysis results, such as text segment, code words, and quotations, was translated into English. The English translations were checked for translation accuracy by an English faculty member. The inductive content analysis method was used to analyze interview data.

The faculty interview transcripts were analyzed first. The employer interview transcripts were handled in a similar way. All of the interview transcripts were read first in order to get an overview of the data, and then the coding data process was started.

Beginning with the shortest interview transcript, text segments related to the research questions were identified and highlighted. The segments of text were then assigned code words or labels used to describe the meaning of the highlighted text segment. The interviewees' actual words and standard educational terms were used to assign code words. A provisional list of code words was made based on the process of checking back and forth between various code words. The coding process was continued for all interview transcripts. New code words might be added to the provisional list when the data to be processed did not match an existing code. The final list of code words was created when no new information seemed to emerge during the coding process. This list was grouped into meaningful categories. Categories were checked, compared, reanalyzed, and reorganized. This process was iterative cyclical process to reach themes that emerged from the data. Themes were determined based on the synthetic meaning for categories.

Member checking was used to validate the credibility of the findings. Member checking process was conducted by asking interview participants about the interpretation of the research findings. In addition, the interview protocols and detailed description of the data collection, as well as analysis process, were also the methods used to ensure the reliability of the findings.

Data Analysis Results

Both quantitative and qualitative data were collected concurrently for this convergent mixed methods study over a 10-week period, beginning on June 15, 2018, and ending on August 29, 2018. Quantitative data were obtained from students' Likert scale

surveys with 419 complete responses. The data set was imported into SPSS software for data analysis. Qualitative data were collected from eight faculty and six employer interviews, and the interview transcripts were analyzed using inductive content analysis.

This section presents the data analysis results and consists of three parts. The first part presents the findings of Research Question 1 regarding students' perceptions of the broad knowledge and skills provided by the general education program. This part includes demographic information of survey participants and descriptive statistics based on the Likert scale survey. The second and third parts of this section present the qualitative data results used to answer Research Questions 2 and 3 regarding faculty's and employers' perceptions, respectively, of broad knowledge and skills needed for students' career success.

Quantitative Findings

This part presents the results of data analysis conducted to address Research Question 1: What are students' perceptions, based on Likert scale ratings, of the general education program's provision of the broad knowledge and skills needed for students' career success? Demographic information of student respondents is presented first, and then the student responses to Likert scale questions are discussed.

Student Respondent Demographics

Table 1 summarizes the demographic information of students who completed the survey. As shown in Table 1, the majority of student respondents were female (75.2%, *n* = 315) and had a GPA between 2.5 and 3.19 (62.5%, *n* = 262). Eight percent of students were freshmen, 25.8% were sophomores, 35.8% were juniors, and 30.5% were seniors.

All majors offered by the research site had representation in the survey. Most of student participants were enrolled in economics and commerce majors (47.7%, *n* = 200), and English studies (24.3%, *n* = 102). All students who completed the survey had participated in at least one general education course, and the vast majority of student respondents (86.6%, *n* = 363) had taken three courses in broad knowledge and skills courses provided by the general education program.

Table 1

Distribution of Survey Participants' Demographics (N = 419)

Category	*n*	%	Category	*n*	%
Gender			College Year		
Female	315	75.2	Freshman	33	7.9
Male	104	24.8	Sophomore	108	25.8
GPA			Junior	150	35.8
< 2.0	2	0.5	Senior	128	30.5
2.0 - 2.49	25	6.0	Major field		
2.5 - 3.19	262	62.5	Economics and Commerce	200	47.7
3.2 - 3.59	114	27.2	English studies	102	24.3
3.6 - 4.0	16	3.8	Hospitality	66	15.8
Number of general education courses were taken			Technology and Environment	27	6.5
One course	9	2.1	Art and Design	24	5.7
Two courses	47	11.2			
Three courses	363	86.6			

Student Perceptions of the Broad Knowledge and Skills

Overall, less than half of students perceived the provision and gain of broad knowledge as "Very much" or "Quite a bit" (46.6% and 42.1% of students, respectively), in which 14.1% of students and 12.4% of students "Very much" of broad knowledge provided and gained, respectively (see full results in Appendix K). Nearly a quarter of students rated the provision and gain of knowledge as "Very little" (22% and 24.2% of students, respectively). In contrast, the majority of students rated the provision and gain

of skills as “Very much” or “Quite a bit” (71.5% and 70.2% of students, respectively), in which 26.1% of students and 25.0% of students “Very much” of skills provided and gained, respectively. Only a small number of students perceived the skill provision and gain as “Very little” (3.8% and 3.2% of students, respectively).

Further analysis based on students’ demographic data and each survey question was conducted to obtain comprehensive information about the student perceptions of the general education program. The percentage of student responses to the survey questions was grouped according to students’ college years, students’ major fields, and the number of general education courses students had taken. The full results are provided in Appendix L.

For students’ college years groups, less than 50% of second, third, and fourth year students claimed that providing and acquiring broad knowledge from the general education program were “Very much” or “Quite a bit.” More than a quarter of senior students rated the provision and acquisition of broad knowledge as “Very little” (25.8%, 28.2% of students, respectively). For the freshmen group, 58.1% and 49.6% of students rated “Very much” or “Quite a bit” for the provision and acquisition of broad knowledge, respectively (see Table 2). One-way ANOVA with planned comparisons analysis showed that there was a statistically significant difference between freshmen group and other college years groups in their perceptions of provision ($F(1, 415) = 3.97$, $p = .047$) and acquisition ($F(1, 415) = 5.22$, $p = .023$) of broad knowledge. In contrast, for the provision and acquisition of skills, more than 50% of students from all groups rated “Very much” or “Quite a bit.” For the freshmen group, 34.2% of those (the highest percentage among

groups) perceived the provision and acquisition skills as “Very much.” However, there was no statistically significant difference between groups in their perception of skills provision and acquisition (both $p > .05$).

Table 2

Students Rating “Very Much” or “Quite a Bit” by College Year

		Knowledge		Skills	
	n	Provided	Gained	Provided	Gained
Freshmen	33	58.10%	49.60%	76.10%	73.30%
Sophomore	108	48.60%	43.10%	71.20%	68.40%
Junior	150	44.50%	42.00%	71.00%	69.60%
Senior	128	44.40%	39.50%	71.00%	71.40%

Note. Responses of “Very much” and “Quite a bit” were combined.

For the groups of students’ major fields, nearly half of the students from all five groups considered providing and acquiring broad knowledge from the general education program at “Very much” or “Quite a bit” (see Table 3). More than a quarter of Art and Design students rated providing and acquiring broad knowledge as “Very little” (25.8%, 28.2% of students, respectively). More than 20% of students in other groups, except for Technology and Environment students with more than 10% of students, also rated providing and acquiring broad knowledge as “Very little.” However, there was no statistically significant difference between groups in students’ perceptions of the provision and acquisition of broad knowledge (both $p > .05$).

In contrast, for the students’ perception of providing and acquiring skills, over 60% of students from all groups rated “Very much” or “Quite a bit.” In particular, over one-third of Art and Design students and English students rated “Very much.” One-way ANOVA with planned comparisons analysis showed that there was a statistically

significant difference between English studies group and other groups in their perceptions of provision ($F(1, 414) = 5.65$, $p = .018$) and acquisition ($F(1, 414) = 8.04$, $p = .005$) of skills, with 78.1% and 77.1% of English studies students rated "Very much" or "Quite a bit" for the provision and acquisition, respectively.

Table 3

Students Rating "Very Much" or "Quite a Bit" by Major Field

		Knowledge		Skills	
	n	Provided	Gained	Provided	Gained
Economics and Commerce	200	45.20%	40.60%	70.20%	68.70%
Technology and Environment	27	49.00%	46.90%	70.70%	64.00%
Art and Design	24	48.30%	45.60%	72.70%	73.90%
Hospitality	66	46.70%	41.40%	64.90%	64.90%
English studies	102	48.20%	43.60%	78.10%	77.10%

Note. Responses of "Very much" and "Quite a bit" were combined.

For groups based on the number of general education courses students had taken, less than 50% of students in all groups considered providing and acquiring broad knowledge at the level "Very much" or "Quite a bit," except that more than 60% of the students, who attended one general education course, rated the provision of broad knowledge at "Very much" or "Quite a bit" level (see Table 4). More than one-fifth of students who attended three courses perceived "Very little" for providing and acquiring broad knowledge (23.0%, 25.8% of students, respectively). The rating of "Very little" of knowledge provided and gained was also perceived by 18.1% and 16.8% of students taking two courses, respectively. However, there was no statistically significant difference between groups in their perceptions of the provision and acquisition of broad knowledge (both $p > .05$). In terms of perceptions for provision and acquisition of skills,

over 50% of students rated “Very much” or “Quite a bit” in all three groups. In particular, there was a statistically significant difference between the groups of students who studied three general education courses and students who studied two courses in their perceptions of skill acquisition ($F(1, 416) = 5.95$, $p = .015$), with 71.9% of former group students and 56.7% of later group students.

Table 4

Students Rating “Very Much” or “Quite a Bit” by Number of General Education Courses Taken

		Knowledge		Skills	
GE courses were taken	*n*	Provided	Gained	Provided	Gained
One course	9	62.10%	44.50%	74.80%	70.70%
Two courses	47	47.00%	37.70%	59.70%	56.70%
Three courses	363	46.10%	42.60%	72.80%	71.90%

Note. Responses of “Very much” and “Quite a bit” were combined. GE = general education.

Student Responses to Each Survey Question Item

Table 5 summarizes the percentage of students rating “Very much” or “Quite a bit” to each survey question item. The full report is available in Appendix G. For the survey question on students’ perceptions of the general education program’s provision of the broad knowledge, out of 17 broad knowledge categories, six categories had greater than 50% of students perceiving the general education program’s provision as “Very much” or “Quite a bit.” These broad knowledge categories were psychology, professional ethics, intercultural communications, information technologies, Vietnamese culture, and philosophy in practice. Only one category rated “Very much” by more than a quarter of students was psychology, with 31.3% of students, which was the highest percentage. Six

categories were rated “Very little” by more than a quarter of students, including world’s art history (32.0%, the highest percentage), history of scientific thought, the Vietnamese diaspora, designing thinking, cities and urbanization, and mass communication and society.

Table 5

Percentage of Students Rating “Very Much” or “Quite a Bit” per Item

Item	Provision	Gaining
Broad knowledge		
Psychology – Concepts and application	70.2	62.1
Professional ethics	63.0	57.3
Intercultural communication	59.9	54.9
Information technologies	52.5	45.6
Vietnamese culture	50.8	45.6
Philosophy in practice	50.1	44.6
World’s art history	31.7	28.9
History of scientific thought	29.8	27.9
The Vietnamese diaspora	30.8	27.7
Skills		
The ability to work effectively with others in teams	86.2	83.8
The ability to effectively communicate orally	80.9	81.1
The ability to locate, organize and evaluate information from multiple sources	76.1	76.8
Proficiency in English	65.6	65.9
The ability to innovate and be creative	65.2	64.0
Foundations and skills for lifelong learning	63.2	60.9

Note. Responses of “Very much” and “Quite a bit” were combined.

For the survey question on students’ perceived gains in broad knowledge, three broad knowledge categories with greater than 50% of “Very much” or “Quite a bit” ratings were knowledge in psychology (62.1%, the highest rating), professional ethics, and intercultural communications. Three categories rated “Very much” or “Quite a bit” by less than 30% of students were the world’s art history, history of scientific thought,

and the Vietnamese diaspora knowledge (27.7%, the lowest rating). Only one category rated “Very much” by more than a quarter of students was psychology, with 27.0% of students, which was the highest percentage. Eight categories were rated “Very little” by more than a quarter of students, including the Vietnamese diaspora (33.2%, the highest rating), world’s art history, cities and urbanization, history of scientific thought, mass communication and society, Vietnam amidst globalization, designing thinking, and inclusive development.

For the survey question asking about students’ perceptions of the general education program’s provision of skills, all skills were rated “Very much” or “Quite a bit” by at least 63% of the student respondents. Two skills rated most highly were teamwork (86.2%) and oral communication skills (80.9%). For the survey question on students’ perceived gains in skills, two skills that were rated “Very much” or “Quite a bit” most highly were teamwork (83.8%) and oral communication (81.1%), and other skills were rated as “Very much” or “Quite a bit” by at least 61% of the student respondents. Three skills that more than 30.0% of the students perceived skills provided and gained as “Very much” included teamwork, English, and oral communication skills. Less than 5.0% of the students perceived skills provided and gained as “Very little” for all skills except lifelong learning and English skills (less than 8.0% both).

Further analysis of student responses to each survey question item that was grouped according to student’s college years, student’s major fields, and the number of general courses students had taken was performed to identify variations in students’

perceptions of the general education program and to determine the specific need within each group. The student responses grouped by college year students are discussed first.

Student Responses by College Year to Each Survey Question Item

Many differences emerged in students' perceptions of broad knowledge provided by the general education program when grouped according to student's college years. For the survey question on students' perceptions of the general education program's provision of broad knowledge, a number of broad knowledge categories had greater than 50% of students perceiving the general education program's provision as "Very much" or "Quite a bit." Out of 17 broad knowledge categories, as shown in Table 6, freshmen rated 15 categories, sophomores reported six categories, juniors rated five categories, and seniors rated seven broad knowledge categories as "Very much" or "Quite a bit" by more than 50% of students in each college year. Three categories that had more than 50% of students in all college years rated as "Very much" or "Quite a bit" were professional ethics, intercultural communications, and psychology. Three broad knowledge categories were rated "Very much" or "Quite a bit" by more than 50% of students in all college years except one. Those categories included information technologies (except juniors with 48%), Vietnamese culture (except seniors with 46.1%), and philosophy in practice (except sophomores with 43.5%).

Psychology knowledge received the highest rating of "Very much" from students in all college years with 27.3% of freshmen, 35.2% of sophomores, 26.7% of juniors, and 34.4% of seniors. Philosophy category also received a high rating of "Very much" from students in all groups except sophomores. Some knowledge categories were rated "Very

little" by more than one-third of junior and senior students, such as history of scientific thought (31.3% and 37.5% of students, respectively), the Vietnamese diaspora (31.3% and 34.4%), design thinking (32.0% and 30.5%), and world's art history (34.7% and 38.3%).

For students' perceived gains in broad knowledge, a number of broad knowledge categories received "Very much" or "Quite a bit" rating from more than 50% of students in each college year, included freshmen (10 categories), sophomores (four categories), juniors (three categories), and seniors (five categories). Three categories that had more than 50% of students throughout college years rated "Very much" or "Quite a bit" were professional ethics, intercultural communications, and psychology.

Table 6

Percentage of Student "Very much" or "Quite a bit" Responses by College Years to Broad Knowledge Categories

Category	Provision				Gain			
	CY1	CY2	CY3	CY4	CY1	CY2	CY3	CY4
Professional ethics	72.7	65.7	58.7	63.3	60.6	60.2	55.3	56.3
Gender and development in Vietnam	51.5	48.1	49.3	50.8	48.5	47.2	49.3	50.0
Humans and the environment	54.5	43.5	44.7	43.8	57.6	40.7	44.7	40.6
History of scientific thought	60.6	31.5	25.3	25.8	51.5	31.5	26.7	20.3
Cities and urbanization	54.5	41.7	34.7	25.0	42.4	37.0	32.7	28.1
Vietnam amidst globalization	57.6	43.5	41.3	38.3	54.5	40.7	37.3	35.9
Information technologies	66.7	56.5	48.0	50.8	51.5	54.6	43.3	39.1
Vietnamese culture	60.6	52.8	51.3	46.1	51.5	45.4	46.0	43.8
Inclusive development	57.6	49.1	41.3	50.8	51.5	37.0	42.0	39.8
Intercultural communication	57.6	58.3	62.7	58.6	51.5	50.9	59.3	53.9
Psychology – Concepts and application	75.8	77.8	60.7	73.4	54.5	66.7	60.0	62.5
The Vietnamese diaspora	39.4	33.3	31.3	25.8	30.3	29.6	29.3	23.4
Philosophy in practice	54.5	43.5	53.3	50.8	54.5	39.8	41.3	50.0
Mass communication and society	63.6	49.1	44.0	43.0	48.5	42.6	40.0	34.4
Design thinking	54.5	51.9	34.7	37.5	45.5	38.9	33.3	29.7
World's art history	48.5	36.1	27.3	28.9	42.4	30.6	28.0	25.0
Research methods	57.6	43.5	48.0	41.4	45.5	38.9	46.0	39.1

Note. CY1 = Freshmen; CY2 = Sophomores; CY3 = Juniors; CY4 = Seniors; Responses of "Very much" and "Quite a bit" were combined.

Similar to students' perceived knowledge provision, psychology knowledge received the highest rating of "Very much" gains from students in all college years with 21.2% of freshmen, 29.6% of sophomores, 24.0% of juniors, and 29.7% of seniors. Philosophy category received a high rating of "Very much" from students in all groups except sophomores.

Eight knowledge categories were rated "Very little" by more than one-third of junior and senior students, included history of scientific thought (34.7% and 38.3% of students, respectively), cities and urbanization (32.7% and 42.2%), Vietnam amidst globalization (31.3% and 34.4%), inclusive development (32.0% and 31.3%), the Vietnamese diaspora (36.0% and 42.2%), mass communication and society (34.7% and 34.4%), design thinking (34.0% and 30.5%), and world's art history (34.7% and 35.9%). These categories also received high ratings from sophomores (18.5%–27.8%) but low ratings from freshmen (less than 10%, except world's art history with 18.2%).

For skills provided by the general education, more than 60% of students in each college year perceived that the general education program had provided students with "Very much" or "Quite a bit" all skills listed in the survey, excluding lifelong learning skills and English skills rated "Very much" or "Quite a bit" by 59.3% of juniors and 59.4% of seniors respectively. One skill that had the vast majority of students (greater than 80%) in all college years rated "Very much" or "Quite a bit" was the ability to work effectively with others. In addition, the highest rating on most of the skills was given by freshmen. The ability to effectively communicate in writing received the highest percentage (84.8%) from freshmen in comparison with 67.6% of sophomores, 64.0% of

juniors, and 66.4% of seniors. Approximately 85% of freshmen perceived that the general education program had provided them with “Very much” or “Quite a bit” critical thinking skill, while the percentages of sophomores’, juniors’, and seniors’ ratings were 74.1%, 75.3%, and 71.9% respectively. Similar distributions were found for other skills: decision making, problem-solving, creative thinking, lifelong learning skills, and the ability to apply knowledge and skills to real-world settings.

For students’ perceived gains in skills, more than 60% of students in each college year perceived that they had gained “Very much” or “Quite a bit” all skills from the general education program listed in the survey, except that lifelong learning skill was rated “Very much” or “Quite a bit” by 53.3% of juniors. In addition, the highest rating on most of the skills that freshmen gave included written communication, critical thinking, information literacy, creative thinking, lifelong learning skills, and the ability to apply knowledge and skills to real-world settings. Some rated the lowest or nearly lowest by seniors included oral and written communication skills, creative thinking and English language skills. The full report of student responses by college year to each survey question item is provided in Appendix H.

Student Responses by Major Fields to Each Survey Question Item

For students’ perceived broad knowledge provided, a number of broad knowledge categories received “Very much” or “Quite a bit” ratings by most of the students in each major fields’ group (see Table 7). Economics and Commerce students rated six categories; Technology and Environment, and English Studies students rated seven categories; and Art and Design, and Hospitality students rated eight categories. Three

categories that most of the students in all major fields rated “Very much” or “Quite a bit” were professional ethics, intercultural communications, and psychology. Two categories of broad knowledge which most of the students in almost all major fields, excepting for one or two major(s), perceiving the general education program’s provision as “Very much” or “Quite a bit” were philosophy in practice, and gender and development in Vietnam. Conversely, world’s art history knowledge was perceived as “Very much” or “Quite a bit” by 87.5 % of students in Art and Design compared with by less than 35% of students in other major fields.

Table 7

Percentage of Student "Very much" or "Quite a bit" Responses by Major Fields to Broad Knowledge Categories

Category	Provision					Gain				
	Mj1	Mj2	Mj3	Mj4	Mj5	Mj1	Mj2	Mj3	Mj4	Mj5
Professional ethics	62.5	77.8	54.2	59.1	64.7	59.5	63.0	45.8	51.5	57.8
Gender and development in Vietnam	50.5	37.0	62.5	54.5	45.1	50.5	37.0	58.3	43.9	50.0
Humans and the environment	42.0	51.9	45.8	54.5	42.2	40.5	51.9	29.2	54.5	43.1
History of scientific thought	26.0	40.7	25.0	30.3	35.3	26.0	44.4	20.8	27.3	29.4
Cities and urbanization	32.5	37.0	33.3	36.4	39.2	35.5	33.3	29.2	25.8	34.3
Vietnam amidst globalization	44.5	40.7	37.5	42.4	39.2	41.0	40.7	29.2	33.3	41.2
Information technologies	56.5	74.1	41.7	42.4	48.0	46.5	74.1	25.0	37.9	46.1
Vietnamese culture	48.5	44.4	45.8	51.5	57.8	42.0	48.1	45.8	47.0	51.0
Inclusive development	48.0	44.4	41.7	54.5	44.1	39.5	40.7	62.5	39.4	39.2
Intercultural communication	55.0	51.9	58.3	78.8	59.8	48.5	51.9	50.0	74.2	56.9
Psychology – Concepts and application	75.5	59.3	66.7	53.0	74.5	66.5	66.7	54.2	45.5	64.7
The Vietnamese diaspora	28.5	37.0	16.7	33.3	35.3	28.0	33.3	20.8	24.2	29.4
Philosophy in practice	50.0	63.0	50.0	37.9	54.9	46.0	48.1	37.5	37.9	47.1
Mass communication and society	44.0	48.1	54.2	42.4	52.0	35.0	33.3	58.3	42.4	44.1
Design thinking	37.0	55.6	75.0	36.4	42.2	28.0	51.9	79.2	34.8	32.4
World's art history	25.0	29.6	87.5	28.8	34.3	21.0	37.0	95.8	25.8	28.4
Research methods	42.0	40.7	25.0	57.6	51.0	36.5	40.7	33.3	57.6	45.1

Note. Mj1 = Economics and Commerce; Mj2= Technology and Environment; Mj3= Art and Design; Mj4= Hospitality; Mj5= English studies. Responses of "Very much" and "Quite a bit" were combined.

World's art history knowledge also received the highest rating of "Very much" from Art and Design students with 41.7% of those compared with less than 10.0% of other major fields students. Similarly, information technology knowledge received the highest "Very much" rating from 48.1% of Technology and Environment students, but low percentages from students in other groups (ranging from 6.1% to 18.6%). In addition, three categories had a high percentage of "Very much" from students in most major fields. Intercultural communication knowledge received more than one-third of students in all major fields, except for Economics and Commerce students (with 17.5%) and Technology and Environment students (14.8%), rating "Very much." Similarly, psychology knowledge also received more than one-third of students in all major fields, except for Technology and Environment students (with 22.2%) and Hospitality students (with 24.2%), rating "Very much." Philosophy category received more than 20% of students (ranging from 23.0% to 25.9%) in all major fields except one, Hospitality students with 15.2%, rating "Very much."

A number of knowledge categories were perceived as "Very little" provision from most of the students in each group. Six categories that received higher or equal one-third of students in Art and Design, Hospitality, and English majors rating "Very little" included history of scientific thought, cities and urbanization, Vietnam amidst globalization, philosophy, and mass communication and society. World's art history and design thinking received the same proportions from students in Hospitality, English, and Economics and Commerce majors. In particular, research methods received 45.8% of Art and Design students rating "Very little."

For survey questions on students' perceived gains in knowledge, there were considerable differences in their perception among major fields (see Table 7). Three broad knowledge categories received "Very much" or "Quite a bit" ratings from more than 50% of students in all major fields except one: professional ethics (except Art and Design with 45.8%), intercultural communication (except Economics and Commerce with 48.5%) and psychology (except Hospitality with 45.5%). Some broad knowledge categories received more than 50% of "Very much" or "Quite a bit" ratings from students in only one major field, but not from other major fields' students. These categories included information technology knowledge (Technology and Environment major: 74.1%; other major fields: from 25.5% to 46.5%), inclusive development knowledge (Art and Design major: 62.5%; other major fields: from 39.2% to 40.7%), mass communication and society (Art and Design major: 58.3%; other major fields: from 33.3% to 44.1%) and world's art history (Art and Design major: 95.8%; other major fields: from 21.0% to 37.0%). In addition, several broad knowledge categories received greater than 50% of "Very much" or "Quite a bit" ratings from students in each major field: three categories for Economics and Commerce students, four categories for Hospitality students, five categories for English studies, six categories for Technology and Environment, and seven categories for Art and Design students. However, there were not any broad knowledge categories that had greater than 50.0% of students throughout major fields rating "Very much" or "Quite a bit."

