

ENHANCING THE 21ST CENTURY LIFE SKILLS OF UNIVERSITY STUDENTS USING WHOLE BRAIN LITERACY, EXPERIENTIAL LEARNING THEORY, AND APPRECIATIVE INQUIRY: AN ACTION RESEARCH FOR ASSUMPTION UNIVERSITY

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Abstract: This research investigated the effect of organization development interventions (ODI) using three modalities namely: Whole Brain Literacy (WBL), Experiential Learning Theory, and Appreciative Inquiry (AI) in enhancing the 21st Century Life Skills of undergraduate students in Assumption University of Thailand. An action research was conducted in three phases; pre-ODI, ODI, and post-ODI where both quantitative and qualitative research methods were used to explore, assess and gather the data to enhance the life skills of students which included thinking skills, action-related skills, creativity skills, relationship skills, and self-management skills. The quantitative data were collected by using the same set of questionnaire which has been developed from relevant sources on life skills development during before and after OD interventions to measure life skills with close-ended questions while the qualitative data were collected from an interview, observation, and group discussion. The Design of the Action Research used two groups of 30 students each, the first group went through Organization Development Interventions (ODI) and the second group of 30 was the control group without the ODI. The participants were selected by using Purposive sampling technique. The quantitative data was analyzed by using Paired Sample T-Test and the content analysis was used for the qualitative data. The findings reveal that OD interventions helped enhance the confidence level of life skills of the students involved in the study. As a recommendation, a new model for enhancing the life skills of students called “Life Skills Enhancement Model for Students: the Processes of Learning and Living on Purpose was developed.

Keywords: Organization development interventions, whole brain literacy, appreciative inquiry, experiential learning theory, IKIGAI, 21st century life skills.

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Introduction

The rapid changes happening today bring challenges to children and youth especially in the area of education where opportunities are somehow unequal and curriculum not updated to the needs of the times (Donnelly 2004; Laurie 2003; Rushworth and Davis 2003a; Rushworth and Davis 2003b). Many academic institutions fail to prepare graduates with specialized skills, life skills, and experiences that are necessary for their future careers and real life living in the society (Business Council of Australia 2006; Kelly 2003).

Most institutions especially in Thailand mostly focus on rote learning methods (James, 2002) where students focus on content-based curriculum (Castleberry, 2001) rather than experiential learning methods and these are no longer responsive to the 21st century changes. For instance, many well-known companies require basic skills such as critical thinking, good communication, problem-solving skills, adaptability to changes, leadership skills, multicultural skills, and organizational skills. (Cooper and Lee 2000; Gray, Whiten, and Knightbridge 2002; Wee, Kek, and Kelley 2003). When students have not developed life skills and they cannot handle life challenges, these results in poor decision-making and unacceptable behaviors.

Despite Thailand's efforts in improving areas of human development, these benefits have not reached all children in the country. In terms of education, there are large drops in school attendance within the general population after junior high. Today's education system aims to build and support practical, academic and life skills, social competencies, moral and democratic values, and a national identity. Over the years, Thailand has expanded the number of years of free schooling available to Thai children and youth, and the country now offers a range of schools to meet students' different needs. However, students in remote areas or from disadvantaged backgrounds do not have access to the same quality of education as those in other parts of the country, and there are inefficiencies in the overall governance of the system. High percentages of Thai students in school are not acquiring the basic life skills required for their own success and the country's continued development. Thailand will need to significantly enhance the effectiveness, development of life skills, equity and efficiency of its education system in order for students to achieve positive outcomes that match the country's investment in education and socioeconomic aspirations. According to Nelson Mandela's statement on "*Education is the most powerful weapon which you can use to change the world*", it ensures that education is a core factor of human development to make change and create a better life and world.

Research objectives

- 1) To assess the confidence level of life skills of AU undergraduate students which include thinking skills, action-related skills, creativity skills, relationship skills, and self-management skills.
- 2) To develop, design, and implement the appropriate OD interventions to enhance life skills of AU undergraduate students.
- 3) To determine the difference between pre and post-Organization Development Intervention (ODI) results on life skills of AU undergraduate students.
- 4) To develop a new model to enhance life skills of students to face life's challenges and changes.

The following research hypotheses were formulated:

- 1) There is a significant difference between pre and post OD intervention results on Thinking skills of AU undergraduate students
- 2) There is a significant difference between pre and post OD intervention results on Action-related skills of AU undergraduate students
- 3) There is a significant difference between pre and post OD intervention results on Creativity skills of AU undergraduate students
- 4) There is a significant difference between pre and post OD intervention results on Relationship skills of AU undergraduate students
- 5) There is a significant difference between pre and post OD intervention results on Self-management skills of AU undergraduate students
- 6) There is a significant difference between pre and post OD intervention results on confidence level of Life competencies/skills of AU undergraduate students

Literature Review

Learning Theories

Learning is an enduring change in behavior, or in the capacity to behave in a given fashion, which results from practice or other forms of experience. Learning is universally accepted that it is one of the most important factors for human development. There are several meanings of learning defined by different people such as researchers, theorists, and practitioners with different of views (Shuell, 1986).