Two categories had more than 20.0% of students in most of the major fields rating "Very much" for knowledge gains, including professional ethics and psychology

knowledge. In particular, students in Art and Design major perceived that they gained "Very much" knowledge in five categories with the highest ratings. Those categories included world's art history (with 41.7% of those; other groups ranging from 1.5% to 7.4%), gender and development in Vietnam (25.0%; other groups: 7.6% - 19.6%), intercultural communication (29.2%; other groups: 13.5% - 24.5%), mass communication and society (29.2%; other groups: 6.0% - 17.6%), and design thinking (25.0%; other groups: 3.0% - 14.8%). There were no students in Hospitality rating "Very much" for the Vietnamese diaspora knowledge.

Many knowledge categories received "Very little" knowledge gain ratings from more than a quarter of students in most major fields. Four categories that were rated by more than one-third of students in all major fields (ranging from 30.3% to 50.0%), except one or two majors, included the Vietnamese diaspora, cities and urbanization, history of scientific thought, and world's art history. Six categories that were rated by more than a quarter of students in all major fields (ranging from 25.0% to 41.7%), except one or two majors, included information technologies, Vietnamese culture, philosophy in practice, design thinking, Vietnam amidst globalization, and mass communication and society. Especially among those categories with high "Very little" ratings, five categories were rated most highly by students in Art and Design major. These categories included cities and urbanization (with 50.0% of students), history of scientific thought (41.7%), Vietnam amidst globalization (41.7%), the Vietnamese diaspora (37.5%), and information technologies (37.5%).

All skills provided by the general education program received “Very much” or “Quite a bit” ratings from most students in all major fields. Five skills rated “Very much” or “Quite a bit” by greater than two-thirds of students in all major fields included teamwork, oral communication, critical thinking, decision making, and information literacy skills. In particular, teamwork skill received “Very much” rating from more than 40.0% of students in all major fields, notably 50% of students in Art and Design major. Two skills that had almost all students (90.2%) in English Studies rating “Very much” or “Quite a bit” were teamwork and critical thinking. Similarly, almost all students (92.6%) in Technology and Environment rated “Very much” or “Quite a bit” for oral communication skill. Some skills were rated the lowest or nearly lowest by just half or nearly 60.0% of students in one or two majors. Lifelong learning skill was received 54.2% and 59.1% of “Very much” or “Quite a bit” ratings from students in Hospitality, and Art and Design, respectively. Similarly, written communication skill also received 50.0% of ratings from those students. Creative thinking was rated by just 55.6% of Technology and Environment students.

In contrast with students’ perceived broad knowledge providing as “Very little”, the percentages of students’ perceived skills providing were low. Nearly all skills were rated “Very little” by less than 10.0% of students in almost all major fields. In addition, no students in Technology and Environment major rated oral communication, teamwork, and critical thinking as “Very little.” Similarly, no Art and Design students rated problem-solving and information literacy skills as “Very little.” Teamwork skill also did not receive “Very little” rating from Economics and Commerce students.

For the students' perceived gains in skills, greater than 50.0% of students in all major fields perceived that they gained "Very much" or "Quite a bit" all of the skills provided by the general education program, except one skill, "the ability to apply knowledge and skills to the real-world setting." This skill received 48.1% of students in Technology and Environment rating "Very much" or "Quite a bit," while percentages of student ratings in other major fields were greater than 65.0%. In addition, some skills which were rated lowest by just half or nearly 60.0% of students in this major included written communication skill, problem-solving, lifelong learning, and English skills. Information literacy and lifelong learning skills also were rated lowest by students in Hospitality.

Three skills received "Very much" ratings from more than one-third of students in almost all major fields, which included oral communication (except Technology and Environment students with 22.2%), teamwork (except Technology and Environment students with 29.6%), and English (except Technology and Environment students and Economics and Commerce students with 18.5% and 22.0% respectively). Information literacy skill also received "Very much" rating from more than a quarter of students in all majors except Technology and Environment major (22.2%) and Hospitality major (22.7%).

Similar to the percentages of students' perceived skills providing, for students' perceived skills gains, nearly all skills were rated "Very little" by less than 10.0% of students in almost all major fields. In addition, no students in Art and Design major rated teamwork, critical thinking, problem-solving, and information literacy skills as "Very

little." Similarly, no students in Technology and Environment major rated oral communication, written communication, and lifelong learning skills as "Very little." Oral communication skill also did not receive "Very little" rating from Economics and Commerce students. The full result of student responses by major fields to each survey question item is available in Appendix I.

Student Responses by the Number of General Education Courses Taken to Each Survey Question Item

Student respondents were sorted into three groups based on the number of general education courses they had taken. Group 1GE consists of students who had participated in one general education course. Group 2GE and group 3GE consist of students who had participated in two and three general education courses, respectively. Students in these groups closely reflected their perceptions of the broad knowledge and skills provided by the general education program.

Table 8 displays the list of broad knowledge categories rated "Very much" or "Quite a bit" by most of the students in each group. For the survey question on students' perceptions of broad knowledge provided by the general education program, there was a difference in the number of broad knowledge categories, which had greater than 50.0% of students in each group rating "Very much" or "Quite a bit." Almost all broad knowledge categories, excluding philosophy in practice and world's art history, were rated "Very much" or "Quite a bit" by greater than 55.0% of students in the group 1GE. Conversely, just four categories and seven categories were rated "Very much" or "Quite a bit" by greater than 50.0% of students in each group 2GE and 3GE, respectively. Four broad

knowledge categories which had more than 50.0% of students throughout the three groups rating “Very much” or “Quite a bit” were professional ethics, information technologies, intercultural communication, and psychology. In addition, students in group 1GE showed higher percentages of “Very much” or “Quite a bit” ratings for most of the broad knowledge categories than did students in group 2GE and 3GE.

Almost all knowledge categories received “Very much” rating from less than 20.0% of the students in each group. Notably, there were no students in group 1GE rating “Very much” for three categories, including gender and development in Vietnam, Vietnamese culture, and research methods knowledge. Only three categories that received “Very much” rating from more than 20.0% of the students in each group 1GE and 3GE included intercultural communication (22.2% and 25.3% of those students, respectively), psychology (55.6% and 32.8%), and philosophy (22.2% and 23.1%).

For “Very little” rating, five categories received this rating from more than 20.0% of students in each group 2GE and 3GE. These categories included history of scientific thought (23.4% and 31.4% of students in group 2GE and 3GE, respectively), mass communication and society (21.3% and 27.5%), design thinking (23.4%, 29.5%), world’s art history (23.4%, 33.6%), and research methods (21.3% and 23.4%). In addition, seven categories received most highly percentages of “Very little” rating from students in group 3GE, which consisted of cities and urbanization (28.9%), Vietnam amidst globalization (26.2%), information technologies (22.3%), Vietnamese culture (22.9%), inclusive development (23.7%), The Vietnamese diaspora (30.3%), and philosophy (20.1%).

Except for world's art history, all categories did not receive "Very little" rating from students in group 1GE.

Table 8

Percentage of Student "Very much" or "Quite a bit" Responses by Number of General Education Courses Taken to Broad Knowledge Categories

Category	Provision			Gain		
	1GE	2GE	3GE	1GE	2GE	3GE
Professional Ethics	77.8	55.3	63.6	55.6	48.9	58.4
Gender and development in Vietnam	55.6	44.7	50.1	33.3	44.7	49.9
Humans and the Environment	55.6	42.6	44.9	33.3	38.3	44.4
History of scientific thought	55.6	34.0	28.7	33.3	31.9	27.3
Cities and urbanization	55.6	42.6	33.6	33.3	31.9	33.3
Vietnam amidst globalization	55.6	42.6	41.9	33.3	38.3	39.4
Information technologies	77.8	53.2	51.8	66.7	44.7	45.2
Vietnamese culture	55.6	44.7	51.5	44.4	36.2	46.8
Inclusive development	55.6	48.9	47.1	44.4	38.3	41.0
Intercultural communication	66.7	57.4	60.1	66.7	40.4	56.5
Psychology – Concepts and Application	88.9	68.1	70.0	55.6	55.3	63.1
The Vietnamese Diaspora	55.6	29.8	30.3	44.4	17.0	28.7
Philosophy in practice	44.4	48.9	50.4	33.3	38.3	45.7
Mass communication and society	66.7	48.9	45.7	55.6	27.7	40.8
Design Thinking	77.8	48.9	39.7	44.4	38.3	33.9
World's Art History	44.4	40.4	30.3	33.3	31.9	28.4
Research methods	66.7	48.9	44.6	44.4	38.3	42.4

Note. 1GE: a group of students who participated in one general education course; 2GE: a group of students who participated in two general education courses; 3GE: a group of students who participated in three general education courses. Responses of "Very much" and "Quite a bit" were combined.

For the students' perceived gains in the broad knowledge, there were several broad knowledge categories which had greater than 50% of students in each group perceiving that they had gained "Very much" or "Quite a bit." Students in group 1GE had five categories, students in group 2GE had only one category, and students in group 3GE had three categories. Just one category, psychology, had more than 50% of students in all groups rating "Very much" or "Quite a bit." In addition, greater than 50.0% of students in each group 1GE and 2GE perceived that they had gained "Very much" or "Quite a bit" knowledge in intercultural communication and professional ethics, but students in group 3GE did not. Conversely, knowledge about philosophy in practice just had more than 50.0% of students in group 3GE rating "Very much" or "Quite a bit."

Almost all knowledge categories received "Very much" rating from less than 20.0% of the students in each group. Only psychology knowledge category received "Very much" rating from more than 20.0% of students in each group 1GE and 3GE with 22.2% and 28.4% of those, respectively. In addition, four other categories received "Very much" rating from 22.2% of students in group 1GE, which were professional ethics, intercultural communication, mass communication and society, research methods. Particularly, four categories did not receive "Very much" rating from students in group 1GE, including gender and development in Vietnam, humans and the environment, information technologies, and Vietnamese culture.

For "Very little" rating, the percentages of this rating from students in group 3GE were the highest for all categories. Six categories received this rating from 30.0% to 35.5% of students in group 3GE, including history of scientific thought, cities and

urbanization, Vietnam amidst globalization, the Vietnamese diaspora, mass communication and society, and world's art history. Moreover, six other categories also received "Very little" rating from 23.4% to 29.5% of students in 3GE, including Vietnamese culture, information technologies, inclusive development, philosophy, research methods, and design thinking. Of those categories, four categories also received "Very little" rating from 21.3% to 23.4% of students in group 2GE, including the Vietnamese diaspora, philosophy, world's art history, and history of scientific thought. Students in group 1GE did not rate any category as "Very little."

For skills provided by the general education program, greater than 50.0% of students in groups of 1GE and 3GE perceived that the program had provided "Very much" or "Quite a bit" all skills listed in the survey for them. Most of the students in group 2GE also rated those perceived levels for all skills except lifelong learning. Students in group 3GE rated highest "Very much" or "Quite a bit" for most of the skills.

Almost all skills received "Very much" rating of skills provided from more than one-third of students in group 1GE, except two for oral communication and critical thinking skills, with 22.2% of students for each skill. In particular, English skill received 66.7% of those students, and teamwork and lifelong learning received 44.4% of students for each skill. Six skills received "Very much" rating from more than 20.0% of students in group 2GE, including oral communication, written communication, teamwork, critical thinking, decision-making, and lifelong learning skills. More than 20.0% of students in group 3GE rated almost all skills as "Very much," except oral communication skill, with

18.7%. Teamwork skill received “Very much” rating from more than one-third of students in all three groups.

For “Very little” rating, almost all skills received this rating from less than 5% of students in each group. The highest percentage of this rating was 8% rated by 3GE students for English skill. There were no students in 1GE rating “Very little” for all skills, except for real-world application skill, with 11.1% of those.

For the students’ perceived gains in skills, more than 50.0% of students in 1GE and 3GE perceived that they had gained “Very much” or “Quite a bit” all skills listed in the survey. Most of the students in group 2GE also rated those perceived levels for almost all skills except lifelong learning, problem-solving, and decision-making skills. Students in group 3GE also rated the highest “Very much” or “Quite a bit” for most skills.

Five skills received “Very much” rating from more than one-third of 1GE students, including oral communication, teamwork, information literacy, lifelong learning, and English skills. Other skills received “Very much” rating from 22.2% of those, except written communication skill with 11.1%. Only four skills received this rating level from more than 20.0% of 2GE students (ranging from 21.3% to 29.8%), including oral communication, teamwork, information literacy, and English skills. More than one-third of 3GE students rated communication, teamwork, and English skills as “Very much” with 30.9%, 33.1%, and 43.5% of those, respectively. Five skills received this rating from 20.7% to 27.5%, including written communication, critical thinking, decision-making, problem-solving, and information literacy. Three skills received “Very much” rating more than one-third of students in each group 1GE and 3GE, which

included oral communication (33.3% and 33.1% of students, respectively), teamwork (44.4% and 43.5%), and English (44.4% and 30.9%) skills.

For “Very little” rating, most of the skills received this rating from less than 5.0% of students in each group. The highest rating was 10.6% of 3GE students rated for English skill. There were no students in 1GE rating “Very little” for all skills, except for real-world application and decision-making skills, with 11.1% of those. The full results of student responses grouped by the number of general education courses taken can be found in Appendix J.

Interpretation of Quantitative Results

In relation to the literature review, the results from the Likert scale survey showed that students valued the provision and gain of broad knowledge to a lesser extent than the provision and gain of skills from the general education program. Overall, most of the students perceived that the general education program did not provide them with “Very much” or “Quite a bit” broad knowledge, and they did not gain “Very much” or “Quite a bit” broad knowledge from the program. More than a quarter of the students responded that they gained “Very little” knowledge in many categories: world’s art history, cities and urbanization, history of scientific thought, mass communication and society, Vietnam amidst globalization, designing thinking, and inclusive development.

These results are in contrast with several previous studies. A study by Shek et al. (2017a) on the general education program at a university in Hong Kong found that, in general, the vast majority of students were satisfied with broad knowledge areas provided by the program. Similar results are found in Omar et al. (2016) study at three universities

in Malaysia. The majority of students felt that the general education courses broadened their knowledge and that the courses' content was updated according to current developments. Those general education programs provided students with knowledge similar to those undertaken in this study, such as philosophy, gender and social changes, design thinking, information technology, psychology, human and development, culture, history, and globalization. There have been no studies in Vietnam on students' perceptions of the general education program's provision and acquisition of broad knowledge. However, some studies on students' learning needs partly reflected equipping students with broad knowledge in Vietnamese universities. A study by Duyen (2016) showed that students wanted to be equipped with more general knowledge related to the fields of history and humanities and social issues outside of their major, which they are not equipped with from their university. Similar results are found in the study of Ca (2015), in which students said that their university did not equip them with enough general knowledge related to humanities and social sciences.

Additional analyses indicated that some provided broad knowledge categories that most students perceived as "Very much" or "Quite a bit" included psychology, professional ethics, intercultural communications, information technology, philosophy, and Vietnamese culture. In addition, three broad categories that most students perceived they had gained "Very much" or "Quite a bit" were psychology, professional ethics, and intercultural communications. Student satisfaction with the intercultural communication knowledge provided by a general education course at a university in the United States was found in a study by McClinton and Schaub (2017). Research results showed that

students enhanced in both knowledge and other competence aspects of intercultural intelligence in general and intercultural communication in particular.

In contrast to the perception of broad knowledge, the majority of students perceived that the general education program had provided them with “Very much” or “Quite a bit” skills needed for future career success. Additionally, most of the student respondents also perceived that they gained all the skills provided by the program, which included oral and writing communication, teamwork, critical thinking, real-world application, decision making, problem-solving, literacy information, creative thinking, lifelong learning, and English skills. These results are similar to the results of Shek et al. (2017a) study. Most students felt that their general education program helped them develop critical thinking, teamwork, real-world application, critical thinking, lifelong learning, and communication skills. In Vietnam, there have been no researches on students’ perception of the provision and acquisition of skills through the subjects provided by the general education program. However, the results of several studies on the application of active teaching methods into a general education course are somewhat similar to the results of this study. The research results of Canh’s (2017) study showed that most students made progress in English listening and speaking, creative thinking, teamwork, real-world application, and literacy information skills through a general education English course. Another study by Kim (2019) also found that most students showed that they acquired literacy information, problem-solving, teamwork, communication, and real-world application skills through a general education System thinking course.

In relation to the theoretical framework, the findings indicated that most of the students gained knowledge in several broad knowledge categories and all skills provided by the general education program. These results correspond to what Kolb (1984) described in that students were able to achieve the best learning outcomes when they were immersed in all four stages of the learning cycle. In this study, the general education program at SVU was developed based on liberal education and general education framework derived from higher education in the United States that transformative learning experiences had been seen as central components of the general education program. According to Kolb, students use different ways of learning through an experience transformation process. Students can learn better when subjects were presented consistently with their preferred learning styles. In addition, students may change their approach to learning through dimensions of the learning cycle, effectively organized by the faculty, to adapt their learning styles to the learning context to obtain better academic achievement.

Qualitative Findings

Qualitative data were collected through interviews with eight faculty and six employers in order to answer Research Question 2: What are faculty's perceptions of the general education program's provision of the broad knowledge and skills needed for students' career success? and Research Question 3: What are employers' perceptions of the general education program's provision of the broad knowledge and skills needed for students' career success? Data collected from each interview were transcribed into Vietnamese text document. The transcripts were reviewed several times, and then they

were sent to each interview participant for member checking. Interview participants were asked to verify the accuracy of the transcripts. Three interviewees sent back the transcripts with some minor edits, and the others agreed with the transcribed interviews. In addition to using member checking, triangulation was used to improve the credibility and validity of study findings. Triangulation of data included using interview responses from faculty and employers with various experiences, positions, and business fields; and the process of building up themes. The interview protocols, the consistent process of interview data collection, and the identification of emerging themes guided by the problem and research questions were also strategies to ensure the validity of the research findings. The results of faculty interviews will be presented first and then followed by the employer interviews results. The participants' identities are confidential; therefore, letters and randomly selected numbers were used to identify the participants.

Faculty Interviews Results

This section presents the results of faculty interviews data analysis through the analysis process using inductive content analysis as described in the qualitative analysis section. Vietnamese transcripts were used for data analysis. I translated only the information used to present data analysis results into English, which included text segments, code words, quotations, and paraphrased sentences. An English translation specialization lecturer fluent in Vietnamese and English checked the English translations to ensure an accurate and equivalent translation. Table 9 demonstrates an example of the coding process.

Table 9

Interview Research Question 1: Coding Example

What are faculty's perceptions of the general education program's provision of the broad knowledge and skills needed for students' career success?		
Frequency	Raw data	Code
2	Professional ethics/ East-West culture	Holistic development
4	A multi-dimensional view	Holistic development
4	Consciousness: People and environment	Vietnamese culture
4	Urbanized life	Global citizenship
4	Geography/ History/ Social economics/ Globalization	Globalization
4	Knowledge benefits	Holistic development
4	Vietnamese diaspora: if implemented well	Vietnamese culture
4	Natural science: Environment/ Biology	Holistic development
4	Design/ Art: free selection	Holistic development
4	Knowledge benefits	Holistic development
5	History of Vietnamese culture/ History of development of views	Vietnamese culture
5	History of Vietnamese culture/History of development of views	Vietnamese culture
5	Art	Holistic development
5	Emotional education/Social Emotional skills	Holistic development
6	Vietnamese literature/Vietnamese culture foundation	Vietnamese culture
6	Vietnamese literature/World Civilization history/Psychology	Vietnamese culture
7	Knowledge of the world/Basic knowledge of what is a complete human being	Global citizenship
7	Professional ethics/ Gender/ Environment/ Scientific research	Holistic development
7	Building green community/ Art Therapy/ Corporate social responsibility	Holistic development
7	Philosophy/ Knowledge of the world	Global citizenship
8	Social sciences/ Vietnamese culture foundation	Vietnamese culture

An initial list of 12 code words emerged from the first selected interview transcript analysis. The coding process continued for all interview transcripts and produced a final list of 39 code words. This list was grouped into meaningful categories. Categories were checked, compared, reanalyzed, and reorganized. This process was the iterative, cyclical process to reach themes that emerged from the data. Themes were determined based on the synthetic meaning for categories, as shown in Table 10.

Table 10

Faculty Response Themes

Themes	Sub themes	Categories
1. The value in terms of providing knowledge and skills.	1. Faculty see knowledge enhancement needs.	Globalization
		Vietnamese culture
		Holistic development
		Global civilizations
	2. Faculty see embedded skills as transformational.	Professionalism
		Transformation of attitudes
		Group work
		Presentation poise
2. The challenge that many students do not value the general education program.	1. Challenge of negative attitudes and disinterest.	Unawareness
		Formative assessments
		Unserious
	2. Challenge of skill development.	Critical thinking lacking
		Teaching methods
	3. Challenge of the structure of the program.	Content overlapping
		Faculty collaboration

Theme 1: The Value in terms of Providing Knowledge and Skills. Faculty participants expressed the necessity and importance of the general education program in equipping students with broad knowledge and skills. Most of the faculty members emphasized the knowledge areas related to globalization, Vietnamese culture, and world

culture. Faculty GV4 from a major program department explained, “Vietnam joined the WTO [World Trade Organization], so students must have a general knowledge of globalization and international integration.” Faculty members also highlighted the basic knowledge of socio-economics, art, psychology, philosophy, and the environment. In addition, all faculty interviewed recognized the need for fostering students’ holistic development through the general education curriculum. Faculty GV6 from a major program department stated, “We designed 16 learning outcomes based on liberal education criteria. All identified skills are very important to students so that they are able to succeed, not only in the future job but also in their studying.” Another faculty member from a general education department asserted that the general education program equipped students with sufficient skills for their future careers. Faculty members also mentioned using active teaching methods to engage students in the learning process, develop students’ skills, and improve students’ attitudes and professionalism.

Subtheme 1: Knowledge Enhancement Needs. Most of the faculty members perceived that the general education program adequately provided students with a wide range of broad knowledge. The program offered plenty of courses for students to choose from, such as psychology, philosophy, environment, Vietnamese culture, gender, and professional ethics. The faculty members believed that those courses were essential for all students. Both faculty GV3, who came from a general education program’s department, and faculty GV5, from a major program department, explained that those knowledge areas related to the human development field, and “they are essential for students in order to help them to reflect on life and values,” as faculty GV3 said. In

addition, faculty GV4, from a general education program's department, and faculty GV8, from a major program department, perceived that those courses related to knowledge in social sciences and humanities areas, and "helped students to expand their knowledge and to adapt themselves to the future working environments quickly," as faculty GV4 stated. Meanwhile, faculty GV7, from a general education program's department, noted that such knowledge areas were "knowledge of the outside world category" and added Vietnamese diaspora and research methodology to the knowledge areas.

Faculty members mentioned other knowledge areas needed for students, which were also provided by the program, such as knowledge about urbanization, globalization issues, international integration in Vietnam, and intercultural communication. Those knowledge areas were "very practical knowledge," as faculty GV3 commented. The faculty additional expressed, "In intercultural communication course, students are equipped with knowledge of cultural differences and different viewpoints on globalization and international trade from a cultural perspective." Faculty GV4 confirmed that all students must know about globalization and international integration because Vietnam joined the WTO [World Trade Organization]. The faculty added, "Knowledge about urban life is also needed for students." Two faculty members from major programs' departments noted that the content of general knowledge subjects was closely related to socio-economic issues of Vietnam and the world. Meanwhile, one general education program department's faculty member emphasized the importance and usefulness of the theoretical foundations provided through general knowledge courses.

Two faculty members mentioned that the general education program also provided students with some new courses. The new courses were offered "to meet the needs of students and society" (faculty GV7) and "to increase student experience" (faculty GV5). The courses were delivered in the form of service learning courses, which included Building Green Community, Corporate Social Responsibility, and Holistic Development through Art Therapy courses. According to these faculty, those courses added to the value of the general education program, and students were also interested in taking those courses.

Although most faculty members perceived that the provision of broad knowledge courses was sufficient, three faculty members, who came from major programs, expressed their desire to equip students with knowledge about some other areas that the university has not offered. Faculty GV2 believed that students needed to know world culture, such as "oriental culture and western culture, not just Vietnamese culture," because "such knowledge would contribute to helping students succeed in a globalized world." For the same reason, faculty GV6 added the knowledge about Vietnamese history, and both faculty GV5 and GV6 noted that students needed to be equipped with knowledge about the history of world civilization.

Subtheme 2: Embedded Skills as Transformational. Most faculty members interviewed believed that the general education program sufficiently equipped students with skills needed for their study and future careers. The mentioned skills included reading, writing, critical thinking, presentation, teamwork, collecting and analyzing information, problem-solving, decision making, and communication skills. Although the

program offered several separate skill courses to students, the faculty members commented that those skills were integrated into other general education courses. With regard to developing students' writing skill, faculty GV1, who came from a general education program's department and taught a broad knowledge course, said, "I asked my students to write a paper regularly, every week and send it to me via email. I then made comments and sent it back to students." Three faculty members, who were from major programs and taught different categories of knowledge courses, stated that developing those skills for students was emphasized in all the courses they taught, especially teamwork, critical thinking, communication, and presentation skills.

Most of the faculty members, who taught broad knowledge courses and including those from major programs, commented that most students made some progress in developing presentation, oral, and writing communication skills through general education courses. Faculty GV4, from a major program department, expressed, "Gradually, students were familiar with how to deliver an effective presentation. They became more self-confident when speaking in front of the class." Faculty GV7 from general education department repeated the feedback from a faculty observer, "Your students knew how to organize an effective presentation. Their presentations were organized actively and creatively. They delivered the presentations confidently and coherently." Faculty GV6, who came from a major program, noted that students who studied communication skill course demonstrated these skills better than students who did not.

Interestingly, faculty GV1, who came from a general education program's department, commented on students' improvement in presentation skills. The faculty said, "Freshmen and sophomores both showed greater improvements on their presentation skills than did juniors and seniors, although students in later years delivered their presentations better than those in the first and second years." Only faculty GV8, who came from a general education program's department and taught skills courses, further commented that students improved their writing and group discussion skills.

In addition to the students' improvement in skills development, many faculty members interviewed stated that students demonstrated their professionalism, which employers recognized. The faculty members explained why employers valued students' professionalism. Faculty GV2 said, "Equipping students with necessary skills helped students feel confident and comfortable when they participated in internships, job interviews, and workplaces." Another faculty member, faculty GV7 asserted that "the reason was that general education equipped students with a firm foundation." Faculty GV3 had the same views as those faculty members but emphasized changes in students' attitudes and behaviors throughout the course. The faculty member noted, "Students had a positive cultural attitude, and they knew how to behave properly in a diverse cultural context."

Faculty members discussed the use of active teaching methods to engage students in the learning process, develop the necessary skills for students, and help them deeply understand the subject content. Two methods used by all faculty interviewed were group work and student presentation. Several faculty members stated that group work was a

way to motivate students to learn how to analyze and solve problems from each other. In addition, through working in a group, students could "learn how to assign group members' tasks and monitor the group's performance," as faculty GV7 said. Other faculty members confirmed that group work was an effective teaching and learning method that helped students increase their interpersonal and communication skills and change their attitudes. However, faculty GV5 from a major program department commented that some students tended to solely apply teamwork skills' techniques to achieve the results rather than focus on the effectiveness of the whole group work process. Therefore, according to this faculty, lecturers should guide students to work effectively in groups. Regarding using the student presentations method in the classrooms, the faculty members utilized different types of student presentations to strengthen knowledge and develop skills for students. The faculty members commented that students were active and expressed their creativity in organizing presentation sections in classrooms. Students used various technology tools, such as Kahoot!, video clips, and crossword games to increase the effectiveness of their presentations.

In addition to using group work and student presentation, faculty members used other forms of interaction in classrooms as useful teaching and learning tools for increasing student engagement in the learning process. Two faculty members from major programs utilized Kahoot! and short film to refocus students' attention on the lesson. Those methods were useful to increase student engagement in the learning process. Faculty GV2 described, "I showed a short film related to the subject and then asked students to respond to the message of the film. I also used Kahoot! to increase student

engagement." Faculty GV6 agreed and said, "Using Kahoot! … I saw positive changes in students' learning." In addition, faculty GV6 often interacted with students by asking questions or discussing to create a positive classroom atmosphere. Meanwhile, several faculty members from the general education program's departments often used debates or group discussions to keep students interested in lecture topics and enhance their critical thinking and oral communication skills. The discussion topics "depend on lessons, students' interests, and qualifications in order to help them better understand lecture topics," faculty GV8 said. The faculty members noted that students tended to favor discussion topics related to practical context and their majors. In doing so, students became aware of the value and importance of the general education courses to their future careers.

Theme 2: The Challenge that Many Students do not Value the General Education Program. Besides expressing positive feelings, the faculty participants mentioned the challenges in teaching general education courses. The primary concerns expressed by the faculty participants included students' awareness of and attitudes to the general education program. Faculty GV2 stated, "Some classes were not as expected. Even though I tried to attract student's attention to the courses, they seemed indifferent." The enhancement of students' essential skills, applying suitable teaching methods, and establishing relationships between the general education program and major academic departments were also the challenges that faculty participants faced in their teaching general education courses.

Subtheme 1: Challenge of Negative Attitudes and Disinterest. Most of the faculty members mentioned students' awareness and attitudes towards general education courses as a major challenge. Three out of all four faculty members from major programs stated that students were not aware of the value of general education courses. Some students took general education courses "because of the required number of general education credits," as noted by faculty GV6. Other faculty members said that students often chose the courses "solely based on their feelings," (GV5) or "because of the attractive course title," (GV8) or "just because their classmates chose that course," as faculty GV6 reflected. Inadequate awareness of students about general education courses led students to unserious attitudes towards the courses. The faculty members expressed challenges of negative student attitudes they faced, such as uninterested learning, passive participation in classes, focusing on grades more than learning, and feelings about the easy pass in the class without effort.

Subtheme 2: Challenge of Skills Development. Several faculty members were concerned about the slow progress of students in writing, critical thinking, and presentation skills. The faculty members commented that students did not have reading habits and did not read assigned books. That might be the reason why students failed to improve their writing skills as faculty GV5 asserted, "Students lack writing skills." Similar to the writing skills challenge, faculty members expressed concern about students' lack of critical thinking skills. That might be caused by students' lack of critical thinking habits of mind. The faculty members said that students "often think in a superficial way," (GV5) and "they were able to think critically in one course, but not in

another course," as faculty GV6 stated. Moreover, faculty GV8 observed, "Approximately 20% of students had good critical thinking abilities, 15% of students did not improve, and other students had basic skills of critical thinking." Two faculty members identified issues related to teaching skill courses, which might cause students' failure to develop skills. Faculty GV3 from a general program's department said that teaching skills should focus on developing a practical capacity and tending towards human development for students rather than just providing techniques. However, in practice, "teaching skills was more about the provision of techniques than the development of competencies," as faculty GV5 from a major program reflected.

Subtheme 3: Challenge of the Structure of the Program. Many faculty members expressed concern about the issues related to the structure of the general education program. Groups of knowledge and skills courses lacked coherence, and some courses were overlapped in content and objectives. Therefore, students felt bored when they have to learn such duplicated content, as faculty GV8 from a general education department observed. The faculty added, "Learning outcomes for the whole general education program had not been identified. It is important that when students complete three required elective general education courses, they will achieve all of the identified learning outcomes of the program." Faculty GV3 from another general education program's department said that the general education program should be restructured in order to "help students really make a change in their knowledge, their attitudes, and their skills. Head, heart, hand." In addition, two faculty members, who came from major program's departments, expressed concern about the integration of field trips into the

curricula. Field trips should be “incorporated officially into the curriculum”, as faculty GV2 said, and “designed as a part of the course requirement” as faculty GV4 stated. Another faculty member, GV8, expressed the desire to integrate service learning in some of the general education courses to enhance the student experience.

Several faculty members were concerned about the issue of the relationship between the general education program and major programs. Faculty GV3 from a general education program’s department argued that general education courses should be offered from both the general education program and major programs’ departments. Besides, the general education program should not offer stand-alone soft skills courses, as faculty GV8 from another general education program’s department expressed. The faculty member added, “Instead, soft skills should be integrated into major foundation courses and general education broad knowledge courses.” Meanwhile, faculty GV6 from a major program emphasized the essentials of collaboration in teaching general education courses. The faculty member noted that “general education faculty members need to collaborate with faculty who taught major courses to ensure consistency in the provision of knowledge and skills to students.” Such collaboration might increase the coherence of the general education program and students’ learning experiences.

Employers’ Interviews Results

The qualitative data collected from employer interviews were used to answer the Research Question 3: What are employers’ perceptions of the general education program’s provision of the broad knowledge and skills needed for students’ career success? As described in the qualitative analysis section, the inductive content analysis

was used to identify code words. The iterative process resulted in a list of 26 code words. The list of code words was grouped under meaningful categories and then compared and revised to delineate themes. Categories were checked, compared, reanalyzed, and reorganized. This process was the iterative, cyclical process to reach themes that emerged from the data, as shown in Table 11. Vietnamese transcripts were used for data analysis. I translated only information used to present data analysis results into English, including text segments, code words, quotations, and paraphrased sentences. An English translation specialization lecturer fluent in Vietnamese and English checked the English translations to ensure accurate and equivalent translations.

Table 11

Employer Response Themes

Themes	Sub themes	Categories
1. Recognition of value of general education for knowledge and general skills.	1. Knowledge needed for the job does not always match the provision.	Globalization
		Holistic Development
		Cultural Diversity
	2. Job skills needed mostly match the provision.	Professionalism
		Communication skills
		Critical thinking
		Computer skills
		English
2. Concerns about the weaknesses of the program and abilities of graduates.		Upgrade of skills
		University collaboration

Theme 1: Recognition of Value of General Education for Knowledge and Soft Skills. Interviewed employer participants expressed the importance of having broad

knowledge and soft skills for graduates that would contribute to their career success and workplace change. Employers highlighted areas of knowledge that graduates needed to be equipped with, such as culture, foreign investment issues, customer industry, intellectual property, and cultural diversity. Such broad knowledge would help graduates "do better in their job" (employer DN6), "broaden their knowledge" (employer DN1), and "effectively deal with clients," as employer DN4 stated. Besides required broad knowledge, employers emphasized the skills needed for graduates such as communication, English, and information technology skills. Although employers had different skills' requirements for graduates, those skills were one of the hiring criteria of most employers.

Subtheme 1: Knowledge Needed for the Job. Employers interviewed perceived that equipping graduates with broad knowledge was an essential factor in recruiting staff, helping them do their jobs better, and contributing to workplace change. The employers shared their expectations of finding candidates with both broad knowledge and deep expertise, even though they "had difficulty finding such candidates," as employer DN1 expressed. The employers expected graduates to have diverse broad knowledge areas depending on their business demands. An employer in the hospitality industry, DN1, said they requested employee candidates to have "a broad knowledge of trends in economic development, foreign investment issues, society, and cultural diversity." Meanwhile, graduates with a broad base knowledge in intercultural communication and other areas, such as finance, accounting, trade, and commerce, were the requirements of employer DN3 in information technology industry.

Likewise, employer DN4 in the banking and finance sector also required graduates to have "the relevant knowledge of the customer's industry" in order to be able to work effectively with their clients. The employer further expressed that a wide range of background knowledge provided by the university was significant for graduates, and then the company would give graduates opportunities to continue increasing their knowledge. An employer in the fashion and garment industry, DN2, said, "We expect graduates to apply general knowledge, which is relevant to their occupational field, to their works in order to make a difference and help the business change." According to the employer, the general knowledge ranged from aesthetics, painting, and music to cultural knowledge, philosophy, and historical ideas related to employee's job functions.

Other employers expected graduates to have a broad knowledge in similar areas. In addition, they expected graduates to be equipped with knowledge of copyrights, intellectual property and environment, professional ethics, and globalization issues. The employers believed that such knowledge was an important factor in helping graduates do well in their jobs.

Subtheme 2: Job Skills Needed. Almost all employers identified communication, English, critical thinking, and information technology skills as the top essential skills needed for graduates. Communication and information technology skills were the main recruitment criteria among those skills, as noted by all employers. Regarding communication skills, the employers emphasized graduates' ability to communicate effectively, including verbal, non-verbal, and writing, and specified various communication requirements. A furniture company employer required graduates to have

the ability to “communicate effectively with partners, suppliers, and colleagues.” An employer in the hospitality industry, DN1, argued that “communication skills included communicating in English, fluent presentation and building relationship with colleagues and clients.” Other employers said that graduates needed to have good intercultural communication skills, effective communication with the company’s customers, and interacting with others effectively, including non-verbal communication. Regarding information technology skills, the employers noted that all graduates’ jobs required these skills. The employers specified the requirements of information skills such as using the company’s reporting system, mail merge, Excel, Microsoft Word, email, and searching information on the internet. The interviewed employers believed that graduates with those skills would help them integrate into the workplace quickly.

With regard to English requirements, three employers in the hospitality, information technology, and furniture sectors established English speaking and writing skills as prescribed criteria for recruitment. They desired graduates with fluency in English skills to compete with human resources from ASEAN countries and to contribute the company’s success. Two employers in the finance and banking and reproduction energy industry said that English was a critical skill for graduates, although this skill was less important in their recruitment process. Employer DN4 stated, “Graduates with good English language skills will have a much better chance of promotion.” Employer DN6 agreed and added, “The type of promotions may be a higher job position, assigning important job tasks, or becoming a global team member.”

Regarding critical thinking skill, most employers said that graduates did not yet have a habit of thinking critically, although this skill was important and necessary in the workplace. Employer DN1 expressed, “Only a few graduates demonstrated critical thinking after one year or two years at work. In the first years at work, they often complied with requirements.” Employer DN6 said that graduates did not know how to evaluate the authenticity of the collected information. Employers DN3 commented, “Graduates need to have better critical thinking skills such as collecting, analyzing, and interpreting customer requirements.” The interviewed employers also expected graduates to express their idea clearly and to know how to reason effectively.

Employers also considered some other skills as the essential skills for graduates’ career success, such as creative thinking (employers DN2 and DN3), management skills (DN5 and DN6), teamwork skills (DN3 and DN6), and problem-solving skills (DN5). Employers also said that graduates were weak on those skills. In addition, several employers emphasized the importance of positive attitudes that graduates needed to possess. Employers DN4 and DN5 expected graduates to have positive attitudes such as enthusiasm, initiative, energy, humility, patience, and hardworking. They believed that having a positive attitude would make graduates progress faster at work and help them succeed in their careers.

Employers interviewed provided helpful feedback on what skills SVU graduates demonstrated best and met employers’ requirements. The employers asserted that SVU graduates possessed essential skills employers required, such as English (employers DN1, DN5, and DN6), communication (DN1, DN6), teamwork (DN3, DN6), computer skills

(DN5, DN6). Only one employer in the hospitality industry, DN1, felt satisfied with SVU graduates' presentation and critical thinking skills. The employer said, "They [SVU graduates] often raised right questions or issues in work discussions. Most of them expressed their ideas clearly, and confidently asked and answered questions." Similarly, one employer in the information technology sector, DN3, noted that SVU graduates showed their problem-solving ability when working on team projects. In addition, most of the employers highly valued SVU candidates because of their readiness for employment. Having a good professional appearance, soft skills, and good interview skills were the strengths of SVU graduates.

Theme 2: Concerns about the Weaknesses of the Program and Abilities of Graduates. Besides SVU graduates' strengths, employers also pointed out SVU graduates' weaknesses. Employer DN3 commented that SVU graduates did not have the habit of writing reports in English and lacked creativity. In addition, "SVU graduates need to improve their ability to communicate in English effectively when meeting with clients and colleagues," as the employer reflected. Moreover, intercultural communication, personal emotional management, and critical thinking were also the skills that SVU graduates did not meet the employers' requirement. Employer DN6 noted, "They lacked an ability to understand other people's feelings when interacting with other people or talking with people face-to-face." Employer DN3 also said that SVU graduates need to be equipped with skills in personal emotional management so that they could be able to "interact with people better." With regard to critical thinking skill, employer DN6 commented that SVU graduates lacked logical consistency in thinking

when dealing with a problem. The employer added, “They did not know how to collect information effectively, systematize the facts, events, ideas, and evaluate information which is able to use.” This indicated that SVU graduates lacked literacy information skills.

In addition to required soft skills, employers were also concerned about SVU graduates’ attributes. Employers DN1 and DN6 mentioned that SVU graduates lacked patience. In addition, “sincerity, loyalty, and gratitude” were essential attributes that employer DN1 expected SVU graduates needed to develop further. The lack of such virtues caused “some students failed to identify long-term goals for their career development,” DN1 commented. In addition, DN6 emphasized that SVU students needed to do well in their entry-level positions before they could be in management positions.

Regarding the improvement of SVU graduates’ skills, the interviewed employers suggested establishing the close collaboration between SVU and their company as one of the solutions. The collaboration could be done through the university inviting experts from businesses to share experiences with students, teach soft skills courses, or organize workshops to train students’ soft skills. Employer DN5 believed that specialists from businesses would “give students real-life situations to learn. They can also share the labor market situations in different occupational fields with the students.” Employer DN6 stated that SVU should also invite alumni to participate in workshops on developing individual skills for students. In addition, employer DN2 noted that should involve “employers from internationally competitive companies” in developing general education

courses. That might be a good practice in equipping graduates with skills and broad knowledge to meet employers' requirements.

Career guidance for students was also a concern of some employers. Employer DN1 in hospitality industry recommended that SVU "should interview student applicants and advise them to choose the right major." Other employers suggested that SVU should provide students with "an early career orientation," (employer DN2 in furniture sector) and "opportunities to get workplace experience," as employer DN4 in banking and finance said. Types of workplace experience could be internships, field trips, field work, and company visits. Employers also expressed their willingness to welcome students to participate in such experience activities. In addition, employer DN4 suggested that SVU should integrate updated knowledge and skills, which are associated with changes taking place in the market, into the curriculum and courses.

Interpretation of Qualitative Results

The qualitative findings from faculty members interviewed showed that faculty members believed that the SVU general education program adequately provided students with a wide range of broad knowledge and skills needed for students' success. Faculty members also recognized the necessity and importance of the general education program in equipping students with broad knowledge and skills. In relation to the literature review, these results are somewhat similar to those found in previous studies. A study by Shek et al. (2017b) revealed that lecturers had positive views towards equipping students with broad knowledge and skills provided by a general education program. Another study

conducted by Nghia (2017b) showed that lecturers believed in the importance and necessity of teaching generic skills courses to students.

Faculty members emphasized the use of active teaching methods to engage students in the learning process and develop skills for students. Faculty members believed that most students made some progress in developing soft skills through general education courses, such as presentation, communication skills, and professionalism. These results are consistent with the findings of the studies by Kim (2019) and Shek et al. (2017b) regarding using active teaching methods and students' communication skills improvement. However, like studies by Nguyen et al. (2015) and Shek et al. (2017b), students' unserious attitudes, uninterested learning, and low improvement in skills development were challenges that faculty members interviewed in this study faced.

The qualitative findings from employers' interviews indicated several essential skills that graduates needed to have: communication, critical thinking, information technology, and English speaking and writing skills. Those skills were required by most interviewed employers, although they came from various business sectors. Some employers expected graduates to have creativity, teamwork, intercultural communication, problem-solving skills, and professionalism. These results are somewhat consistent with previous studies. Studies by Ca (2015), Hanh (2015), and Truong et al. (2018) showed that Vietnamese employers expected graduates to have soft skills similar to those identified in this study.

Moreover, employers also require graduates to have other skills such as presentation, self-management leadership, time-management, negotiation (Truong et al.,

2018), lifelong learning, planning and organizational skills (Hanh, 2015), and work experience (Tran, 2015), which are skills not included in the findings of this study. A study by Li (2015) pointed out the three most essential skills that businesses in Hong Kong required for graduates included working attitude, English speaking and writing, and problem solving skills. Research by Hart Research Associates (2018) also identified the most important skills that employers in the United States required for graduates when recruiting included oral and written communication, critical thinking, ethical judgment, working effectively in teams, working independently, self-motivation, and real-world application of skills and knowledge. Those results show that employers in Vietnam and other countries considered soft skills as important requirements for graduates. Employers also emphasize the importance of having broad knowledge for graduates, including culture, foreign investment issues, customer industry, intellectual property, and cultural diversity. This result partly supports studies by Ca (2015) and Duyen (2016), in which alumni asked their universities to equip students with more broad knowledge related to history, humanities, and social issues to meet the recruitment requirements and for their jobs.

The employers' interview results also indicated that SVU graduates did not meet their requirements in several skill areas: speaking and writing in English, creativity, intercultural communication, personal emotional management, critical thinking, and literacy information skills. This result is similar to the findings in studies by Hanh (2015) and Lan (2020) that graduates at their research sites do not meet employers' expectations for acquiring generic skills such as communication, critical thinking, creative thinking,

intercultural communication, teamwork, and leadership skills. This study results also suggested that establishing a partnership between the university and businesses was one of the solutions to improve graduates' competence. This result is consistent with the trend discussed in T. Tran (2016). The collaboration between universities and businesses has been seen as a long-term solution to improve students' skills and enhance the responsiveness of universities to industry and students' expectations.

In relation to the theoretical framework, the faculty interview results support Mezirow's (1997, 2000, 2009) transformative learning theory. Faculty participants supported students' involvement in the transformative learning process by establishing an open learning environment for fostering critical reflection and the free exchange of ideas. Most of the faculty interviewed perceived that students changed their attitudes and had improvements in their broad knowledge and skills through such learning environments in general education classes. The faculty interview findings also revealed that critical reflection and critical discourse, which were crucial functions in the transformative learning theory (Mezirow, 2009), were used through various types of interactive teaching and learning methods in the learning process.

The employers' interview results also support Mezirow's (1997) transformative learning theory, in that the central role of autonomous learning is recognized through identified learning needs of the workforce. This study revealed that employers required graduates with a wide range of skills and broad knowledge such as teamwork skills, problem solving skills, information literacy, and using cultural understandings. In addition, the various types of collaboration between the university and employers

suggested by employers interviewed are consistent with experiential learning theory (Kolb & Kolb, 1984, 2017), which emphasizes the need to link higher education and employment.

Synthesized Findings

The purpose of this mixed methods study was to examine the perceptions of students, faculty, and employers about whether the general education program was providing students with the broad knowledge and skills needed for career success. Quantitative data obtained from a Likert scale survey, in response to Research Question 1, provided insights into students' perceptions of the general education program's provision and acquisition of the broad knowledge areas and skills. Qualitative data obtained from faculty members' and employers' interviews addressed Research Questions 2 and 3 about faculty members' and employers' (respectively) perception towards equipping students with broad knowledge and skills needed for students' career success.

The results from the survey showed that students valued the provision and gain of skills to a greater extent than the provision and gain of broad knowledge from the general education program. The majority of students perceived that the program insufficiently provided students with broad knowledge in almost all areas. Students rated most highly six out of 17 provided knowledge areas and perceived that they highly gained only three broad knowledge areas. Conversely, students perceived that the general education program adequately provided them with skills needed for their success. Most students perceived that they highly gained all of the 11 skills provided by the general education program.

Faculty interview results showed that all faculty members perceived that the general education program at SVU sufficiently equipped broad knowledge and skills for students. The faculty members highly valued broad knowledge related to social sciences and humanities, human development, globalization, and international integration areas provided by the program. In addition, faculty interviewed also perceived using active and interactive teaching methods as effective tools which helped students improve their broad knowledge and skills from general education courses. However, the faculty members satisfied student improvements only in presentation, teamwork, oral and writing communication skills, and professionalism. The faculty members also expressed their concern about issues that need to be addressed: students' awareness and attitudes towards general education courses, students' skills development, and the structure of the general education program.

With regard to employers' interviews results, most of the employers interviewed perceived that equipping broad knowledge and soft skills for students was important and necessary for their career success. Some employers considered soft skills to be the most important criteria for staff recruitment. In addition, most of the employers interviewed perceived that SVU graduates had good communication, English, teamwork, and information technology skills. However, many employers expected SVU graduates to improve their creativity, critical thinking, intercultural communication, emotional intelligence, English, and attitudes such as sincerity, loyalty, gratitude, and patience. As suggested by most employers, a close collaboration between SVU and employers should be one solution to improve SVU graduates' skills.

The results of this study provided a comprehensive portrait of the general education program at SVU through different stakeholders' perceptions. In general, faculty members and employers had positive perceptions of the program's provision of both knowledge and skills. Meanwhile, students rated the equipping and acquiring skills somewhat higher than equipping and acquiring knowledge provided by the program.

Students appreciated several provided knowledge areas, such as psychology, professional ethics, Vietnamese culture, information technology, philosophy, and intercultural communications. These responses corresponded with faculty members' and employers' perspectives, in which faculty and employers believed those knowledge areas were essential for all students. Faculty appreciated the value of other knowledge areas, including world's art history, history of scientific thought, the Vietnamese diaspora, designing thinking, cities and urbanization, and mass communication and society. However, students perceived that they gained very little of those knowledge areas from the program. In addition, employers expected graduates to have other areas of knowledge, such as trends in economic development, foreign investment issues, the customer's industry, copyrights, intellectual property, foundation of finance, accounting, trade, and commerce. However, the general education program did not offer that knowledge to students.

As for provided skills, students and faculty members shared the same view that the general education program adequately provided students with skills needed for their success. Most students perceived that they highly acquired all skills provided by the general education program. However, faculty members and employers appreciated

students' progress in presentation, oral and writing communication, professionalism, creativity, and teamwork skills. Moreover, faculty members noted that students failed to improve their reading, writing, and critical thinking. Employers also felt that SVU graduates needed to improve English speaking and writing, creativity, intercultural communication, personal emotional management, critical thinking, and literacy information skills. However, several employers were satisfied with their English skills, computer skills, teamwork, problem-solving, and critical thinking skills.

Based on the results of this study, a professional development workshop project for academic staff was created to help faculty better prepare all students for the value of broad knowledge and skills from the general education program. Through the workshop, faculty members will be equipped with the principles and models of general education, learning theories related to general education, and approaches to teaching general education courses. This project will be described in the following Section 3 and presented as a doctoral product in Appendix A.

Section 3: The Project

Based on the findings presented in Section 2, which showed a need to improve skills and broad knowledge for students, a 3-day faculty professional development workshop was created to help faculty better equip students with broad knowledge and skills of the general education program. The workshop is organized for all faculty members, particularly general education faculty members and major course coordinators. The three goals of the workshop are to enhance faculty understanding of concepts, principles, and models of general education; to provide faculty with effective approaches to teaching general education courses; and to improve faculty capacity for using teaching methodologies based on student-centered approach. By the end of the faculty development workshop, participants should be able to relate the concepts, principles, and models of general education to the development of general education courses; explain the basic principles of learning theories that underlie the student-centered methodologies; select appropriate teaching methods to achieve course objectives and learning outcomes; and utilize effective teaching strategies to actively engage students in learning activities.

The faculty professional development workshop was designed by themes and divided into several sessions for each day. Lectures will be interspersed with interactive discussions, teamwork, and participant presentations. At the end of each day, participants will be asked to complete an evaluation for the training sessions and an assignment to reflect the participants' comprehension through the workshop. The workshop will be organized in the week before the summer semester begins, which is the week without

class schedules and convenient for calling the faculty to participate in workshops and arrange rooms for the workshop.

The language used in the workshop will be Vietnamese and English to give comfort to both Vietnamese and foreign faculty participants. The translation into English and Vietnamese, in case necessary, will be supported by the workshop facilitator and faculty participants' colleagues in their academic departments. However, slide presentations, handouts, evaluation survey forms, and reference materials will be in English and not translated into Vietnamese.

Rationale

The findings of this study showed that although interviewed faculty believed that the general education program had adequately provided students with the broad knowledge and skills needed for students' career success, students' surveys indicated that they gained a little broad knowledge. In addition, although students believed that they had acquired many of the skills provided by the general education program, faculty and employers perceived that students needed to improve their skills and broad knowledge areas.

The use of active teaching methods with a well-designed course will help students firmly acquire knowledge and skills from the courses (Shek et al., 2017a). In addition, understanding of the principles and objectives of the general education program is an essential factor that helps faculty select the knowledge areas and skills necessary for students' success. Faculty are an essential factor in helping students understand the purpose of the general education program, in connecting the broad knowledge areas and

skills with employer requirements, and in designing courses to motivate students to develop skills and knowledge (Hale & Bessette, 2016; Nghia, 2017a; Wells, 2016). The faculty development workshop may improve the effectiveness of the general education program in providing students with the broad knowledge and skills needed for students' career success. The content of the workshop includes theoretical and practical aspects of approaches to improve on providing students with broad knowledge and skills through the general education program.

Review of the Literature

This section presents a review of literature related to best practices for the design of a faculty professional development workshop and for the general education program's provision of the broad knowledge and skills needed for students' career success which will be used as the contents of the workshop. The Walden University Library website and Google Scholar were used for conducting the literature review. Subject terms were used to search included *faculty development*, *professional development*, *faculty professional development workshop*, *develop general education courses*, *general education curriculum*, and *general education program*. These terms were combined with key words such as *provision*, *approaches*, *structure*, *teaching methods*, *Vietnam*, *Mezirow*, and *Kolb*. Scholarly articles used for this literature review section were within the last 5 years.

Faculty Professional Development

Faculty professional development has been viewed as training activities to improve faculty teaching competencies. Most training activities for faculty professional development are a series of workshops, which help faculty members understand and

implement active teaching and learning methods and techniques in their classes (Tricio et al., 2017; von Hoene et al., 2017; Welch & Plaxton-Moore, 2017; Wright et al., 2018). Other faculty professional development workshops focus on technology integration in teaching and pedagogical competencies improvement (Phuong et al., 2018; H. Tran, 2016; Welch & Plaxton-Moore, 2017), or emphasize topics of course design, curriculum development, and student learning assessment (von Hoene et al., 2017; Welch & Plaxton-Moore, 2017).

Learning theories were also discussed through faculty development workshops, such as adult learning theory, transformative learning theory, and experiential learning. These theories are necessary for faculty members to enhance their teaching, and they were necessarily provided in faculty development workshops (Phuong & McLean, 2016). Improving faculty members' understanding of learning theories would give them a strong methodological foundation for improving their teaching effectiveness. Applying these theories to teaching practice can help faculty members achieve desired student outcomes more effectively.

Many universities consider faculty professional development to be one of the most important strategies for improving the quality of teaching, thereby improving students' learning quality. Research by Elliott and Oliver (2016) showed the positive influence of faculty development programs on improving teaching strategies and student learning outcomes. On the other hand, positive teaching strategies also lead to an increase in student success rates in their learning process (Brown & Kurzweil, 2017). Through faculty professional workshops, faculty members have perceived that they were more

confident about using and integrating new teaching methods and improving pedagogical skills (Piryani et al., 2018). In addition, faculty also confirmed that they changed their awareness, increased pedagogical knowledge, and utilized a more student-centered approach to the teaching process after attending faculty development workshops (Lee et al., 2018; Sutherland & Hall, 2018). Faculty development programs bring positive outcomes for faculty teaching and student learning and support faculty members in developing leadership and other educational skills (Kamel, 2016). Therefore, faculty development programs are an essential component of university development strategies.

Faculty development programs are also considered the practical solutions to improve curricula and student learning outcomes of general education programs. The agenda can include a variety of topics such as assessing how to enhance the quality of teaching (Beach et al., 2016), integrating experiential learning, first-year seminar, and capstone project into curricula to positively impact on student success (Sorcinelli et al., 2017). The development of teaching skills, which closely link to learning outcomes, and the integration of sustainability content into the design of general education courses are also main topics for faculty development programs (Beld, & Delmont, 2016). These topics have helped faculty members pay attention to the crucial components of the course design, which are included learning outcomes, assessment, teaching and learning activities, and the content of subjects (Hurney et al., 2016). Faculty must also know how to design general education subjects effectively (Wells, 2016). Faculty members should be aware of the context of student life, including their academic level, personal growth, and social environment, to design the content of the subjects in accordance with the

diverse needs of students and the goals of the general education program. In addition, faculty development programs should provide faculty members, both general education and non-general education faculty, with methods of integrating general education requirements into all courses. This content helps non-general education faculty members better understand the values of the general education program and increase the effectiveness in achieving the goals of the general education program.

One of the ultimate goals of faculty development programs is the transfer of learning from faculty development workshops to teaching practices and then to impact student learning positively. For the transfer to be successful, the design of programs for faculty development programs needs to pay attention to the following three factors: participants with strong motivation, supportive learning climate at participants' working environment, and program design elements and activities (Iqbal & AlSheikh, 2018). The components of the faculty development workshops should include the use of positive learning approaches, balancing the amount of knowledge, discussion and practice through teamwork, and effective use of information technology tools. In addition to the above factors, the professional factor is also an essential factor influencing the organization of workshops. The workshops should be organized at a time and place suitable to the target audience (Kenyon et al., 2019). The provision of knowledge and conducting group discussion should also pay attention to the participants' position, experience, and qualifications. Similarly, these elements can contribute to promoting members to participate in the workshops productively and effectively (Vasil et al., 2018).

Moreover, the use of competency-based or theoretical foundations approaches, such as experiential learning and transformative learning, in faculty development programs have been an effective way to bring about the change in faculty members' teaching practice and faculty development. These approaches require explicitly identifying the components and scope of knowledge and skills provided to the faculty to sustain the intended changes (Welch & Plaxton-Moore, 2017). Such components, knowledge, and skills should include broader workshops' outcomes, such as civic responsibility, critical consciousness, cultural competence, rather than traditional course-based academic objectives.

Principles and Models of General Education

The term *general education* is often used to refer to an educational philosophy that develops the knowledge and competencies needed for all students regardless of their major. Some universities have emphasized the development of essential skills for all students, and others have focused on specific content or general education learning outcomes. Essential skills, such as critical thinking, problem-solving, teamwork, communication, and decision making based on ethical reasoning, were designed as a bridge between general education and the world of work and student life (Hadzigeorgiou, 2019; O'Banion, 2016). Specific content, such as civic life and ethics, diversity and social justice, the environment, global perspectives, and technology and society, focuses on nurturing students' motivation in learning, promoting students' responsibility for local and global issues, and linking knowledge to practice (Haberberger, 2018; Wells, 2016). General education learning outcomes are defined as competencies, including knowledge,

skills, and attitudes, such as cognitive competencies, intellectual, interpersonal competencies, integrative learning, and lifelong learning competencies (Nhung, 2020; Schejbal, 2017; Yu et al., 2019). These learning outcomes are identified in general education courses and throughout the entire curricula to ensure that all graduates have the ability to apply the knowledge and skills to their life and careers.

Three general education models, which consist of core, distribution, and competency development, are often used to deliver general education programs (Fox, 2016; Jiang, 2019; O'Banion, 2016). The core model includes a set of compulsory courses that all students must complete. These general education core courses are interdisciplinary courses, which are specifically structured based on a combination of different disciplines and various methodologies, and a diversity of ways of seeing the world. In contrast, the distribution model is structured based on a wide range of disciplines. This model aims to equip all students with a broad knowledge related to many different fields and a set of skills and attitudes. The competency development model focuses on the development of academic competencies and personal growth. In addition, this model includes a specially created set of general education objectives, which emphasizes the process rather than the specific content. Of the three models, the distribution model is the most popular. However, this model is often integrated with other models, such as the core-distribution model and the core-distribution-competency model (Fox, 2016; Hill & Wang, 2018; Huang, 2017), depending on the specific characteristics of each university.

Although there are differences in the general education models and structures, designing an effective general education program should include the following factors: institutional specifics, intentionality, coherence, integration, and innovation. The general education program should be designed based on characteristics of the university, mission and identity of the university, quality of teaching staff, the attention and understanding of faculty members on general education, and student needs (Haberberger, 2018; Wells, 2016). The intentionality factor needs to be considered to ensure the embedding of the educational priorities of the institutional mission into the overall curriculum design and course design. This factor also requires the design of activities in and outside the classrooms, which intentionally aim at realizing the goals of general education (Dose, 2019; Hadzigeorgiou, 2019). The coherence of the general education program ensures the role of the general education program in promoting students to engage in their educational activities and in connecting student's diverse experiences completely. Additionally, the coherent structure of the general education program creates opportunities for student success and for meeting society's requirements (Bechtold, 2017; Wells, 2016).

Integration between the general education program and the majors is also necessary to ensure the achievement of general education goals. General education does not include the foundation subjects but rather should be reflected throughout the entire learning process of students. Such integration enables students to develop their skills connected with general education throughout their time in university and apply those

competencies in various situations with different complexity (Birx, 2019; O'Banion, 2016; Ortiz & MacDermott, 2018; Rust & Korstange, 2018).

The general education program also requires creativity beyond the set of general education courses to connect other educational activities in which the functions of general education can be realized. Best practices in such activities are diverse, such as service learning (Cordner, 2019; Hoshmand, 2018; Le et al., 2019; Pak, 2020), e-portfolio (Kahn, 2019; Khoo, 2019; Loan & Tin, 2016), study abroad programs (Huffman et al., 2020; Schenker, 2019; Sun, 2020; Xujia, 2019), internships (Christou & Chatzigeorgiou, 2019; Nurrahman & Bachtiar, 2019; Yu et al., 2019) and capstones (Bass et al., 2017; Birx, 2019; Coker & Gatti, 2017). Those activities and consideration of a variety of innovative practices are needed to be considered essential components of an effective general education program.

Methodologies to Teach General Education Courses

Teaching approaches can be classified into two broad categories: a lecturer-centered approach and a student-centered approach to teaching. The lecturer-centered approach refers to the traditional teaching methodology in which faculty members used passive learning methods such as lecturing, speaking, and using tables, images, video, or charts to illustrate lectures (Emaliana, 2017; Menyani, 2020; Viviers & Villiers, 2020). In this approach, the teaching process primarily focuses on the instructor's role in imparting knowledge to students, who are seen as passively receiving information. This traditional approach revealed many limitations in helping students acquire knowledge and develop competencies, though, according to Emaliana (2017) and Viviers & Villiers, using a

lecturer-centered approach to teaching could be seen as an effective way to convey a large amount of knowledge in a limited time or to introduce a new concept or a new topic.

In contrast to the traditional approach to teaching, a student-centered approach to teaching is considered to be a modern teaching methodology, which focuses on student learning and the role of students in the learning process through positive learning activities guided by lecturers (Hoidn, 2017; Trinidad, 2019; Viviers & Villiers, 2020). The student-centered approach involves a broad range of teaching methodologies, such as active learning, experiential learning, and transformative learning methodologies. Teaching methodologies based on a student-centered approach to teaching will help students improve their learning and develop their thinking and lifelong learning capacity.

Active learning methodologies refer to teaching methods that actively engage students in learning activities to encourage deeper learning and competency development (Ting et al., 2019). Different teaching methods related to active learning methodologies, such as project-based learning (Canh, 2017; Park et al., 2018), problem-based learning (Itatani et al., 2017; Luy-Montejo, 2019), collaborative learning (LoPresto & Slater, 2016; Luy-Montejo, 2019), cooperative learning (Chen, 2017; Tran, 2019) and interactive learning (Chalapati et al., 2018; Chan et al., 2017), were applied to teaching general education courses.

Depending on the classroom context and course content, a combination of active learning methods is an effective approach to teaching general education courses. By using problem-based learning combined with interactive learning in large general

mathematics courses, Ting et al. (2019) concluded that there was a significant improvement in students' engagement in the learning process. In addition, this approach also increased students' conceptual understanding and exam performance, including students with less background knowledge. Similarly, Shen et al. (2017) implemented a flipped classroom strategy framework, in which problem-based learning was used in combination with cooperative learning in teaching a series of general chemistry courses. The integrated use of these teaching methods provides students with an opportunity to increase work experience, learn practical knowledge, and develop creative and critical thinking skills.

The flipped classroom is also used as an effective active teaching method for other general education courses such as critical thinking (Smith et al., 2018), English as a Foreign Language (Quyen, & Loi, 2018; Webb, & Doman, 2020; Yousufi, 2020; Zainuddin, & Perera, 2019), introductory statistics (Green et al., 2018), neuroscience (Giraldez, 2020), and information technology skills courses (Chen, & Yen, 2019; Nam, & Giang, 2017). Using the flipped approach to teaching, faculty members can flexibly combine different positive teaching methods, such as group discussion, presentation, debate, and quiz show. This approach also allows the integration of various media types to increase student engagement in the learning process, both inside and outside the classroom. Through such flipped general education courses, students participated actively in the learning process to develop their skills such as critical thinking, reading, writing, teamwork (Giraldez, 2020; Smith et al., 2018), independent learning skills, problem-solving (González-Gómez et al., 2016; Zainuddin, & Perera, 2019), communication

skills, digital literacy skills (Nam, & Giang, 2017; Webb & Doman, 2020) and lifelong learning capacity (Giraldez, 2020) in addition to improving students' academic performance and their learning attitudes.

Active learning methodologies also encompass a variety of teaching methods to engage students in the learning process actively. Teaching methods that positively impact on student learning include in-class discussions and activities, clicker questions, small-group activities, and the interdisciplinary project (Hodges et al., 2017; Hymers & Newton, 2019; Hyun et al., 2017); group discussion, individual writing exercises, inquiry-based learning, presentation, formative assessment, and problem-solving (Borda et al., 2020; Shek et al., 2017b; Stieha et al., 2016; Tran et al., 2019).

In addition to active learning methodologies, experiential learning and transformative learning methodologies are also used as teaching and learning strategies to enhance student learning for general education courses. Experiential learning methodologies cover a broad range of teaching methods that involve students in the learning process through which they build knowledge and skills from their direct experience (Gorghiua, & Santib, 2016; Wurdinger, & Allison, 2017). Experiential learning methods are effectively used for teaching general education courses such as simulation, real-world example-based instruction (Shek et al., 2020; Zuo et al., 2019), community project (Druzhinina, 2020; Nashleanas, 2016; Weller, & Saam, 2019), case study (Mountrouidou et al., 2018; Zuo et al., 2019), hands-on and real-world group work project (Druzhinina, 2020; Mountrouidou et al., 2018; Weller, & Saam, 2019),

classroom-based challenge activities (Schary et al., 2018), and field trip and role-playing (Shek et al., 2020).

Teaching methods based on experiential learning methodologies are also used in combination with other activities and active learning methods to engage students in general education courses. Young et al. (2018) used a series of experiential learning exercises and case studies combined with group discussions, individual and group projects, and reflective writing assignments in teaching a freshman-level general education course. Students had a positive response to these teaching methods, according to the results of student surveys, and they felt that the class was always interesting, and the courses covered an important topic in today's world. Similarly, Schechtel et al. (2020) used experiential learning methods in combination with active learning activities through puzzle designing and solving project in a large chemistry general education classroom. Through such a learning process, students engaged in learning activities and take responsibility for their own learning. Also, students were directed to a deeper level of learning, and they developed their competencies such as teamwork, critical thinking, creativity, problem-solving, and meaningful learning. The combination of experiential learning methods and active learning methods was also applied successfully by Nelson-Hurwitz and Buchthal (2019) to a large social science general education classroom. Through a combination of team-based experiential learning approaches, group discussions, and reflective writing, students have applied course content and skills, such as critical thinking and teamwork skills, into practice. The combination of teaching

methods also help students broaden critical social issues and arouse enthusiasm in their degree programs and future careers.

The use of experiential learning methods is also a practical approach to developing intercultural and global competencies for students. By using integrated experiential learning methods, such as panel presentation, discussion, hands-on activities, cooperative project, reflection papers, and cross-cultural service learning, Lyons et al. (2018) attracted students to participate actively in domestic intensive and intentional cross-cultural experiences in a first-year seminar and a leadership development program. The student survey results showed that such experience activities positively impacted students' intercultural competencies development, including intercultural knowledge, skills, and abilities.

Cross-cultural experiential learning was also applied by Kopish et al. (2019) in an elective general education course through a global citizenship education framework. This approach have allowed faculties to collaborate with the campus and the community, and to utilize diverse perspectives to promote students' global experiences development. Students have been provided opportunities to participate in cross-cultural experiential learning activities, including diversity presentations, cross-cultural conversations, critical country study, immersion experience, after-school program, and global citizen action project. Through such activities, students have gained meaningful learning experiences that contributed significantly to their global competencies.

As a form of experiential learning, service learning is also a practical approach to teaching general education courses. Service learning provides students opportunities to

study outside the classroom by engaging in an organization or community (Currie-Mueller, & Littlefield, 2018; Maloyed, 2016). Service learning activities are often integrated as a component in a general education course. The integration helps students better understand the knowledge they learned in class, apply the course concept to real-life contexts, and develop cognitive and behavioral competencies (Currie-Mueller, & Littlefield, 2018). In addition, general education service learning also helps students increase civic engagement levels and develop research and professional skills (Maloyed, 2016). The positive results from the application of general education service learning are also found in studies conducted by Chen (2019), Díaz et al. (2019), and Tirza (2020). By integrating the contents of general education courses with service learning activities, students have gained a better understanding of different social issues and themselves. Students also have increased their social knowledge and reinforced their skills, such as interpersonal skills, the ability to communicate and work with others, and leadership skills.

To achieve positive results of the implementation of service learning as a component of general education courses, Nishimura and Yokote (2020) argued that the design of service learning programs needed to balance focusing on students' learning of the self and society and student inquiry of social issues. Besides, program planning and critical reflection are essential factors that need to be considered when integrating the service learning program into general education courses (Cordner, 2019; Estes et al., 2019). Planning a service learning project should be fully shared with students and simplified about logistics. The implementation of students' critical reflection practicing

should be done periodically during the service learning process. Students practice critical reflection through various ways, such as students' reflection papers, story-exchange circles, and empathy mapping, that focus on promoting the transformation of students' thinking and civic attitudes.

Critical reflection is also an essential element in transformative learning methodologies, which refers to teaching methods that focus on guiding students in their meaning making process (Chien, 2018; Nielsen, 2020). Regarding general education courses, teaching strategies have been used to support transformative learning, including problem-oriented project learning (Nielsen, 2020), collaborative learning, journal assignments, free-choice learning (Chien, 2018), discussion, debate, student presentation (Haynal, 2017), and projects related to daily life experiences (Chien, 2018; Ubaidah et al., 2019). These teaching methods can be used in an interwoven way based on transformative learning processes, such as two transformative learning phases (Chien), three transformative learning schemes (Ubaidah et al.), and communicative process (Haynal). Besides, service learning, as integrated into general education programs, is also considered as an approach to promoting students' transformative learning process. Service learning experiences have led to a change in students' perspectives and beliefs (Díaz et al., 2019), students' thinking, and student-citizen's attitudes (Freire et al., 2017). Moreover, Pak (2020) concluded that conducting a quality service learning program might lead to long-term achievement in academic, personal, professional, and civic development.

The effective use of teaching strategies is a key factor for the successful teaching of general education courses. Faculty members should select appropriate teaching methods that meet the course's objectives, content and learning outcomes, and the specific classroom context. Teaching methods based on the student-centered approach emphasize promoting students' roles and responsibilities throughout the learning process, from knowledge formation and competencies development to changing attitudes towards themselves and the community.

Project Description

Potential Resources and Existing Supports

The number of faculty members participating in the 3-day faculty development workshop will be estimated at 30 participants, whom their deans will select. The potential resources needed to organize the workshop will include facilities, organizational budget, and supporting staff. The workshop will need a seminar room and three small classrooms. The seminar room is available at SVU university with facilities, such as round tables, a projector, sound systems, and flipcharts. Discussion groups (10 participants per group) will be arranged in small classrooms, equipped with additional flipcharts and whiteboards. Administrative staff will assist the workshop organizer in booking the rooms and providing the required equipment. The workshop's expenditures will include expenses for tea breaks (coffee, tea, and snacks), printing needs such as handouts and evaluation survey materials, and paying remuneration to two invited keynote speakers.

Potential Barriers and Potential Solutions to Barriers

Faculty participation in the workshop might be affected by personal time, although the workshop will be held in a week without classes. Workshop participants might also be affected by faculty concerns about the benefits of the workshop. Potential solutions to those barriers will be to notify faculty members of the workshop's scheduled time at least one month in advance. Besides, the selection of faculty participation in the workshop will be discussed with the deans. Participants should be those who will be able to arrange their time to attend the workshop. On the other hand, the information about the workshop provided to the faculty members will highlight the workshop topics' practicality and the relevance between the topics to be discussed and faculty professional development. Those tasks will probably be done in conjunction with the regular monthly academic department meetings before the workshop.

In addition, slide presentations and reference materials used for workshop sessions will be all in English and not translated into Vietnamese. That could be an obstacle for some Vietnamese faculty participants who are not fluent in English to gain a deeper understanding of the workshop's topic. However, giving lectures and discussions in Vietnamese might help them overcome that obstacle. In contrast, foreign faculty will have difficulty with lectures in Vietnamese. Therefore, the presentation slides and reference materials will be in English and an interpreter's assistance can somewhat alleviate that obstacle for them. The translation into Vietnamese and English, in case necessary, will be a possible solution to help all participants feel comfortable and participate in the workshop's activities effectively.

Proposal for Implementation and Timetable

The project will be sent to the general education program director in April 2021 for a scheduled workshop for the following summer semester. Once the project is approved, a workshop organizer team will be formed, consisting of myself as the team leader, one Registrar's Office representative, one general education faculty member, and one faculty member from other academic departments. The organizer team will have the first meeting right after the team is established, scheduled for early May 2021, to collaborate in planning the workshop implementation. The workshop implementation plan will cover tasks to be done, such as preparing the rooms and equipment, printing workshop materials, budgeting, collecting a list of participants, and inviting keynote speakers. Each job will be assigned a person in charge and set a deadline. The organizer team will continue to meet bi-weekly until the workshop's date, scheduled for the first week of July 2021. At meetings, the team will review progress perform and handle newly arising jobs.

Roles and Responsibilities

Working closely with faculty and staff is a crucial factor in the success of the workshop. As the workshop organizer, I will be responsible for coordinating the organizer team, preparing documents and slides, inviting keynote speakers and presenters, contacting the general education program director for funding, and serving as a workshop facilitator. The Registrar's Office representative will coordinate with the facility department to prepare rooms, facilities, and tea breaks. Two faculty members will assist me in designing the documents and slides; and will join discussion groups as group

members. Participant engagement during the workshop will be a crucial factor for the workshop's success. Faculty participants will be responsible for attending on time and in full the workshop activities, informing the organizer team in advance of the absence, actively participating in discussions, reading pre-documents, and performing assignments.

Project Evaluation Plan

The type of evaluation planned for the project will be formative and summative evaluation. Formative evaluation will be performed at the end of each session with a short survey using the Likert scale and an open-ended question (Appendix A). This survey will help organizers and presenters to know the satisfaction levels of the participants concerning each session. This data may be used for further refinement for the next session. Summative evaluation will be conducted at the end of the workshop to evaluate the participants' perceptions of the workshop's overall effectiveness using the Likert scale and open-ended questionnaire (Appendix A). The Likert scale questions will measure whether intended workshop goals and learning outcomes were achieved. The open-ended questions will explore the participants' possibilities of transforming learning from workshop to teaching practice. According to Khan et al. (2020), formative evaluation combined with summative evaluation for a faculty development workshop helped maintain the quality of sessions throughout the workshop and evaluate the effectiveness of the workshop against its expected goals and learning outcomes. The workshop evaluation results will be used to improve and develop future faculty development programs. The workshop's evaluation results will be shared with university

administrators, including the board of directors, deans and academic department chairs, and faculty participants, who are key stakeholders. Faculty members participating in the workshop will play essential roles in applying the new teaching strategies they learned from the workshop. University administrators will establish a supportive working environment where faculty members will make improvements in their teaching methods that lead to improving student learning.

Project Implications

This project was designed to help faculty better equip students with general knowledge and skills from the general education program. One of the project's learning outcomes is that faculty participants would be able to apply effective teaching strategies, including conducting activities both inside and outside the classroom according to each subject's requirements. By doing so, faculty will engage students actively in the learning process and motivate them to achieve deep learning and develop skills over the long term. Additionally, the use of student-centered teaching methodologies will also create a positive impact on changing student motivation, attitudes, and learning achievement. The fact that students acquire general knowledge and soft skills through the general education program will contribute to creating high-quality human resources required by society. Students graduating with general education competencies can be potential agents of change in their workplace and the community.

In a broader context, faculty participants can become active actors in sharing their experiences in applying new teaching methods among the faculty community both inside and outside the university. Similar seminars and workshops can be held periodically to

help the faculty community exchange experiences, learn from each other about effective teaching strategies in improving the quality of learning and developing capacity for students, not only in general education subjects but also in specialized subjects and activities outside the classroom. This project can be updated, improved, and used partially or fully to implement faculty professional development programs for other universities in Vietnam. In the context of higher education, Vietnamese universities need substantial and effective changes in teaching methods (Le et al., 2019; Nhung, 2020; Tran, 2019). Therefore, once this project has been successfully implemented in the university, it may actively motivate other universities to conduct faculty development programs in teaching methodologies. The change in teaching methods will be a basic premise in improving the quality of higher education in Vietnam.

Section 4: Reflections and Conclusions

Project Strengths and Limitations

This project has three main strengths. The first is the rich and concise content of the faculty professional workshop. Participants are concisely equipped with closely related knowledge from the concepts, principles, and models of general education to teaching methodologies based on student-centered approach. Those knowledge areas are considered an essential foundation for improving teaching effectiveness and required a faculty professional development workshop (Phuong & McLean, 2016). The second strength of this project is the structure of the interactive sessions. Participants have opportunities to work together in groups, discuss, and share their understanding of workshop topics. Such interactive activities have been seen as essential factors motivating teachers to apply what they learned from the workshop to teaching practice (Iqbal & AlSheikh, 2018). The third strength of this project is its adaptability. Due to the sessions' individual nature, this project can be modified into a series of workshops spanning several weeks or a shorter 1-day or 2-day workshop. In addition, the knowledge contents of the workshop are of fundamental methodological nature. Therefore, universities and academic departments might adopt this workshop based on their specific resources.

Besides the strengths of the project, this project has several limitations. The main limitation is the inconsistent connection between the project's design and the participants' knowledge background. Although the workshop topics range from theoretical foundation to applying best teaching practices, participants who have a

methodological background and teaching experience may not be interested in the workshop's topics. On the other hand, the workshop's concise contents can be challenging for participants with little teaching experience. These participants may need more time to complete the activities and requirements of the workshop. A greater emphasis on promoting experienced participants' role in sharing their experiences and coordinating interaction activities at each session is proposed. Such interactive activities can stimulate the interest of experienced participants to engage in a deeper understanding of topics. Further, experienced participants can effectively assist participants with little experience in understanding the concepts and the fulfillment of workshop requirements.

Another limitation of this project is that it does not evaluate the workshop's impact on enhancing student learning. The project evaluation focuses on assessing the workshop's immediate impact through practical application sessions and summative evaluation. Hence, post-workshop follow-up activities need to be done to ensure successful transfer of learning and student learning improvement.

Recommendations for Alternative Approaches

An alternative approach to address the problem would be designing an online faculty professional development program instead of a 3-day workshop. Through the learning management system, all faculty members would access data resources and share experiences at any time. The program would be designed in modules, including application assignments to help faculty immediately apply their learned knowledge in teaching practice. In addition, monitoring and assessing student progress through the

transfer of learning would be integrated during and after the faculty participate in the online program.

Another alternative approach would be creating a policy position paper. This position paper would provide recommendations to better provide students with skills and broad knowledge through the general education program. The policy position paper would propose solutions to improve faculty teaching capacity and develop a supportive environment for applying effective teaching strategies. In addition, the position paper would also include suggestions for improving the general education curriculum structure and students' awareness of the role of the general education program in their development of broad knowledge and skills.

Scholarship, Project Development, and Leadership and Change

Through this project study, I learned the research requirements, especially the need to ensure the alignment's research design components. I learned how to use the DAT (Design Alignment Tool) to assist in the overall conceptualization of the research plan and ensure the alignment of the problem statement, the purpose of the study, research questions, data collection, data source, and data analysis. Achieving alignment in research design was not easy for me. Completing the DAT approved by the committees was a process of my own hard work and patience and the committees' members' effective support. Once the components of the study design are consistent, the next steps of the research process would be carried out effectively.

Ethical compliance requirements helped me better to understand the researcher's responsibility for the protection of research participants. In addition, I learned how to

research to meet ethical principles. Completing the Protecting Human Research Participants course enabled me to identify solutions to ensure the privacy of research participants' personal information and store data collected during the study securely. Walden University's IRB review process helped me anticipate possible negative impacts on research participants and potential conflicts of interest and have solutions to minimize risks for participants.

The project development helped me to expand my knowledge about approaches to problem-solving. The research findings and the literature review provided me with a solid foundation to develop a faculty development workshop. In addition to selecting useful workshop topics, I planned the resources needed and identified potential barriers and solutions for implementing the project. The project evaluation was also planned to maintain quality throughout the workshop and measure the entire workshop's effectiveness. The project evaluation results might be used for updating and developing other projects in the future.

Reflection on the Importance of the Work

Throughout this study, I recognized a variety of approaches to general education. The effective application of general education concepts and models is a challenge for educators, including administrators, faculty, and staff. Educational activities based on general education require a holistic combination of curriculum development, applying student-centered teaching strategies, and integrating skill development activities, both inside and outside of the classroom, into all curricula. General education activities must be in line with the university's vision and mission and the faculty's competency.

Understanding how faculty, students, and employers feel about equipping students with skills and broad knowledge is vital for developing an effective general education program. Through my research, I explored the diverse faculty's, students', and employers' perspectives of providing skills and broad knowledge for students, which were not examined in the previously published literature on the topic. As a product of this study, the faculty professional development workshop aims to better equip students with broad knowledge and skills. Achieving this goal has important implications for meeting employers' demands for high-quality human resources.

Implications, Applications, and Directions for Future Research

The results of this study open potential opportunities for further studies. This research disclosed the factors that influence the development of students' skills and broad knowledge through the general education program. These factors include teaching and learning methods and the structure of the general education program. Therefore, additional studies may explore in-depth how the factors affect the improvement of broad knowledge and skills for students through the general education program. In addition, further studies can expand the sample size to many universities in different regions in Vietnam. Researching at more universities may lead to different results in faculty's and students' understanding of general education and employers' requirements for graduates' skills and broad knowledge.

This study has implications for social change, including reforming curricula based on general education principles and models and encouraging faculty take to further their professional development activities. A change in faculty members' and leaders'

perceptions of general education requirements and enhancing skills and broad knowledge for students will significantly affect the construction of a supportive environment for teaching methods improvement and curriculum reform. By adopting student-centered teaching methods and integrating general education components into courses, it will be possible to positively impact students' skills and broad knowledge development. Graduates possess such competencies that will bring benefits to their family life and career development and positively impact the community and society.

Conclusion

The findings of this study showed the importance and necessity of equipping students with broad knowledge and skills through the general education program. Faculty highly valued the provision of broad knowledge needed for students' success. Faculty and students perceived that the general education program adequately provided students with skills needed for their personal and professional development in the future. Employers stated that skills and broad knowledge were essential criteria for staff recruitment and were essential for career success. Research findings also indicated problems to be solved in order to improve students' skills and broad knowledge. Based on the research results, a faculty professional development workshop was developed. Through this workshop, participants will be able to apply effective teaching strategies to enhance students' general education competencies, helping them become potential agents to bring about positive change in their working environment and society.

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Appendix A: The Project

Faculty professional development workshop: Effective teaching methodologies for general education program

Purpose: To help faculty members better equip students with broad knowledge and skills of the general education program.

Goals: The goals of the workshop are to:

1. enhance faculty understanding of concepts, principles, and models of general education.
2. provide faculty with effective approaches to teaching general education courses.
3. improve faculty capacity for using teaching methodologies based on student-centered approach.

Learning Outcomes: By the end of the faculty development workshop, participants will be able to:

1. relate the concepts, principles and, models of general education to the development of general education courses
2. explain the basic principles of learning theories that underlie the student-centered methodologies
3. select appropriate teaching methods to achieve course objectives and learning outcomes
4. utilize effective teaching strategies to actively engage students in learning activities

Workshop Duration: Three full days. 09:00 - 12:00 Morning Session and 13:30 - 16:30 Afternoon Session for each day.

Location: Seminar Room, 8th floor, SVU University.

Target Audience: General education program faculty members and major course coordinators.

Workshop Language: Vietnamese and English (translation will be supported).

Course Materials: Slide presentations, handouts, evaluation survey forms, and reference materials will be in English.

Workshop Schedule

Time	Content/Topic	Methodology
Day 1		
09:00 - 09:15	Welcome - Introduction - Rules	Discussion

09:15 - 10:30	**Session 1:** Liberal Education and General Education Concepts	Brain Storming - Discussion - Lecture presentation
10:30 - 10:45	Tea break	
10:45 - 12:00	**Session 2:** General Education Program: Models and Principles	Lecture presentation - Discussion
12:00 - 13:30	Lunch - A nap break	
13:30 - 14:45	**Session 3:** Learning Theories and Student-Centered Approach to Teaching ❖ Lecturer-Centered and Student-Centered Approach to Teaching ❖ Constructivism Learning Theory and Active Learning Methodologies	Discussion - Lecture presentation
14:45 - 15:00	Tea break	
15:00 - 16:10	**Session 3** (cont.) ❖ Experiential learning and Transformative learning methodologies ❖ Experiential learning and Transformative learning theories	Lecture presentation - Group discussion
16:10 - 16:30	Wrap up and Homework	Group discussion
Day 2		
09:00 - 09:15	Welcome and Recap	
09:15 - 10:15	**Session 4:** Typical student-centered teaching methods ❖ Problem-based and Project-based learning ❖ Collaborative, Cooperative and Interactive learning ❖ Flipped classroom	Small Group Discussion and Activity
10:15 - 10:30	Tea break	
10:30 - 12:00	**Session 5:** Typical student-centered teaching methods (cont.)	Small Group Presentation
12:00 - 13:30	Lunch - A nap break	
13:30 - 14:30	**Session 6:** Typical student-centered teaching methods (cont.)	Interactive Review of Session 5/ Lecture

		Presentation - Discussion
14:30 - 14:45	Tea break	
14:45 - 16:15	**Session 7:** Service learning	Lecture Presentation - Discussion - Videos
16:15 - 16:30	Wrap up and Homework	Discussion/ Reflection
Day 3		
09:00 - 09:15	Welcome and Recap	
09:15 - 10:15	**Session 8:** Critical Reflection and Transformative learning	Discussion - Reflection - Lecture Presentation - Video
10:15 - 10:30	Tea break	
10:30 - 12:00	**Session 9:** Practical Application ❖ Panel group discussion	Group Discussion and Activity
12:00 -13:30	Lunch - A nap break	
13:30 - 15:00	**Session 10:** Practical Application (cont.) ❖ Panel group presentation	Presentation - Discussion
15:00 -15:15	Tea break	
15:15 - 16:00	**Session 10 (cont.):** Practical Application (cont.) ❖ Panel group presentation (cont.)	Presentation - Discussion
16:00 - 16:30	Discussion and Wrap Up	Discussion/ Reflection/ Summative Evaluation

Content and Resources

Day 1

09:00 - 09:15

Welcome - Introduction - Rules

* A brief introduction to workshop participants, goals, learning outcomes, and agenda

***** Expectations and Rules:

- Respect for all ideas
- Actively participate in activities, homework, and discussions

- Start on time and keep the schedule
- Fun learning together

09:15 - 10:30

Session 1: Liberal Education and General Education Concepts

* Participants will write a few short sentences describing the concepts of general education and liberal education (5 min.)
* Participants (pioneered or invited) will present their written concepts (10 min.)
* Keynote lecture presentation (40 min.)
    - Liberal education
        - prepare students for complexity, diversity, and change
        - help students develop broad knowledge of science, cultures, history, and society, as well as knowledge and skills important in their chosen specializations
        - emphasize the development of proficiencies that span all fields of study, including social and ethical responsibility, strong intellectual and practical skills
    - General education
        - refer to the part of a liberal education shared by all students
        - provide a platform for fostering proficiencies that span all fields of study
        - provide opportunities for hands-on experience with complex questions and problems
        - help students build the broad and integrative knowledge they need for careers
        - prepare students directly for questions and issues they will confront as citizens in a globally engaged democracy
    - Liberal education and general education - Different concepts?
        - gradually blurred
        - a trend of mutual absorption and integration
        - used more and more interchangeably
        - a lot of similarities
        - shared purposes
            - cultivating broad knowledge
            - developing the powers of the mind
            - fostering ethical and civic or societal responsibility
        - use varied approaches, practices, and cultural traditions to help students achieve the forms of learning
        - not to ‘what’ is taught, but ‘how’ it is taught

- not in its learning outcomes, but in its capacity to apply these to practice and to the person
- to gain an understanding of themselves and the world around them

* Q & A (20 min.)

* Resources

Association of American Colleges and Universities (AAC&U). (2015). *General Education Maps and Markers: Designing Meaningful Pathways to Student Achievement.* Association of American Colleges and Universities.

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10:45 - 12:00

Session 2: General Education Program: Models and Principles

❖ **Models of general education program**

* Keynote lecture presentation (20 min.)
  - Three primary general education models
    - Core model
      - a set of compulsory courses
      - interdisciplinary courses
    - Distribution model
      - based on a wide range of disciplines
      - broad knowledge related to many different fields
      - a set of skills and attitudes
      - the most popular model
    - Competency development model
      - focused on the development of academic competencies and personal growth

- a specially created set of general education objectives
- emphasized the process rather than the specific content

- Integration of models
  - core-distribution model
  - core-distribution-competency model

* Discussion (20 min.)
  - Strengths and weaknesses of models
  - The general education model in SVU

❖ **Principles of Designing General Education Program and Courses**

* Keynote lecture presentation (20 min.)
  - Five factors in designing an effective general education program
    - Institutional specifics
      - mission and identity of the university
      - quality of teaching staff
      - faculty members' understanding of general education
      - student needs
    - Intentionality
      - the cross-institutional and interdepartmental context
      - embedding of the educational priorities of the institutional mission into the overall curriculum design and course design
      - intentionally aim at realizing the goals of general education for activities in and outside the classrooms
    - Coherence
      - societal needs
      - students' engagement
      - a well-structured educational program
      - connecting student's diverse experiences completely
    - Integration
      - general education program and the majors
      - throughout the entire student's learning process in the university
      - applying competencies in a variety of situations with different complexity
    - Innovation
      - thinking outside a set of general education courses
      - a wide variety of innovative educational activities
  - Effective general education course design

- Determining the objectives and learning outcomes of the course
- Aligning the design with the course's purpose
- Aligning the design with general education goals
- Connecting academic and social contexts of students' lives

* Discussion (15 min.)
  - Q & A
  - Link with the current practice

* Resources

Bechtold, J. I. (2017). The idea of calling presented in light of high-impact practices in a general education course and beyond. *Christian Higher Education, 16*(1–2), 79–91. https://doi.org/10.1080/15363759.2017.1249765

Fox, C. R. (2016). A liberal education for the 21st century: Some reflections on general education. *Currents in Teaching & Learning, 8*(2), 5–17. https://www.academia.edu/download/49569574/A_Liberal_Education_for_the_21st_Century.pdf

Hill, L. M., & Wang, D. (2018). Integrating sustainability learning outcomes into a university curriculum. *International Journal of Sustainability in Higher Education, 19*(4), 699-720. https://doi.org/10.1108/IJSHE-06-2017-0087

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13:30 - 14:45

Session 3: Learning Theories and Student-Centered Approach to Teaching

❖ **Lecturer-Centered and Student-Centered Approach to Teaching**

* Discussion (10 min.)
  - Why student-centered learning

* Keynote lecture presentation (15 min.)
  - Lecturer-centered approach to teaching
    - focused on the lecturer's role
    - student's role: passively receiving information
    - passive learning methods: lecturing, speaking, illustrated by image, table.
  - Student-centered approach to teaching
    - focused on student learning process
    - the role of students: autonomy and responsibility for learning

- the role of lecturers: design and facilitate the learning process
- the function of content: contribute to the learning process and acquisition of skills
- the purpose of evaluation: to be a means for students to learn, practice skills, and be given feedback.
- improve students' learning and develop their capacity for thinking and lifelong learning

- Teaching methodologies based on a student-centered approach

❖ **Constructivism Learning Theory and Active Learning Methodologies**

* Keynote lecture presentation (30 min.)

- Constructivism learning theory
  - How people learn
    - through experiencing things and reflecting on those experiences
    - build new knowledge upon the foundation of previous learning
  - Assimilating
    - to incorporate new experiences into the old experiences
    - to develop new outlooks, rethink what were once misunderstandings, and evaluate what is important, ultimately altering their perceptions
  - Accommodation
    - reframing the world and new experiences into the mental capacity already present
    - conceive a particular fashion in which the world operates
    - accommodate and reframing the expectations with the outcomes
  - Constructivist learning environment
    - provide the opportunity for active learning
    - knowledge will be shared between teachers and students
    - lecturers and students will share authority
    - the lecturer's role is one of a facilitator or guide
    - learning groups will consist of small numbers of heterogeneous students
  - Four essential criteria
    - eliciting prior knowledge
    - creating cognitive dissonance
    - applying new knowledge with feedback
    - reflecting on learning or metacognition
- Active Learning Methodologies
  - Concept
    - a variety of teaching methods/teaching strategies

- actively engage students in learning activities
- encourage students in deeper learning and competency development
- associated with constructivism learning theory

▪ A wide variety of teaching methods
- project-based learning
- problem-based learning
- collaborative learning
- cooperative learning
- interactive learning
- group discussions
- inquiry-based learning, etc.
- combinations of teaching methods

* Q & A and Discussion (20 min.)

* Resources

Bada, S. O., & Olusegun, S. (2015). Constructivism learning theory: A paradigm for teaching and learning. *Journal of Research & Method in Education, 5*(6), 66–70. https://doi.org/10.9790/7388-05616670

Borah, R. (2015). Improving teaching-learning in higher education: Constructivist approach to teaching-learning. *Sundries Research Mechanism, 2*(3), 1–7.

Konopka, C. L., Adaime, M. B., & Mosele, P. H. (2015). Active teaching and learning methodologies: Some considerations. *Creative Education, 6*(14), 1536–1545. https://doi.org/10.4236/ce.2015.614154

Trinidad, J. E. (2019). Understanding student-centred learning in higher education: Students' and teachers' perceptions, challenges, and cognitive gaps. *Journal of Further and Higher Education, 44*(8), 1013–1023. https://doi.org/10.1080/0309877X.2019.1636214

15:00 - 16:10

Session 3: Learning Theories and Student-Centered Approach to Teaching (cont.)

❖ **Experiential learning and Transformative learning methodologies**

* Keynote lecture presentation (15 min.)

- Experiential learning methodologies
  - a broad range of teaching methods
    - simulation
    - real-world example-based instruction
    - community project

- case study
- hands-on and real-world group work project
- classroom-based challenge activities
- field trip
- role-playing
- service learning, etc.

- involve students in the learning process
- build knowledge and skills from their direct experience

- Transformative learning methodologies
  - different teaching methods
    - problem-oriented project learning
    - collaborative learning
    - journal assignments
    - free-choice learning
    - discussion
    - debate
    - service learning, etc.
  - focused on guiding students in their meaning making process

❖ **Experiential learning and Transformative learning theories**

* Keynote lecture presentation (40 min.)

- Kolb's experiential learning theory
  - Concept
    - learning as a process of creating knowledge and skills through the transformation of experience
  - Four-stage learning cycle
    - Concrete experience: students actively experimenting with the knowledge obtained.
    - Reflective observation: a process of critical reflection on those experiences from various perspectives.
    - Abstract conceptualization: students develop concepts based on the integration of their reflective observations
    - Active experimentation: students apply those concepts to a new context
  - Students gain knowledge and skills by meaningful transforming experience in a recursive process: experiencing, reflecting, thinking, and acting.
  - Lecturer roles and teaching around the learning cycle
    - Facilitator Role

        - warm affirming style
        - facilitating conversation in small groups
        - creates personal relationships with students
      - Subject Expert Role
        - reflective, authoritative style
        - systematically organizes and analyzes the subject matter knowledge
        - uses lectures and texts
      - Standard-Setter/Evaluator Role
        - objective results-oriented style
        - creates performance activities
        - structures learning evaluations
      - Coaching Role
        - collaborative, encouraging style
        - works one-on-one with students
        - provides feedback and development in the context
  - Mezirow's transformative learning theory
    - Concept
      - the process by which students transform their frames of reference
      - make students more inclusive, discriminating, open, reflective, and emotionally able to change
    - Critical reflection
      - lead to frames of reference transformation
      - instrumental learning: task-oriented skills
      - communicative learning: developing one's own beliefs through reflection.
    - Critical discourse
      - full and free engagement in dialogue
      - focusing on beliefs and assumptions to confirm a best judgement
    - Mezirow's 10 phases of transformative learning
      - Phase 1 - A disorienting dilemma
      - Phase 2 - Self-examination with feelings of fear, anger, guilt, or shame
      - Phase 3 - A critical assessment of assumptions
      - Phase 4 - Recognition that one's discontent and the process of transformation are shared
      - Phase 5 - Exploration of options for new roles, relationships, and actions
      - Phase 6 - Planning a course of action

- Phase 7 - Acquiring knowledge and skills for implementing one's plans
- Phase 8 - Provisional trying of new roles
- Phase 9 - Building competence and self-confidence in new roles and relationships
- Phase 10 - A reintegration into one's life based on conditions dictated by one's new perspective
- ◊ a recursive, spiral, and cumulative process
- ◊ spreads over a period of time

* Q & A and Discussion (15 min.)

* Wrap Up Day 1 and Homework (20 min.)
  - Ask participants to review articles by AAC&U, 2015; Calleja, 2014; Bada and Olusegun, 2015; Kolb and Kolb, 2017; Trinidad, 2019; Wells, 2016.
  - Homework
    - Prepare tomorrow's session 4
    - Split participants into three groups, 10 participants per group, including participants who are teaching broad knowledge courses, teaching skills courses, and major courses
    - Assign each group a topic
      - Problem-based and Project-based learning
      - Collaborative, Cooperative and Interactive learning
      - Flipped classroom
    - Ask participants to complete homework using Moodle Learning Management System (max 1hr): watch videos and read articles.

* Resources

Calleja, C. (2014). Jack Mezirow's conceptualisation of adult transformative learning: A review. *Journal of Adult and Continuing Education, 20*(1), 117–136. https://doi.org/10.7227/JACE.20.1.8

Kolb, A. Y., & Kolb, D. A. (2017). Experiential learning theory as a guide for experiential educators in higher education. *Experiential Learning & Teaching in Higher Education, 1*(1), 7–44. https://nsuworks.nova.edu/elthe/vol1/iss1/7

Kolb, D. A. (2015). *Experiential learning: Experience as the source of learning and development* (2nd ed.). Pearson Education.

Mezirow, J. (2009). An Overview on Transformative Learning. In K. Illeris (Ed.), *Contemporary Theories of Learning: Learning Theorists in their Own Words*, (pp. 90–105). Routledge.

Day 2

09:00 - 09:15
Welcome and Recap

- Overview of Day 2 topics and activities

09:15 - 10:15
Session 4: Typical student-centered teaching methods
* Group discussion

Based on the knowledge learned from the Day 1 homework, each group will discuss and build a slide presentation on the following points:

- The distinction between methods
- For each method
  - Concept
  - Role of lecturer
  - Role of student
  - Implementation Process/Framework/Techniques/Principles
  - Combination of methods
  - Ability to apply in SVU teaching practice

10:30 - 12:00
Session 5: Typical student-centered teaching methods (cont.)
* Group presentation

Each group representative will present their slides to entire workshop participants (20 min.)

Q & A (10 min. for each group)

13:30 - 14:30
Session 6: Typical student-centered teaching methods (cont.)

* Facilitator will compare the presentations of the groups with the prepared keynote lecture to add and/or highlight important content (45 min.)

- **Problem-based learning**
  - Concept
    - Work collaboratively in groups to solve a realistic ill-structured problem

- Focus on the process of learning
- Role of lecturer: facilitator, tutor
- Role of student: self-directed and self-regulated learner
- Two types of problems
  - Strategy problems (or diagnosis-solution problems): to acquire procedural knowledge - PBL as a simulation of professional practice
  - Explanation problems: to acquire declarative knowledge - PBL as mental model construction
- Process
  - Start with a problem
  - Define the problem, and generate hypotheses
  - Gather relevant learning resources - self-direct study
  - Report the findings and apply new knowledge to the problem.
- Variants of the process
  - Five steps
    - Identifying a Question
    - Formulating a Hypothesis
    - Gathering Information
    - Evaluating Hypotheses
    - Generalizing
  - Seven stages
    - Clarification of unknown concepts
    - Formulation of a problem definition
    - Brainstorming on the problem
    - Problem analysis
    - Formulation of learning issues for further self-directed study
    - Gathering relevant literature resources
    - Synthesize the findings in light of the original problem
- Principles
  - Focuses on authentic, challenging, and real-world problems
  - The problem is ill-structured and has multiple solutions (often interdisciplinary)
  - Students work in their groups to solve the problems
  - A tutor or facilitator guides student groups
- Strategies
  - Lecture-based cases
  - Case-based lectures

        - Case method
        - Modified case-based
        - Problem-based
        - Closed-loop problem-based

- **Project-based learning**
    - Concept
        - Work collaboratively in groups to solve authentic problems within real-world practices
        - Focus on creating a product
    - Role of lecturer: Instructor, Coach
    - Role of student: Independent learners, Self-mentor, Project manager
    - Process
        - Start with a challenging problem or driving question
        - Design plans for projects
        - Make a schedule
        - Monitor project progress
        - Assess results
        - Evaluate experience
    - Variants of the process
        - Eight steps
            - Identify a problem/issue/question
            - Explore the problem
            - Do a planning
            - Research the topic
            - Implement the project
            - Develop a final product
            - Disseminate results
            - Evaluate what worked
        - Six stages
            - Preparation
            - Planning
            - Research
            - Conclusions
            - Presentation
            - Evaluation
    - Typical types of projects

        - Task project
        - Discipline project
        - Problem project
    - Principles
        - Cognitive learning approach
            - Problem - Project - Experience - Context
        - Contents approach
            - Interdisciplinary - Exemplary practice - Connection between theory and practice
        - Social approach
            - Team-based learning - Participant-directed learning
    - Similarities
        - Learning activities based on student-centered approach to teaching
        - Emphasizing students' independence, self-direction, inquiry, and collaboration
        - Providing an authentic application of content and skills
        - Focusing on open-ended questions
        - Aiming for a development soft skills
        - Often associated with interdisciplinarity
    - Differences
        - Problem-based learning focusing on learning itself
        - Project-based learning focusing on creating a product

* Resources

Brassler, M., & Dettmers, J. (2017). How to enhance interdisciplinary competence—Interdisciplinary problem-based learning versus interdisciplinary project-based learning. *Interdisciplinary Journal of Problem-Based Learning, 11*(2). https://doi.org/10.7771/1541-5015.1686

Du, X., & Han, J. (2016). A literature review on the definition and process of project-based learning and other relative studies. *Creative Education, 7*(07), 1079–1083. http://dx.doi.org/10.4236/ce.2016.77112

Garcia-Martin, J., & Perez-Martinez, J. E. (2017). Method to guide the design of project based learning activities based on educational theories. *International Journal of Engineering Education, 33*(3), 984–999. https://core.ac.uk/download/pdf/148688888.pdf

Kolmos, A., De Graaff, E., & Du, X. (2009). Diversity of PBL–PBL learning principles and models. In X. Du et al. (Eds). *Research on PBL practice in engineering education* (pp. 9–21). Sense Publishers.

Savery, J. R. (2006). Overview of problem-based learning: Definitions and distinctions. *Interdisciplinary Journal of Problem-Based Learning, 1*(1). 9–20. https://doi.org/10.7771/1541-5015.1002

Suwarno, S., Wahidin, W., & Nur, S. H. (2020). Project-based learning model assisted by worksheet: It's effect on students' creativity and learning outcomes. *JPBI (Jurnal Pendidikan Biologi Indonesia), 6*(1), 113–122. https://doi.org/10.22219/jpbi.v6i1.10619

Wrigley, H. S. (1998). Knowledge in action: The promise of project-based learning. *Focus on Basics, 2*(D), 13–17. http://www.ncsall.net/index.php@id=384.html

- **Cooperative, Collaborative, and Interactive learning**
  - **Cooperative learning**
    - Concept
      - Students working together in a small group
      - Without direct and immediate supervision of the lecturer
      - A wide range of teaching methods/learning activities
      - Promoting academic learning through peer cooperation and communication
    - Principles
      - Suitable group goals
      - Positive interdependence
      - Individual accountability and responsibility
      - Equal participation
      - Face-to-face promotive interaction
    - Strategies
      - Think-Pair-Share
      - Timed Pair Share
      - Three-Step Interview
      - Jigsaw
  - **Collaborative learning**
    - Concept
      - Students work together with the lecturer to develop knowledge
      - Focus on working with each other toward the same goal
    - Role of lecturer
      - Counselor, Guide, Encourager, And Moderator
    - Process
      - Input
      - Exploration

    - Transformation
    - Presentation
    - Reflection
  - Principles
    - High-complexity cognitive tasks
    - Less structured learning process
    - Determining group formation criteria
    - Positive interdependence and Individual accountability
  - Strategies
    - lecture-tutorials worksheet
    - term paper
    - group work and group presentation
    - social talk, exploratory talk, presentational talk, meta-talk (making their talk visible), and critical talk.
    - collaborative project
- **Interactive learning**
  - Concept
    - Establish a supportive, confident and comfortable classroom atmosphere
    - Encourage interactions among students, and between students and lecturer
    - Provide activities and questions for students to think and discuss
  - Process
    - Provide concept questions
    - Think individually
    - Discuss with peers
    - Discuss with the whole class
    - Explain the corresponding concepts
  - Another process
    - Theory
    - Examples
    - Exercise
    - Solution
    - Reflection
  - Strategies
    - ABCD cards
    - Clickers
    - Team-based exercises

- Behavioral modeling
- Case study
- Metaphor game
- Peer feedback
- Storytelling
- Role-playing
- Play projects
- Discussion
- Brainstorming

Resources

Chang, W., Jones, A., & Kunnemeyer, R. (2002). Interactive teaching approach in year one university physics in Taiwan: Implementation and evaluation. *Asia-Pacific Forum on Science Learning and Teaching*, *3*(1), 1–23. https://www.ied.edu.hk/apfslt/download/v3_issue1_files/changwj/changwj.pdf

Chen, W. H. (2017). Cooperative learning in a professional general university geometry course. In J. Vopava, V. Douda, R. Kratochvil, M. Konecki (Eds.), *Proceedings of the Multidisciplinary Academic Conference* (pp. 582–597). MAC Prague consulting s.r.o. http://www.rdi.rmutsb.ac.th/2011/digipro/prague/Prague.pdf

Kandiah, R. (2015, June 14–17). *Connect2U approach to teaching introduction to water resources management as a general education course* [Paper presentation]. ASEE's 122nd Annual Conference & Exposition, Seattle, WA. https://www.asee.org/public/conferences/56/papers/13927/view

Khine, S. M., Nyunt, T. T. S., Maw, A. A., & Min, S. S. (2019, May 24–25). *Effective learning for higher education using Jigsaw approach* [Paper presentation]. Myanmar Universities' Research Conference, Yangon, Myanmar. https://onlineresource.ucsy.edu.mm/handle/123456789/2124

Krusche, S., Seitz, A., Börstler, J., & Bruegge, B. (2017). Interactive learning: Increasing student participation through shorter exercise cycles. *Proceedings of the Nineteenth Australasian Computing Education Conference (ACE), Geelong, Australia, 17–26.* https://doi.org/10.1145/3013499.3013513

LoPresto, M. C., & Slater, T. F. (2016). A new comparison of active learning strategies to traditional lectures for teaching college astronomy. *Journal of Astronomy & Earth Sciences Education (JAESE)*, *3*(1), 59–76. https://doi.org/10.19030/jaese.v3i1.9685

Tran, V. D., Nguyen, T. M. L., De, N. V., Soryaly, C., & Doan, M. N. (2019). Does cooperative learning may enhance the use of students' learning strategies?. *International Journal of Higher Education, 8*(4), 79–88.

https://doi.org/10.5430/ijhe.v8n4p79

Weinberger, Y., & Shonfeld, M. (2018). Students' willingness to practice collaborative learning. *Teaching Education, 31*(2), 127–143. https://doi.org/10.1080/10476210.2018.1508280

Yakovleva, N. O., & Yakovlev, E. V. (2014). Interactive teaching methods in contemporary higher education. *Pacific Science Review, 16*(2), 75–80. https://doi.org/10.1016/j.pscr.2014.08.016

- **Flipped classroom**
  - **Concept**
    - A type of blended learning
    - The inversion of learning process
    - Out-class lectures and collaborative activities before coming to class
    - In-class collaborative and active learning activities
  - **Process**
    - Pre-class
      - Lecturer
        - Develop video lectures/assignments/reading materials
        - Upload the documents to Moodle platform/Facebook/LMS/Drives
      - Students - Individual and/or group
        - Watch videos
        - Reading materials
        - Complete assignments
      - Lecturer-student and student-student interactions
    - In-class
      - Decide problems that will be explored
      - Solve problems independently
      - Distribute exploration activities
      - Evaluate students' achievements
      - Get course evaluation
  - **Variants of the process**
    - Four steps
      - Analysis
        - Analyze the curriculum and the learning content
        - Select suitable contents to implement the flipped classroom
      - Design
        - Design learning outside class activities
        - Design learning inside class activities

- Design learning evaluation and student feedback
- Implementation of the flipped classroom
- Evaluation/Feedback

- Four phases
  - Initiation
    - Define need and goals
    - Estimate time, staff, and financial expenses
    - Identify stakeholders (lecturers, students, institution)
  - Planning
    - Define learning outcomes
    - Identify group of students
    - Inform students in advance
    - Prepare and produce material
    - Choose in-class activities and prepare material
    - Tune in-class and online courses
    - Prepare learning analytics
  - Execution
    - Provide online material
    - Continuous learning assessment
    - Proceed in-class activities
    - Monitor participants and learning success
    - Steer according to students' needs
  - Closing
    - Carry out exams
    - Conduct formative evaluation
    - Conduct summative evaluation
    - Lessons learned

- **Instructional strategies**
  - Out-class
    - Video instruction/ images/ PowerPoint presentations
    - Audio lectures
    - Interactive tutorials
    - Reading materials: text/ reference papers/ search of contents
    - Assignments/ Quizzes
    - Group learning activities: Discussion/ Hand-on activities
    - Take notes/ Write down questions

        - Immediate help/ Feedback
    - In-class
        - Quizzes
        - Clicker Questions
        - Pair-And-Share Activities
        - Student Presentations
        - Group Learning Activities: Discussion/ Talent Show/ Debate
        - Problem-Solving
        - Collaborative Group Work
        - Case studies
        - Questions and answers
        - Gaming
        - Concept mapping
        - Brainstorming
- **Principles**
    - Explicit connections between in-class and out-of-class activities
    - Lecturer-student and student-student interactions both out- and in-class
    - Prompt feedback on individual or group works
    - Clearly defined and well-structured guidance
    - High quality video lectures
    - The length of videos should not be longer than 20 min
    - Enough time for students to carry out the assignments
    - Easy to access out-of-class activities
    - Focus on higher-level cognitive activities for in-class activities
    - Evaluation student understanding

Resources

Akçayır, G., & Akçayır, M. (2018). The flipped classroom: A review of its advantages and challenges. *Computers & Education, 126*(2018), 334–345. https://doi.org/10.1016/j.compedu.2018.07.021

Blömer, L., Droit, A., & Vogelsang, K. (2020). May the change be with you: The need for new roles to support flipped classroom development. In M. Hattingh, M. Matthee, H. Smuts, I. Pappas, Y. Dwivedi & M. Mäntymäki (Eds.), *Responsible design, implementation and use of information and communication technology. I3E 2020. Lecture notes in Computer Science, Vol 12066* (pp. 532–544). Springer. https://doi.org/10.1007/978-3-030-44999-5_44

DeLozier, S. J., & Rhodes, M. G. (2017). Flipped classrooms: A review of key ideas and

recommendations for practice. *Educational Psychology Review, 29*(1), 141–151. https://doi.org/10.1007/s10648-015-9356-9

Nam, N. H., & Giang, V. T. (2017). Flipped classroom model for improving computer skills of students majoring in pedagogy. *Vietnamese Journal of Vocational Education and Training, 51*, 44–49.

Quyen, T. T. T., & Loi, N. V. (2018). Flipped model for improving students' English speaking performance. *Can Tho University Journal of Science, 54*(2), 90–97. https://doi.org/10.22144/ctu.jen.2018.012

Shen, H. Y., Hu, M. Q., Li, M., Dong, X. Y. (2017). Training students' innovative and critical thinking capabilities via flipped classroom strategy - The courses of general chemistry as examples. *Proceedings of 3rd International Conference on Education and Social Development (ICESD 2017), China*, 1–4. https://doi.org/10.12783/dtssehs/icesd2017/11484

Wang, Z. (2014, August). Research on teaching design and application of flipped classroom mode. In L. G. Wang (Ed.) *Proceedings of 2014 2nd International conference on education technology and information system (ICETIS 2014)* (pp. 379–383). Atlantis Press. https://dx.doi.org/10.2991/icetis-14.2014.85

* Q&A - Discussion (15 min.)

14:45 - 16:15

Session 7: Service Learning

* Keynote lecture presentation (45 min.)
    - **Concept**
        - a form of experiential learning/ a way to link course content with real-life communities
        - participate in organized service activities/ social services/ a planned reflection process
        - meet identified community needs/ solve community problems
        - gain further understanding of course content
        - enhance civic responsibility/ lead to transformative learning
    - **Process**
        - Select community partners
        - Identify selected partners' needs
        - Organize workshops to prepare students for service learning
            - Introduction to concepts and practice of service learning
            - Provide students with the background of their service target

        - Provide students skills and knowledge for service design and implementation
    - Students develop detailed service plans and write a reflective journal on what they have learned from the workshops
    - Students implement their service plans
        - Lecturer observe students' service and provide instant feedback and support
        - Daily reflective meeting
    - Organize post-service workshops
        - Reflective journal
        - Group presentation
        - Post-service evaluation
- **Variants of the process**
    - Assign students a service learning activity as a requirement of the course
    - Instruct students to select service learning placement
    - Students submit a detailed service activity plan
    - Students carry out the plan
        - Periodical report
    - Evaluation service learning assignment
- **Reflection - Four Cs principles**
    - Consistent
    - Continuous
    - Challenging
    - Contextualized
- **Types/Models**
    - Service learning capstone course
    - Direct service projects
    - Indirect service projects
    - Community-based research projects
    - Problem-based service learning
    - Research-based service learning
    - International service learning
- **Criteria for course design**
    - Relevant and meaningful service with the community
    - Enhanced academic learning
    - Purposeful civic learning
- **Principles for service learning pedagogy**
    - Focus both academic learning and civic learning on

  - Course objectives
  - Learning outcomes
  - Learning strategies
  - Evaluation of students' learning
- Prepare students for learning from the community
- Establish criteria for the selection of service placements
- Maximize the community responsibility orientation of the course

* View clips "Service learning: Lessons from practice" and "Service learning: Critical Reflection," and discuss as a large group (20-25 min. for each clip)

Resources

Currie-Mueller, J. L., & Littlefield, R. S. (2018). Embracing service learning opportunities: Student perceptions of service learning as an aid to effectively learn course material. *Journal of the Scholarship of Teaching and Learning, 18*(1), 25–42. https://doi.org/10.14434/josotl.v18i1.21356

Deeley, S. J. (2010). Service-learning: Thinking outside the box. *Active Learning in Higher Education, 11*(1), 43–53. https://doi.org/10.1177/1469787409355870

Howard, J. (2001). *Service-learning course design workbook*. OCSL Press, Edward Ginsberg Center for Community Service, The University of Michigan. https://eric.ed.gov/?id=ED457774

Nishimura, M., & Yokote, H. (2020). Service-learning as a means to understand socio-economic privilege, inequality, and social mobility. In C. S. Sanger, & N. W. Gleason (Eds.), *Diversity and Inclusion in Global Higher Education* (pp. 183–207). Palgrave Macmillan.

Pak, C. S. (2020). Exploring the long-term impact of service-learning: Former students of Spanish revisit their community engagement experiences. *Hispania, 103*(1), 67–85. https://doi.org/10.1353/hpn.2020.0004

Yu, L., Shek, D. T. L., & Zhou, X. (2019). *Service-learning as a vehicle to promote student social responsibility. A qualitative study* [Paper presentation]. The 3rd International Conference on Service-Learning, Hong Kong Polytechnic University, Hong Kong. http://hdl.handle.net/10397/81811

* Wrap Up Day 2 and Prepare Day 3 (15 min.)

- **Homework**

Develop best practice teaching strategies to improve on providing students with broad knowledge and skills through the general education course.

- Describe a brief of the selection of teaching strategies (teaching methodologies/methods/activities), including concepts/principles/criteria
- Present a rationale for using the teaching strategies, including course objectives and learning outcomes
- Present the implementation of selected teaching strategies, including steps/phases and teaching and learning activities

Day 3

09:15 - 10:15
Session 8: Critical Reflection in Teaching Practices
* Discussion/Reflection (15 min.)

* Keynote lecture presentation (30 min.)
  - **Concept**
    - critical analysis of knowledge and experience
      a process of questioning one's beliefs, values, and behaviors
      a process of reconstructing and reorganizing experiences
    - deeper meaning and understanding achievement
  - **Criteria**
    - systematic, rigorous, and disciplined way of thinking
    - deeper understanding of relationships and connections with other experiences
    - interaction with others
    - value personal and intellectual growth of oneself and of others.
  - **Models**
    - Iterative model (Schön, 1987)
      - Knowing-in-action
      - Surprise
      - Reflection-in-action
      - Experimentation
      - Reflection-on-action
    - Vertical model (Mezirow, 1991)
      - Habitual action
      - Thoughtful action/Understanding
      - Reflection
      - Critical reflection
  - **Forms and domains of critical reflection**

- Personal reflection
  - Self-inspection
  - Personal reflexivity
  - Self-awareness
  - The ability to represent oneself to oneself
- Interpersonal reflection
  - Interactions with others
  - Group dynamics
  - Team working
- Contextual reflection
  - Questioning the knowledge structures
  - Examining established concepts, theories, and methods
  - An alternative frame of reference
  - Way of thinking had been used
- Critical reflection
  - Examining limitations of thinking/practice
  - Making explicit social/ethical/political issues
  - Questioning issues/ways of thinking

- **Strategies**
  - Reflective essay
  - Journal writing
  - Case studies
  - Action research
  - Practical experience
  - Immersion in diverse cultures
  - Feedback/self-evaluation forms
  - Story writing
  - Reflective interview
  - Peer- or group-discussion
  - Interactive, reflective work
  - Reflective notes
- **Rules of critical reflection learning climate**
  - Confidentiality
  - Respect and acceptance
  - Non-judgementalism
  - Focus on responsibility
  - Openness to other perspectives

Resources

Estes, J. J., Carey, C., Tavares, D., & Del Mar, D. P. (2019). Begin it now: Critical service learning in the first year of college. *The Journal of General Education, 67*(3–4), 178–193. https://doi.org/10.5325/jgeneeduc.67.3–4.0178

Fook, J. (2015). Reflective practice and critical reflection. In J. Lishman (Ed.), *Handbook for practice learning in social work and social care: Knowledge and theory* (pp. 440–454). Jessica Kingsley Publishers. http://ndl.ethernet.edu.et/bitstream/123456789/4932/1/47.pdf.pdf#page=365

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10:30 - 12:00

Session 9: Practical Application

*** Panel group discussion**

- Participants will break up into three panel groups based on course taught: broad knowledge courses, teaching skills courses, and major courses
- Group will discuss the proposed best practice teaching strategies shared by each participant

13:30 - 16:00

Session 10: Practical Application (cont.)

*** Panel group presentation**

- Each group will nominate two participants to present their best practice strategies teaching strategies (30 min. for presentation, and 15 min. for Q&A)

16:00 - 16:30

* Discussion and Wrap Up
    - Discussion/ Reflection
    - Summative Evaluation

Formative Evaluation

Session _____

Thank you for attending the session. Please take a few minutes to complete this survey.

1. The presentation improved my understanding of the topic

① Strongly Disagree ② Disagree ③ Neutral ④ Agree ⑤ Strongly Agree

2. The session was engaging

① Strongly Disagree ② Disagree ③ Neutral ④ Agree ⑤ Strongly Agree

3. The time allotted to the session was adequate

① Strongly Disagree ② Disagree ③ Neutral ④ Agree ⑤ Strongly Agree

4. Resources, materials, and equipment were sufficient

① Strongly Disagree ② Disagree ③ Neutral ④ Agree ⑤ Strongly Agree

What additional comments do you have about the session?

Summative Evaluation

Thank you for attending the workshop. Please take a few minutes to complete this survey.

The workshop helped me improve my understanding of

1. general education and liberal education concepts

① Strongly Disagree ② Disagree ③ Neutral ④ Agree ⑤ Strongly Agree

2. principles and models of the general education program

① Strongly Disagree ② Disagree ③ Neutral ④ Agree ⑤ Strongly Agree

3. fundamental student-centered learning approaches

① Strongly Disagree ② Disagree ③ Neutral ④ Agree ⑤ Strongly Agree

As a result of attending the workshop, I am able to

4. relate the concepts, principles, and models of general education to the development of general education courses

① Strongly Disagree ② Disagree ③ Neutral ④ Agree ⑤ Strongly Agree

5. explain the basic principles of learning theories that underlie the student-centered methodologies

① Strongly Disagree ② Disagree ③ Neutral ④ Agree ⑤ Strongly Agree

6. select appropriate teaching methods to achieve course objectives and learning outcomes

① Strongly Disagree ② Disagree ③ Neutral ④ Agree ⑤ Strongly Agree

7. utilize effective teaching strategies to actively engage students in learning activities

① Strongly Disagree ② Disagree ③ Neutral ④ Agree ⑤ Strongly Agree

How will you apply what you learned from the workshop in order to better equip students with broad knowledge and skills of the general education program?

What additional comments do you have about the workshop?

Appendix B: Student Questionnaire Items

I. Background Information

1. Gender

○ Female	○ Male

2. Year of birth (Choose from the list of 1996 or before, 1997, 1998, 1999 or after)

3. Enrollment Intake (Choose from the list of 2014, 2015, 2016, 2017)

4. How many credits did you gain?

○ 0 - 36 credits	○ 37 - 76 credits	○ 77 - 116 credits	○ > 116 credits

5. What is your current GPA?

○ < 2.0	○ 2.0 - 2.49	○ 2.5 - 3.19	○ 3.2 - 3.59	○ 3.6 - 4.0

6. What is your major?

○ Accounting	○ Information Technology	○ Fashion Design
○ Finance - Banking	○ Software Engineering	○ Graphics Design
○ Business Administration	○ Telecommunications and Computer Networking	○ Interior Design
○ International Business	○ Environment and Natural Resources Management	○ Travel and Tourism Management
○ Marketing	○ Environmental Engineering Technology	○ Hotel Management
○ Human Resource Management	○ Management Information Management	○ Restaurant Management
○ Media Production and Management	○ Applied Mathematics	○ English Studies

7. Which general education courses have you taken (choose one course from each following group)**?**

Methods and Skills Courses Group	**Social Values Courses Group**	**Culture and Ideology Courses Group**
○ N/A	○ N/A	○ N/A
○ Communication skills	○ Professional Ethics	○ Intercultural communication
○ Study skills in higher education	○ Gender and development in Vietnam	○ Psychology – Concepts and Application
○ Critical Thinking	○ Human and the Environment	○ The Vietnamese Diaspora
○ Introduction to research methods	○ History of scientific thoughts	○ Philosophy in practice
○ Vietnamese writing skills	○ Cities and urbanization	○ Mass communication and society
	○ Vietnam in globalization	○ Design Thinking
	○ Informatics and Community	○ World's Art History
	○ Seminars: Vietnamese culture	
	○ Inclusive development and service learning I	
	○ Inclusive development and service learning II	

II. Students' Perceptions

8. When thinking about your participation in general education courses up to now, to what extent do you perceive that the broad knowledge needed for career success, as listed in the categories below, in the left-hand column, have been provided by the general education program?

Please respond with a check mark in the *Very Much, Quite a Bit, Some, Very Little* column.

	Very Much	Quite a Bit	Some	Very Little
1. Professional Ethics				
2. Gender and development in Vietnam				
3. Humans and the Environment				
4. History of scientific thought				
5. Cities and urbanization				
6. Vietnam amidst globalization				
7. Information technologies				
8. Vietnamese culture				
9. Inclusive development				
10. Intercultural communication				
11. Psychology – Concepts and Application				
12. The Vietnamese Diaspora				
13. Philosophy in practice				
14. Mass communication and society				
15. Design Thinking				
16. World's Art History				
17. Research methods				

9. When thinking about your participation in general education courses up to now, to what extent do you perceive that you have gained or made progress in the broad knowledge categories below, in the left-hand column, which are needed for career success?

Please respond with a check mark in the *Very Much, Quite a Bit, Some, Very Little* column.

	Very Much	Quite a Bit	Some	Very Little
1. Professional Ethics				
2. Gender and development in Vietnam				
3. Humans and the Environment				
4. History of scientific thought				
5. Cities and urbanization				
6. Vietnam amidst globalization				
7. Information technologies				
8. Vietnamese culture				
9. Inclusive development				
10. Intercultural communication				
11. Psychology – Concepts and Application				
12. The Vietnamese Diaspora				
13. Philosophy in practice				
14. Mass communication and society				
15. Design Thinking				
16. World’s Art History				
17. Research methods				

10. When thinking about your participation in general education courses up to now, to what extent do you perceive that skills needed for career success, as listed in the categories below, in the left-hand column, have been provided by the general education program?

Please respond with a check mark in the *Very Much, Quite a Bit, Some, Very Little* column.

	Very Much	Quite a Bit	Some	Very Little
1. The ability to effectively communicate orally				
2. The ability to effectively communicate in writing				
3. The ability to work effectively with others in teams				
4. Critical thinking and analytical reasoning skills				
5. The ability to apply knowledge and skills to real-world settings				
6. Ethical judgment and decision-making				
7. The ability to analyze and solve complex problems				
8. The ability to locate, organize, and evaluate information from multiple sources				
9. The ability to innovate and be creative				
10. Foundations and skills for lifelong learning				
11. Proficiency in English				

11. When thinking about your participation in general education courses up to now, to what extent do you perceive that you have gained or made progress in the skills categories below, in the left-hand column, which are needed for career success? Please respond with a check mark in the *Very Much, Quite a Bit, Some, Very Little* column.

	Very Much	Quite a Bit	Some	Very Little
1. The ability to effectively communicate orally				
2. The ability to effectively communicate in writing				
3. The ability to work effectively with others in teams				
4. Critical thinking and analytical reasoning skills				
5. The ability to apply knowledge and skills to real-world settings				
6. Ethical judgment and decision-making				
7. The ability to analyze and solve complex problems				
8. The ability to locate, organize, and evaluate information from multiple sources				
9. The ability to innovate and be creative				
10. Foundations and skills for lifelong learning				
11. Proficiency in English				

Appendix C: Faculty Interview Protocol

Interviewee: Title:
Phone: Email:
Time of Interview: Date: Place:

[Describe the purpose of the research, the interview. Tell the interviewee about the confidentiality of interview data and the duration of the interview]

1. In your perception, what are the most important broad knowledge areas that graduates needed to succeed in careers? Why are they important?
2. What are the most important skills that graduates needed to succeed in careers? Why are they important?
3. In your teaching experiences, how you perceive the broad knowledge provided by the general education program at SVU?
4. How do you perceive the skills provided by the general education program at SVU?
5. How do you evaluate the progress of students in achieving the skills?
6. How would you recommend that SVU help students develop the skills?

Probe:

* Broad knowledge:
  - Professional ethics - Vietnamese culture - Philosophy in practice
  - Psychology: concepts and application
  - Vietnam in globalization - Human and the environment
* Skills:
  - Oral communication - Writing skills - Critical Thinking
  - Problem-solving - Team work - Decision making
  - Applying knowledge and skills to real-world settings
  - Information literacy - Life long learning - Creative thinking
  - Proficiency in English

Probing questions:

Can you explain more about ...?
Can you give me examples of ....?
..., what do you mean?
You mentioned that ... . Did I understand you correctly?

[Thank the interviewee for the cooperation and participation in the interview. Assure them of the confidentiality of their answers and the potential for future interviews]

Appendix D: Employer Interview Protocol

Interviewee: Title: Company:
Phone: Email:
Time of Interview: Date: Place:

[Describe the purpose of the research, the interview. Tell the interviewee about the confidentiality of interview data and the duration of the interview]

1. In your perception, what are the most important broad knowledge areas that graduates needed to succeed in careers? Why are they important?
2. What areas of knowledge do SVU graduates demonstrate best?
3. In your perception, what are the most important skills that graduates needed to succeed in careers? Why are they important?
4. What skills do SVU graduates demonstrate best?
5. What skills needed for the job do SVU graduates lack?
6. How would you recommend that SVU help students develop the skills?

Probe:
* Broad knowledge:
    - Professional ethics - Vietnamese culture - Philosophy in practice
    - Psychology: concepts and application
    - Vietnam in globalization - Human and the environment
* Skills:
    - Oral communication - Writing skills - Critical Thinking
    - Problem-solving - Team work - Decision making
    - Applying knowledge and skills to real-world settings
    - Information literacy - Life long learning - Creative thinking
    - Proficiency in English Probing questions:
    Can you explain more about ...?
    Can you give me examples of ....?
    ..., what do you mean?
    You mentioned that ... . Did I understand you correctly?

[Thank the interviewee for the cooperation and participation in the interview. Assure them of the confidentiality of their answers and the potential for future interviews]

Appendix E: Interview Procedure Checklist

1. _____ Who will participate in your interviews?
2. _____ What types of interviews are best to conduct?
3. _____ Is the setting for your interview comfortable and quiet?
4. _____ If you are audiotaping, have you prepared and tested the equipment?
5. _____ Did you obtain consent from the participants to participate in the interview?
6. _____ Did you listen more and talk less during the interview?
7. _____ Did you probe during the interview? (ask to clarify and elaborate)
8. _____ Did you avoid leading questions and ask open-ended questions?
9. _____ Did you keep participants focused and ask for concrete details?
10. _____ Did you withhold judgments and refrain from debating with participants about their views?
11. _____ Were you courteous and did you thank the participants after concluding the interview?

Source: Creswell, J. W. (2012). *Educational research: Planning, conducting, and evaluating quantitative and qualitative research (Laureate custom ed.).* Boston, MA: Pearson Education.

Appendix F: Codebook for Students' Perceptions

Variable name	Description	Type of variable
Gender	Student gender: 1=Female; 2= Male	Nominal
Age	Year of Birth: 1996 or before, 1997, 1998, 1999 or after	Nominal
Intake	Enrollment intake (2014, 2015, 2016, 2017)	Nominal
CY	College Year: 1= 0-36 crts; 2= 37-76; 3= 77-116; 4= over 116 (1= Freshman; 2= Sophomore; 3 = Junior; 4 = Senior)	Nominal
GPA	1= less than 2.0; 2= 2.0 - 2.49; 3= 2.5 - 3.19 4= 3.2 - 3.59; 5= 3.6 - 4.0 (1= Fail; 2= Average; 3= Good; 4= Very Good; 5= Excellent)	Nominal
Major	1= Accounting; 2= Finance and Banking; 3= Business Administration; ... 21= English Studies	Nominal
GrMajors	1= Economic and Commerce; 2= Technology and Environment; 3= Art and Design; 4= Hospitality; 5= English Studies	Nominal
GE1 ... GE3	General education courses student taken (select a maximum of three courses): 0= not taken; 1= Communication skills; 2= Critical thinking; ...; 23= Design thinking	Nominal
NumGE	Number of GE courses completed: 0; 1; 2; 3	Nominal
Q8.1 to Q8.17	Students' perception of the broad knowledge (1= Very little; 2= Some; 3= Quite a bit; 4= Very much)	Interval
Q9.1 to Q9.17	Students perceived gains in the broad knowledge (1= Very little; 2= Some; 3= Quite a bit; 4= Very much)	Interval
Q10.1 to Q10.11	Students' perception of the skills (1= Very little; 2= Some; 3= Quite a bit; 4= Very much)	Interval
Q11.1 to Q11.11	Students perceived gains in the skills (1= Very little; 2= Some; 3= Quite a bit; 4= Very much)	Interval

Appendix G: Percentages of Student Responses to Each Survey Question Item

Category	Provision				Gain			
	Very much	Quite a bit	Some	Very little	Very much	Quite a bit	Some	Very little
Broad knowledge								
Professional Ethics	18.6	44.4	25.8	11.2	19.0	38.2	27.0	15.8
Gender and development in Vietnam	11.9	37.7	34.4	16.0	13.8	35.1	32.7	18.4
Humans and the Environment	13.2	31.7	37.0	18.1	11.5	32.0	37.7	18.9
History of scientific thought	5.0	24.8	40.3	29.8	5.5	22.4	40.6	31.5
Cities and urbanization	7.6	27.4	37.9	27.0	6.4	26.7	35.1	31.7
Vietnam amidst globalization	11.2	31.0	32.9	24.8	9.5	29.6	32.9	27.9
Information technologies	17.7	34.8	26.5	21.0	12.4	33.2	32.2	22.2
Vietnamese culture	13.6	37.2	27.4	21.7	11.2	34.4	32.2	22.2
Inclusive development	14.1	33.4	30.1	22.4	10.5	30.3	32.7	26.5
Intercultural communication	23.6	36.3	25.1	15.0	17.9	37.0	28.9	16.2
Psychology – Concepts and Application	31.3	38.9	19.8	10.0	27.0	35.1	26.0	11.9
The Vietnamese Diaspora	5.3	25.5	40.8	28.4	6.2	21.5	39.1	33.2
Philosophy in practice	22.2	27.9	30.3	19.6	20.0	24.6	32.2	23.2
Mass communication and society	12.6	33.9	27.2	26.3	10.7	28.9	30.5	29.8
Design Thinking	9.3	32.2	30.3	28.2	8.1	26.5	37.7	27.7
World's Art History	7.6	24.1	36.3	32	7.6	21.2	39.1	32
Research methods	14.6	31.0	31.7	22.7	13.6	28.4	35.1	22.9
Skills								
The ability to effectively communicate orally	30.5	50.4	17.2	1.9	32.7	48.4	18.4	0.5
The ability to effectively communicate in writing	19.3	48.0	28.9	3.8	20.5	45.3	31.5	2.6
The ability to work effectively with others in teams	43.0	43.2	12.9	1.0	41.8	42.0	15.3	1.0
Critical thinking and analytical reasoning skills	28.6	46.1	22.2	3.1	24.8	46.5	26.7	1.9
The ability to apply knowledge and skills to real-world settings	22.0	47.5	26.5	4.1	19.6	48.7	29.1	2.6
Ethical judgment and decision-making	21.5	47.3	26.7	4.5	21.2	45.8	28.6	4.3
The ability to analyze and solve complex problems	20.3	48.2	28.2	3.3	19.8	46.8	30.8	2.6
The ability to locate, organize and evaluate information from multiple sources	26.3	49.9	21.0	2.9	27.2	49.6	20.8	2.4
The ability to innovate and be creative	21.5	43.7	30.5	4.3	18.1	45.8	31.7	4.3
Foundations and skills for lifelong learning	22.4	40.8	31.3	5.5	19.1	41.8	32.9	6.2
Proficiency in English	31.5	34.1	26.7	7.6	30.1	35.8	27.0	7.2

Appendix H: Percentages of Student Responses by College Year to Each Survey Question Item

Item	Scale	Provision				Gain			
		CY1	CY2	CY3	CY4	CY1	CY2	CY3	CY4
		Broad Knowledge							
Professional ethics									
	4	33.3	21.3	13.3	18.8	27.3	21.3	14.0	21.1
	3	39.4	44.4	45.3	44.5	33.3	38.9	41.3	35.2
	2	18.2	25.9	27.3	25.8	27.3	27.8	25.3	28.1
	1	9.1	8.3	14.0	10.9	12.1	12.0	19.3	15.6
Gender and development in Vietnam									
	4	15.2	13.0	9.3	13.3	9.1	15.7	10.7	17.2
	3	36.4	35.2	40.0	37.5	39.4	31.5	38.7	32.8
	2	42.4	36.1	32.7	32.8	42.4	36.1	28.7	32.0
	1	6.1	15.7	18.0	16.4	9.1	16.7	22.0	18.0
Humans and the environment									
	4	21.2	12.0	14.7	10.2	15.2	9.3	10.7	13.3
	3	33.3	31.5	30.0	33.6	42.4	31.5	34.0	27.3
	2	33.3	40.7	39.3	32.0	39.4	40.7	36.7	35.9
	1	12.1	15.7	16.0	24.2	3.0	18.5	18.7	23.4
History of scientific thought									
	4	15.2	6.5	3.3	3.1	15.2	8.3	2.0	4.7
	3	45.5	25.0	22.0	22.7	36.4	23.1	24.7	15.6
	2	21.2	46.3	43.3	36.7	36.4	43.5	38.7	41.4
	1	18.2	22.2	31.3	37.5	12.1	25.0	34.7	38.3
Cities and urbanization									
	4	12.1	8.3	6.7	7.0	15.2	7.4	6.0	3.9
	3	42.4	33.3	28.0	18.0	27.3	29.6	26.7	24.2
	2	33.3	39.8	36.7	39.1	48.5	38.0	34.7	29.7
	1	12.1	18.5	28.7	35.9	9.1	25.0	32.7	42.2
Vietnam amidst globalization									
	4	15.2	12.0	10.0	10.9	18.2	8.3	8.0	10.2
	3	42.4	31.5	31.3	27.3	36.4	32.4	29.3	25.8
	2	27.3	37.0	32.0	32.0	39.4	37.0	31.3	29.7
	1	15.2	19.4	26.7	29.7	6.1	22.2	31.3	34.4
Information technologies									
	4	15.2	20.4	13.3	21.1	9.1	12.0	11.3	14.8

Item	Scale	Provision				Gain			
		CY1	CY2	CY3	CY4	CY1	CY2	CY3	CY4
	3	51.5	36.1	34.7	29.7	42.4	42.6	32.0	24.2
	2	18.2	27.8	30.0	23.4	42.4	30.6	30.0	33.6
	1	15.2	15.7	22.0	25.8	6.1	14.8	26.7	27.3
Vietnamese culture									
	4	21.2	13.0	10.0	16.4	12.1	12.0	8.7	13.3
	3	39.4	39.8	41.3	29.7	39.4	33.3	37.3	30.5
	2	30.3	29.6	25.3	27.3	45.5	36.1	28.7	29.7
	1	9.1	17.6	23.3	26.6	3.0	18.5	25.3	26.6
Inclusive development									
	4	21.2	12.0	12.7	15.6	18.2	9.3	8.0	12.5
	3	36.4	37.0	28.7	35.2	33.3	27.8	34.0	27.3
	2	30.3	31.5	32.7	25.8	39.4	44.4	26.0	28.9
	1	12.1	19.4	26.0	23.4	9.1	18.5	32.0	31.3
Intercultural communication									
	4	18.2	20.4	22.7	28.9	24.2	16.7	13.3	22.7
	3	39.4	38.0	40.0	29.7	27.3	34.3	46.0	31.3
	2	27.3	26.9	23.3	25.0	42.4	31.5	24.0	28.9
	1	15.2	14.8	14.0	16.4	6.1	17.6	16.7	17.2
Psychology – Concepts and Application									
	4	27.3	35.2	26.7	34.4	21.2	29.6	24.0	29.7
	3	48.5	42.6	34.0	39.1	33.3	37.0	36.0	32.8
	2	12.1	17.6	26.7	15.6	39.4	25.0	27.3	21.9
	1	12.1	4.6	12.7	10.9	6.1	8.3	12.7	15.6
The Vietnamese diaspora									
	4	9.1	6.5	4.7	3.9	12.1	8.3	4.7	4.7
	3	30.3	26.9	26.7	21.9	18.2	21.3	24.7	18.8
	2	45.5	45.4	37.3	39.8	60.6	44.4	34.7	34.4
	1	15.2	21.3	31.3	34.4	9.1	25.9	36.0	42.2
Philosophy in practice									
	4	24.2	13.9	24.7	25.8	24.2	13.9	20.0	24.2
	3	30.3	29.6	28.7	25.0	30.3	25.9	21.3	25.8
	2	33.3	36.1	26.0	29.7	36.4	38.0	30.0	28.9
	1	12.1	20.4	20.7	19.5	9.1	22.2	28.7	21.1
Mass communication and society									
	4	12.1	15.7	11.3	11.7	15.2	13.9	7.3	10.9
	3	51.5	33.3	32.7	31.3	33.3	28.7	32.7	23.4
	2	24.2	27.8	28.7	25.8	42.4	33.3	25.3	31.3
	1	12.1	23.1	27.3	31.3	9.1	24.1	34.7	34.4

Item	Scale	Provision				Gain			
		CY1	CY2	CY3	CY4	CY1	CY2	CY3	CY4
Design thinking									
	4	12.1	13.0	6.0	9.4	15.2	9.3	6.0	7.8
	3	42.4	38.9	28.7	28.1	30.3	29.6	27.3	21.9
	2	27.3	25.0	33.3	32.0	45.5	39.8	32.7	39.8
	1	18.2	23.1	32.0	30.5	9.1	21.3	34.0	30.5
World's art history									
	4	9.1	11.1	6.0	6.3	9.1	11.1	5.3	7.0
	3	39.4	25.0	21.3	22.7	33.3	19.4	22.7	18.0
	2	33.3	38.9	38.0	32.8	39.4	41.7	37.3	39.1
	1	18.2	25.0	34.7	38.3	18.2	27.8	34.7	35.9
Research methods									
	4	18.2	14.8	12.0	16.4	24.2	13.0	10.7	14.8
	3	39.4	28.7	36.0	25.0	21.2	25.9	35.3	24.2
	2	24.2	38.0	29.3	31.3	42.4	38.9	30.7	35.2
	1	18.2	18.5	22.7	27.3	12.1	22.2	23.3	25.8
					Skills				
The ability to effectively communicate orally	4	39.4	30.6	26.7	32.8	42.4	29.6	33.3	32.0
	3	39.4	48.1	57.3	46.9	39.4	49.1	51.3	46.9
	2	21.2	18.5	14.7	18.0	18.2	21.3	15.3	19.5
	1	0.0	2.8	1.3	2.3	0.0	0.0	0.0	1.6
The ability to effectively communicate in writing	4	24.2	16.7	15.3	25.0	30.3	14.8	18.0	25.8
	3	60.6	50.9	48.7	41.4	45.5	49.1	48.0	39.1
	2	15.2	28.7	33.3	27.3	24.2	33.3	32.0	31.3
	1	0.0	3.7	2.7	6.3	0.0	2.8	2.0	3.9
The ability to work effectively with others in teams	4	45.5	42.6	42.7	43.0	39.4	34.3	46.0	43.8
	3	36.4	41.7	44.7	44.5	39.4	45.4	40.0	42.2
	2	15.2	14.8	11.3	12.5	18.2	18.5	14.0	13.3
	1	3.0	0.9	1.3	0.0	3.0	1.9	0.0	0.8
Critical thinking and analytical reasoning skills	4	48.5	26.9	23.3	31.3	42.4	20.4	21.3	28.1
	3	36.4	47.2	52.0	40.6	36.4	48.1	49.3	44.5
	2	15.2	25.0	20.0	24.2	21.2	29.6	27.3	25.0
	1	0.0	0.9	4.7	3.9	0.0	1.9	2.0	2.3
	4	33.3	21.3	16.0	26.6	21.2	18.5	16.0	24.2

Item	Scale	Provision				Gain			
		CY1	CY2	CY3	CY4	CY1	CY2	CY3	CY4
The ability to apply knowledge and skills to real-world settings	3	45.5	44.4	52.7	44.5	54.5	42.6	53.3	46.9
	2	18.2	28.7	27.3	25.8	18.2	36.1	28.7	26.6
	1	3.0	5.6	4.0	3.1	6.1	2.8	2.0	2.3
Ethical judgment and decision-making	4	30.3	21.3	18.0	23.4	33.3	20.4	17.3	23.4
	3	45.5	46.3	48.7	46.9	33.3	43.5	46.0	50.8
	2	24.2	27.8	28.7	24.2	30.3	31.5	32.7	21.1
	1	0.0	4.6	4.7	5.5	3.0	4.6	4.0	4.7
The ability to analyze and solve complex problems	4	21.2	23.1	16.0	22.7	27.3	22.2	16.0	20.3
	3	51.5	44.4	50.0	48.4	36.4	41.7	50.0	50.0
	2	24.2	30.6	29.3	25.8	33.3	35.2	31.3	25.8
	1	3.0	1.9	4.7	3.1	3.0	0.9	2.7	3.9
The ability to locate, organize, and evaluate information from multiple sources	4	30.3	25.9	23.3	28.9	39.4	25.0	25.3	28.1
	3	45.5	50.9	53.3	46.1	42.4	47.2	52.7	50.0
	2	21.2	21.3	21.3	20.3	15.2	26.9	20.0	18.0
	1	3.0	1.9	2.0	4.7	3.0	0.9	2.0	3.9
The ability to innovate and be creative	4	27.3	22.2	19.3	21.9	24.2	20.4	15.3	18.0
	3	42.4	43.5	47.3	39.8	48.5	45.4	48.0	43.0
	2	27.3	30.6	30.0	32.0	21.2	31.5	34.7	31.3
	1	3.0	3.7	3.3	6.3	6.1	2.8	2.0	7.8
Foundations and skills for lifelong learning	4	39.4	25.0	17.3	21.9	33.3	19.4	15.3	19.5
	3	30.3	38.0	42.0	44.5	33.3	45.4	38.0	45.3
	2	24.2	33.3	36.0	25.8	27.3	28.7	42.0	27.3
	1	6.1	3.7	4.7	7.8	6.1	6.5	4.7	7.8
Proficiency in English	4	36.4	32.4	35.3	25.0	42.4	30.6	32.7	23.4
	3	27.3	39.8	31.3	34.4	21.2	39.8	32.7	39.8
	2	36.4	25.0	23.3	29.7	30.3	26.9	26.0	27.3
	1	0.0	2.8	10.0	10.9	6.1	2.8	8.7	9.4

Note. CY1 = Freshmen; CY2 = Sophomores; CY3 = Juniors; CY4 = Seniors; Scale: 4- Very much, 3- Quite a bit, 2- Some, 1- Very little.

Appendix I: Percentages of Student "Very much" or "Quite a bit" Responses by Major Field to Each Survey Question Item

Categories	Scale	Provision					Gain				
		Mj1	Mj2	Mj3	Mj4	Mj5	Mj1	Mj2	Mj3	Mj4	Mj5
		Broad Knowledge									
Professional ethics											
	4	19.5	14.8	16.7	13.6	21.6	20.0	22.2	8.3	10.6	24.5
	3	43.0	63.0	37.5	45.5	43.1	39.5	40.7	37.5	40.9	33.3
	2	28.0	22.2	25.0	22.7	24.5	27.0	29.6	20.8	27.3	27.5
	1	9.5	0.0	20.8	18.2	10.8	13.5	7.4	33.3	21.2	14.7
Gender and development in Vietnam	4	11.0	11.1	12.5	7.6	16.7	12.0	11.1	25.0	7.6	19.6
	3	39.5	25.9	50.0	47.0	28.4	38.5	25.9	33.3	36.4	30.4
	2	36.0	51.9	16.7	28.8	34.3	32.5	44.4	25.0	37.9	28.4
	1	13.5	11.1	20.8	16.7	20.6	17.0	18.5	16.7	18.2	21.6
Humans and the environment											
	4	9.5	18.5	20.8	16.7	14.7	10.5	11.1	8.3	13.6	12.7
	3	32.5	33.3	25.0	37.9	27.5	30.0	40.7	20.8	40.9	30.4
	2	40.5	37.0	29.2	31.8	35.3	40.5	33.3	45.8	33.3	34.3
	1	17.5	11.1	25.0	13.6	22.5	19.0	14.8	25.0	12.1	22.5
History of scientific thought											
	4	4.0	3.7	12.5	6.1	4.9	5.0	7.4	8.3	4.5	5.9
	3	22.0	37.0	12.5	24.2	30.4	21.0	37.0	12.5	22.7	23.5
	2	46.5	44.4	29.2	39.4	30.4	43.5	37.0	37.5	45.5	33.3
	1	27.5	14.8	45.8	30.3	34.3	30.5	18.5	41.7	27.3	37.3
Cities and urbanization											
	4	7.5	3.7	8.3	6.1	9.8	5.5	7.4	8.3	6.1	7.8
	3	25.0	33.3	25.0	30.3	29.4	30.0	25.9	20.8	19.7	26.5
	2	43.5	48.1	25.0	34.8	29.4	37.0	48.1	20.8	43.9	25.5
	1	24.0	14.8	41.7	28.8	31.4	27.5	18.5	50.0	30.3	40.2
Vietnam amidst globalization											
	4	11.5	7.4	8.3	10.6	12.7	11.0	7.4	4.2	3.0	12.7
	3	33.0	33.3	29.2	31.8	26.5	30.0	33.3	25.0	30.3	28.4
	2	36.0	44.4	20.8	27.3	30.4	35.0	37.0	29.2	37.9	25.5
	1	19.5	14.8	41.7	30.3	30.4	24.0	22.2	41.7	28.8	33.3
Information technologies											
	4	17.0	48.1	16.7	6.1	18.6	13.0	37.0	4.2	4.5	11.8
	3	39.5	25.9	25.0	36.4	29.4	33.5	37.0	20.8	33.3	34.3
	2	26.0	22.2	25.0	28.8	27.5	33.5	25.9	37.5	36.4	27.5

Categories	Scale	Provision					Gain				
		Mj1	Mj2	Mj3	Mj4	Mj5	Mj1	Mj2	Mj3	Mj4	Mj5
	1	17.5	3.7	33.3	28.8	24.5	20.0	0.0	37.5	25.8	26.5
Vietnamese culture											
	4	12.0	11.1	8.3	16.7	16.7	10.0	14.8	4.2	10.6	14.7
	3	36.5	33.3	37.5	34.8	41.2	32.0	33.3	41.7	36.4	36.3
	2	32.5	40.7	16.7	16.7	23.5	36.0	37.0	29.2	25.8	28.4
	1	19.0	14.8	37.5	31.8	18.6	22.0	14.8	25.0	27.3	20.6
Inclusive development											
	4	12.5	14.8	16.7	16.7	14.7	8.5	18.5	16.7	7.6	12.7
	3	35.5	29.6	25.0	37.9	29.4	31.0	22.2	45.8	31.8	26.5
	2	33.5	40.7	29.2	16.7	29.4	35.5	40.7	12.5	33.3	29.4
	1	18.5	14.8	29.2	28.8	26.5	25.0	18.5	25.0	27.3	31.4
Intercultural communication											
	4	17.5	14.8	33.3	31.8	30.4	13.5	18.5	29.2	16.7	24.5
	3	37.5	37.0	25.0	47.0	29.4	35.0	33.3	20.8	57.6	32.4
	2	27.5	40.7	16.7	18.2	22.5	33.0	37.0	29.2	19.7	24.5
	1	17.5	7.4	25.0	3.0	17.6	18.5	11.1	20.8	6.1	18.6
Psychology – Concepts and Application											
	4	30.5	22.2	37.5	24.2	38.2	28.0	29.6	25.0	15.2	32.4
	3	45.0	37.0	29.2	28.8	36.3	38.5	37.0	29.2	30.3	32.4
	2	18.5	22.2	12.5	28.8	17.6	26.0	18.5	29.2	34.8	21.6
	1	6.0	18.5	20.8	18.2	7.8	7.5	14.8	16.7	19.7	13.7
The Vietnamese diaspora											
	4	2.5	7.4	8.3	7.6	7.8	4.0	11.1	8.3	0.0	12.7
	3	26.0	29.6	8.3	25.8	27.5	24.0	22.2	12.5	24.2	16.7
	2	46.0	48.1	41.7	34.8	32.4	39.5	44.4	41.7	42.4	34.3
	1	25.5	14.8	41.7	31.8	32.4	32.5	22.2	37.5	33.3	36.3
Philosophy in practice											
	4	23.0	25.9	25.0	15.2	23.5	22.0	18.5	16.7	12.1	22.5
	3	27.0	37.0	25.0	22.7	31.4	24.0	29.6	20.8	25.8	24.5
	2	35.0	33.3	16.7	28.8	24.5	33.5	44.4	37.5	31.8	25.5
	1	15.0	3.7	33.3	33.3	20.6	20.5	7.4	25.0	30.3	27.5
Mass communication and society											
	4	7.0	14.8	25.0	13.6	19.6	6.0	14.8	29.2	6.1	17.6
	3	37.0	33.3	29.2	28.8	32.4	29.0	18.5	29.2	36.4	26.5
	2	31.5	40.7	8.3	27.3	19.6	37.0	44.4	16.7	25.8	20.6
	1	24.5	11.1	37.5	30.3	28.4	28.0	22.2	25.0	31.8	35.3
Design thinking											
	4	4.5	14.8	37.5	7.6	11.8	6.5	14.8	25.0	3.0	8.8
	3	32.5	40.7	37.5	28.8	30.4	21.5	37.0	54.2	31.8	23.5
	2	34.0	29.6	16.7	27.3	28.4	44.0	33.3	8.3	37.9	33.3
	1	29.0	14.8	8.3	36.4	29.4	28.0	14.8	12.5	27.3	34.3
World’s art history											

Categories	Scale	Provision					Gain				
		Mj1	Mj2	Mj3	Mj4	Mj5	Mj1	Mj2	Mj3	Mj4	Mj5
	4	4.5	7.4	41.7	3.0	8.8	6.0	7.4	41.7	1.5	6.9
	3	20.5	22.2	45.8	25.8	25.5	15.0	29.6	54.2	24.2	21.6
	2	41.5	44.4	0.0	31.8	35.3	44.0	37.0	0.0	42.4	37.3
	1	33.5	25.9	12.5	39.4	30.4	35.0	25.9	4.2	31.8	34.3
Research methods											
	4	9.5	7.4	8.3	22.7	22.5	8.5	11.1	12.5	18.2	21.6
	3	32.5	33.3	16.7	34.8	28.4	28.0	29.6	20.8	39.4	23.5
	2	34.0	48.1	29.2	25.8	27.5	38.5	40.7	25.0	28.8	33.3
	1	24.0	11.1	45.8	16.7	21.6	25.0	18.5	41.7	13.6	21.6
						Skills					
The ability to effectively communicate orally	4	30.0	22.2	16.7	28.8	38.2	30.0	22.2	41.7	30.3	40.2
	3	49.0	70.4	70.8	45.5	46.1	50.0	63.0	50.0	47.0	42.2
	2	19.5	7.4	8.3	22.7	13.7	20.0	14.8	4.2	22.7	16.7
	1	1.5	0.0	4.2	3.0	2.0	0.0	0.0	4.2	0.0	1.0
The ability to effectively communicate in writing	4	20.0	7.4	20.8	12.1	25.5	18.5	11.1	20.8	15.2	30.4
	3	48.0	70.4	29.2	37.9	52.9	50.0	40.7	37.5	39.4	43.1
	2	28.0	22.2	45.8	47.0	16.7	28.5	48.1	37.5	42.4	24.5
	1	4.0	0.0	4.2	3.0	4.9	3.0	0.0	4.2	3.0	2.0
The ability to work effectively with others in teams	4	40.5	40.7	50.0	43.9	46.1	36.5	29.6	58.3	45.5	49.0
	3	45.5	40.7	33.3	39.4	44.1	45.5	44.4	29.2	34.8	42.2
	2	14.0	18.5	12.5	13.6	8.8	17.0	22.2	12.5	19.7	7.8
	1	0.0	0.0	4.2	3.0	1.0	1.0	3.7	0.0	0.0	1.0
Critical thinking and analytical reasoning skills	4	28.0	22.2	33.3	16.7	38.2	22.5	11.1	29.2	18.2	36.3
	3	41.5	51.9	45.8	48.5	52.0	45.0	59.3	58.3	45.5	44.1
	2	27.5	25.9	16.7	28.8	7.8	30.5	25.9	12.5	34.8	17.6
	1	3.0	0.0	4.2	6.1	2.0	2.0	3.7	0.0	1.5	2.0
The ability to apply knowledge and skills to real-world settings	4	22.0	22.2	25.0	10.6	28.4	18.0	18.5	12.5	16.7	26.5
	3	47.0	40.7	50.0	51.5	47.1	49.0	29.6	62.5	50.0	49.0
	2	28.5	25.9	20.8	31.8	20.6	31.0	48.1	16.7	31.8	21.6
	1	2.5	11.1	4.2	6.1	3.9	2.0	3.7	8.3	1.5	2.9
Ethical judgment and decision-making	4	20.5	22.2	29.2	15.2	25.5	19.5	14.8	16.7	19.7	28.4
	3	47.0	44.4	41.7	50.0	48.0	46.0	48.1	45.8	47.0	44.1
	2	30.0	25.9	20.8	28.8	20.6	29.5	29.6	29.2	30.3	25.5
	1	2.5	7.4	8.3	6.1	5.9	5.0	7.4	8.3	3.0	2.0

Categories	Scale	Provision					Gain				
		Mj1	Mj2	Mj3	Mj4	Mj5	Mj1	Mj2	Mj3	Mj4	Mj5
The ability to analyze and solve complex problems	4	18.0	14.8	25.0	19.7	25.5	19.5	11.1	20.8	15.2	25.5
	3	50.0	48.1	62.5	42.4	45.1	44.0	48.1	58.3	51.5	46.1
	2	30.0	33.3	12.5	31.8	24.5	34.0	33.3	20.8	31.8	25.5
	1	2.0	3.7	0.0	6.1	4.9	2.5	7.4	0.0	1.5	2.9
The ability to locate, organize, and evaluate information from multiple sources	4	25.5	14.8	37.5	18.2	33.3	25.0	22.2	37.5	22.7	33.3
	3	49.5	70.4	33.3	51.5	48.0	51.0	55.6	45.8	36.4	54.9
	2	22.5	7.4	29.2	28.8	14.7	21.0	18.5	16.7	37.9	10.8
	1	2.5	7.4	0.0	1.5	3.9	3.0	3.7	0.0	3.0	1.0
The ability to innovate and be creative	4	20.0	18.5	33.3	13.6	27.5	14.5	18.5	37.5	12.1	24.5
	3	44.5	37.0	41.7	48.5	41.2	46.0	48.1	33.3	50.0	45.1
	2	33.0	33.3	16.7	34.8	25.5	36.5	29.6	12.5	34.8	25.5
	1	2.5	11.1	8.3	3.0	5.9	3.0	3.7	16.7	3.0	4.9
Foundations and skills for lifelong learning	4	20.0	18.5	29.2	19.7	28.4	17.0	14.8	20.8	16.7	25.5
	3	43.5	44.4	25.0	39.4	39.2	45.5	37.0	33.3	37.9	40.2
	2	31.0	33.3	37.5	37.9	25.5	29.0	48.1	33.3	42.4	30.4
	1	5.5	3.7	8.3	3.0	6.9	8.5	0.0	12.5	3.0	3.9
Proficiency in English	4	27.5	22.2	33.3	27.3	44.1	22.0	18.5	37.5	34.8	44.1
	3	34.5	33.3	33.3	33.3	34.3	41.0	37.0	25.0	27.3	33.3
	2	32.5	33.3	25.0	27.3	13.7	30.5	33.3	25.0	30.3	16.7
	1	5.5	11.1	8.3	12.1	7.8	6.5	11.1	12.5	7.6	5.9

Note. Mj1 = Economics and Commerce; Mj2= Technology and Environment; Mj3= Art and Design; Mj4= Hospitality; Mj5= English studies. Scale: 4- Very much, 3- Quite a bit, 2- Some, 1- Very little.

Appendix J: Percentages of Student "Very much" or "Quite a bit" Responses by General Education Course Taken to Each Survey Question Item

Categories	Scale	Provision			Gain		
		GE1	GE2	GY3	GE1	GE2	GY3
		Broad Knowledge					
Professional ethics							
	4	11.1	17.0	19.0	22.2	19.1	19.0
	3	66.7	38.3	44.6	33.3	29.8	39.4
	2	22.2	31.9	25.1	44.4	38.3	25.1
	1	0.0	12.8	11.3	0.0	12.8	16.5
Gender and development in Vietnam							
	4	0.0	14.9	11.8	0.0	17.0	13.8
	3	55.6	29.8	38.3	33.3	27.7	36.1
	2	44.4	40.4	33.3	66.7	42.6	30.6
	1	0.0	14.9	16.5	0.0	12.8	19.6
Humans and the environment							
	4	22.2	8.5	13.5	0.0	6.4	12.4
	3	33.3	34.0	31.4	33.3	31.9	32.0
	2	44.4	40.4	36.4	66.7	46.8	35.8
	1	0.0	17.0	18.7	0.0	14.9	19.8
History of scientific thought							
	4	11.1	6.4	4.7	11.1	6.4	5.2
	3	44.4	27.7	24.0	22.2	25.5	22.0
	2	44.4	42.6	39.9	66.7	44.7	39.4
	1	0.0	23.4	31.4	0.0	23.4	33.3
Cities and urbanization							
	4	11.1	6.4	7.7	11.1	6.4	6.3
	3	44.4	36.2	25.9	22.2	25.5	27.0
	2	44.4	40.4	37.5	66.7	48.9	32.5
	1	0.0	17.0	28.9	0.0	19.1	34.2
Vietnam amidst globalization							
	4	11.1	8.5	11.6	11.1	8.5	9.6
	3	44.4	34.0	30.3	22.2	29.8	29.8
	2	44.4	38.3	32.0	66.7	44.7	30.6
	1	0.0	19.1	26.2	0.0	17.0	30.0
Information technologies							
	4	22.2	12.8	18.2	0.0	14.9	12.4

Categories	Scale	Provision			Gain		
		GE1	GE2	GY3	GE1	GE2	GY3
	3	55.6	40.4	33.6	66.7	29.8	32.8
	2	22.2	31.9	25.9	33.3	42.6	30.9
	1	0.0	14.9	22.3	0.0	12.8	24.0
Vietnamese culture							
	4	0.0	19.1	13.2	0.0	10.6	11.6
	3	55.6	25.5	38.3	44.4	25.5	35.3
	2	44.4	38.3	25.6	55.6	46.8	29.8
	1	0.0	17.0	22.9	0.0	17.0	23.4
Inclusive development							
	4	11.1	12.8	14.3	11.1	10.6	10.5
	3	44.4	36.2	32.8	33.3	27.7	30.6
	2	44.4	34.0	29.2	55.6	46.8	30.3
	1	0.0	17.0	23.7	0.0	14.9	28.7
Intercultural communication							
	4	22.2	10.6	25.3	22.2	10.6	18.7
	3	44.4	46.8	34.7	44.4	29.8	37.7
	2	33.3	27.7	24.5	33.3	46.8	26.4
	1	0.0	14.9	15.4	0.0	12.8	17.1
Psychology – Concepts and Application							
	4	55.6	14.9	32.8	22.2	17.0	28.4
	3	33.3	53.2	37.2	33.3	38.3	34.7
	2	11.1	19.1	20.1	44.4	38.3	24.0
	1	0.0	12.8	9.9	0.0	6.4	12.9
The Vietnamese diaspora							
	4	33.3	2.1	5.0	11.1	2.1	6.6
	3	22.2	27.7	25.3	33.3	14.9	22.0
	2	44.4	51.1	39.4	55.6	61.7	35.8
	1	0.0	19.1	30.3	0.0	21.3	35.5
Philosophy in practice							
	4	22.2	14.9	23.1	11.1	12.8	21.2
	3	22.2	34.0	27.3	22.2	25.5	24.5
	2	55.6	31.9	29.5	66.7	40.4	30.3
	1	0.0	19.1	20.1	0.0	21.3	24.0
Mass communication and society							
	4	11.1	10.6	12.9	22.2	6.4	11.0
	3	55.6	38.3	32.8	33.3	21.3	29.8
	2	33.3	29.8	26.7	44.4	53.2	27.3
	1	0.0	21.3	27.5	0.0	19.1	32.0

Categories	Scale	Provision			Gain		
		GE1	GE2	GY3	GE1	GE2	GY3
Design thinking							
	4	22.2	12.8	8.5	11.1	8.5	8.0
	3	55.6	36.2	31.1	33.3	29.8	25.9
	2	22.2	27.7	30.9	55.6	42.6	36.6
	1	0.0	23.4	29.5	0.0	19.1	29.5
World's art history							
	4	11.1	8.5	7.4	11.1	6.4	7.7
	3	33.3	31.9	22.9	22.2	25.5	20.7
	2	44.4	36.2	36.1	66.7	46.8	37.5
	1	11.1	23.4	33.6	0.0	21.3	34.2
Research methods							
	4	0.0	8.5	15.7	22.2	10.6	13.8
	3	66.7	40.4	28.9	22.2	27.7	28.7
	2	33.3	29.8	32.0	55.6	42.6	33.6
	1	0.0	21.3	23.4	0.0	19.1	24.0
				Skills			
The ability to effectively communicate orally							
	4	22.2	27.7	31.1	33.3	29.8	33.1
	3	55.6	44.7	51.0	44.4	40.4	49.6
	2	22.2	27.7	15.7	22.2	29.8	16.8
	1	0.0	0.0	2.2	0.0	0.0	0.6
The ability to effectively communicate in writing							
	4	33.3	21.3	18.7	11.1	14.9	21.5
	3	44.4	40.4	49.0	44.4	40.4	46.0
	2	22.2	36.2	28.1	44.4	42.6	29.8
	1	0.0	2.1	4.1	0.0	2.1	2.8
The ability to work effectively with others in teams							
	4	44.4	36.2	43.8	44.4	27.7	43.5
	3	33.3	38.3	44.1	33.3	38.3	42.7
	2	22.2	25.5	11.0	22.2	34.0	12.7
	1	0.0	0.0	1.1	0.0	0.0	1.1
Critical thinking and analytical reasoning skills							
	4	22.2	27.7	28.9	22.2	19.1	25.6
	3	55.6	36.2	47.1	33.3	42.6	47.4
	2	22.2	36.2	20.4	44.4	36.2	25.1
	1	0.0	0.0	3.6	0.0	2.1	1.9
	4	33.3	19.1	22.0	22.2	17.0	19.8

Categories	Scale	Provision			Gain		
		GE1	GE2	GY3	GE1	GE2	GY3
The ability to apply knowledge and skills to real-world settings	3	22.2	34.0	49.9	44.4	36.2	50.4
	2	33.3	44.7	24.0	22.2	44.7	27.3
	1	11.1	2.1	4.1	11.1	2.1	2.5
Ethical judgment and decision-making	4	33.3	27.7	20.4	22.2	12.8	22.3
	3	33.3	29.8	49.9	44.4	34.0	47.4
	2	33.3	40.4	24.8	22.2	48.9	26.2
	1	0.0	2.1	5.0	11.1	4.3	4.1
The ability to analyze and solve complex problems	4	33.3	17.0	20.4	22.2	12.8	20.7
	3	33.3	42.6	49.3	44.4	34.0	48.5
	2	33.3	40.4	26.4	33.3	53.2	27.8
	1	0.0	0.0	3.9	0.0	0.0	3.0
The ability to locate, organize, and evaluate information from multiple sources	4	33.3	17.0	27.3	44.4	21.3	27.5
	3	44.4	40.4	51.2	33.3	46.8	50.4
	2	22.2	40.4	18.5	22.2	31.9	19.3
	1	0.0	2.1	3.0	0.0	0.0	2.8
The ability to innovate and be creative	4	33.3	17.0	21.8	22.2	12.8	18.7
	3	44.4	40.4	44.1	55.6	42.6	46.0
	2	22.2	40.4	29.5	22.2	42.6	30.6
	1	0.0	2.1	4.7	0.0	2.1	4.7
Foundations and skills for lifelong learning	4	44.4	25.5	21.5	33.3	17.0	19.0
	3	33.3	21.3	43.5	44.4	31.9	43.0
	2	22.2	48.9	29.2	22.2	42.6	32.0
	1	0.0	4.3	5.8	0.0	8.5	6.1
Proficiency in English	4	66.7	14.9	32.8	44.4	21.3	30.9
	3	22.2	38.3	33.9	33.3	29.8	36.6
	2	11.1	40.4	25.3	22.2	38.3	25.6
	1	0.0	6.4	8.0	0.0	10.6	6.9

Note. Gr1 = Students participated in one general education (GE) course; Gr2 = Students participated in two GE courses; Gr3 = Students participated in three GE courses. Scale: 4- Very much, 3- Quite a bit, 2- Some, 1- Very little.

Appendix K: Percentage of Student Perception of the General Education Program

	Very Much	Quite a Bit	Some	Very Little
		Knowledge		
Provision	14.1	32.5	31.4	22.0
Gain	12.4	29.7	33.6	24.2
		Skills		
Provision	26.1	45.4	24.7	3.8
Gain	25.0	45.2	26.6	3.2

Appendix L: Percentages of Student Perception of the General Education Program by Groups

Grouped	n	Provided				Gained			
		Very Much	Quite a Bit	Some	Very Little	Very Much	Quite a Bit	Some	Very Little
					Broad knowledge				
By College year									
Freshmen	33	17.6	40.5	28.3	13.5	16.8	32.8	41.7	8.7
Sophomore	108	14.7	33.9	33.6	17.9	12.9	30.2	36.9	20.0
Junior	150	12.2	32.3	31.9	23.6	10.0	32.0	30.7	27.3
Senior	128	14.9	29.5	29.8	25.8	13.7	25.8	32.3	28.2
By Major fields									
Economics and Commerce	200	12.0	33.2	34.7	20.1	11.2	29.4	36.2	23.1
Technology and Environment	27	14.6	34.4	38.8	12.2	15.5	31.4	37.3	15.9
Art and Design	24	19.9	28.4	21.1	30.6	16.2	29.4	26.2	28.2
Hospitality	66	13.3	33.4	27.6	25.7	8.3	33.1	34.4	24.2
English studies	102	17.2	31.0	27.8	24.0	15.9	27.7	28.8	27.6
By GE courses taken									
One course	9	16.3	45.8	37.3	0.7	11.8	32.7	55.6	0.0
Two courses	47	11.1	35.9	34.8	18.1	10.3	27.4	45.6	16.8
Three courses	363	14.4	31.7	30.8	23.0	12.7	29.9	31.6	25.8
					Skills				
By College year									
Freshmen	33	34.2	41.9	22	1.9	34.2	39.1	23.4	3.3
Sophomore	108	26.2	45	25.8	2.9	23.2	45.2	29	2.5
Junior	150	23	48	25	3.9	23.3	46.3	27.6	2.7
Senior	128	27.5	43.5	24.1	4.9	26.1	45.3	24.2	4.4
By Major fields									
Economics and Commerce	200	24.7	45.5	27	2.9	22.1	46.6	28	3.3
Technology and Environment	27	20.5	50.2	24.2	5.1	17.5	46.5	32	4
Art and Design	24	30.3	42.4	22.3	4.9	30.3	43.6	20.1	6.1
Hospitality	66	20.5	44.4	30.3	4.8	22.5	42.4	32.6	2.5
English studies	102	32.8	45.3	17.5	4.5	33.1	44	20.2	2.7
By GE courses taken									
One course	9	36.4	38.4	24.2	1	29.3	41.4	27.3	2
Two courses	47	22.8	36.9	38.3	1.9	18.8	37.9	40.4	2.9
Three courses	363	26.2	46.6	23	4.1	25.7	46.2	24.8	3.3