The Experiential Learning Theory

Experiential Learning Theory is explained as knowledge created by the transmission of experiences; it results from transforming experiences and combination of grasping experiences (Kolb, 1984). The learners learn through a cycle of four stages within two relevant modes (Kolb, 2009) called *mode of grasping experiences* including Concrete Experience (CE) and Abstract Conceptualization (AC), where *mode of*

transforming experiences include Reflective Observation (RO) and Active Experimentation (AE) (Kolb and Kolb, 2005). Learning is best conceived as a process, not in terms of outcomes, the learning should be engaged in a process of learning and a holistic process of adaptation. It is a process of re-learning and creating new knowledge (Kolb and Kolb, 2005).

Life skills and the 21st Century Learning

Life skills are cognitive and non-cognitive skills and abilities, connecting behavior, attitudes, and knowledge, which children and youth can develop and retain throughout their lives. Life skills increase well-being and develop them to be active and productive citizen of the nation. Life skills may include problem solving, critical thinking, effective communication skills, decision making, creative thinking, and interpersonal relationship skills, self-management, and self-organized (UNICEF, 2017).

The framework for the 21st Century Learning describes the skills, knowledge, and expertise students have to learn for the success in work and life especially in the current world including focusing on core subjects and skills for learning, utilizing the 21st century instruments and assessments to improve learning skills, and developing the context and content of the 21st century teaching and learning.

Behavior Change

Behavior change is a purpose for everyone to learn and react within their own situations and communities. The approach of behavior change also help to encourage good health when the person changes own life styles responding to one's environment and setting (UNDP and UNICEF, 2002) where the person needs to understand foundation facts on specific health issues, ability to adapt key attitudes, learn skills sets and be assisted to approach to suitable services and information.

Social Cognitive Theory

The social cognitive theory explained that a person is influenced by the external forces not the inner forces. The triadic interaction of behaviors and environment and personal factors explain how human functions known as “reciprocal determinism”. The personal factors refer to instincts, traits, drives, and other motivation forces of individual, while environmental factors include environments and situational influences that behaviors are preformed (Bandura, 1986). These variables might intervene in behavioral changes processes (Perry et al, 1990).

Purpose in Life (PIL)/IKIGAI

A purpose is “why” and reason for every effort, not simply one part of a larger set of interdependent steps in a series of goals. Purpose in Life began from 19th Century

European philosophy (Kierkegaard, 1844) whereas IKIGAI originated around 14th Century in Japan (Goto & Kamada, 1960). The concepts focused on “Everything changes and Life is the only life time opportunity” where everyone has his/her intrinsic and natural need to achieve as it defines the meaning of life (Kamiya, 1966; Frankl, 1972). Purpose in Life/IKIGAI is psychological and a life ambition.

IKIGAI is one of finding life purpose theories came from Japan. This word is formed of two words: IKIRU means life or KAI means the truth or realization of a person hopes for, in which the meaning of IKIGAI in brief would be the reason of living. IKIGAI was applied through asking four questions are “what do you love to do?”, “What are you good at?”, “what does the world need?”, and “what can you be paid for?”.

Whole Brain Literacy (WBL)

The Whole Brain Literacy model encourages an integration of all brain functions as a whole brain in which each part can function independently and interpedently at the same time, it is interconnected where all are working within the capability and capacity of everyone for the development, changes, and transformation (Tayko, et al., 2017). Whole brain literacy inspires people to use holistic brains to think and analyze in which there will be a combination of characteristics in each working together. Moreover, it is also encourage them to have purpose in the middle means that whatever we do or think in life we need a purpose to shape our thinking process and life (Tayko and Talmo, 2010).

Appreciative Inquiry (AI)

Appreciative Inquiry involves an exploration of what is given to life when a person function at her/his best capacity. This approach involves in an individual and organization changes through positive dialogues and questions with strengths, opportunities, aspirations, and results (Cooperrider & Whitney, 2000). It drives positive forces as a foundation to strengthen human capacity, to energize people to move to their desirable directions, and to achieve their desirable dream or future. AI process works with the 4-D cycle including Discover, Dream, Design, and Destiny. Moreover, SOAR framework focuses on strengths means that the SOAR conversations center on what an organization is doing right, what skills could be enhanced, and what is compelling to those who have a stake in the organization's success. The SOAR stands for Strengths, Opportunities, Aspirations and Results.

Organization Development (OD)

Organization development finds ways for better performances, effectiveness, growth, and making sustainable and effective organizational changes. The process of organization development involves diagnosis, creating and implementing

interventions, and evaluation in order to make changes in the organization or individual (Cummings & Worley, 2009).

Conceptual Framework

The conceptual framework presents the OD interventions; whole brain literacy, experiential learning process, and appreciative inquiry as an independent variable, while the five categories of life skills are dependent variables. These five skill sets can well represent necessary life skills needed in the challenging conditions of living especially when technology and development is being developed too fast and too advanced.

The five skills sets are:

1) Thinking skills which involves necessary skills on critical thinking such as abilities to analyze, conceptualize, translate, process, and reflect experiences, knowledge, and information.

2) Action-related skills involved accountability skills which refers to ability to manage, initiative, adapt, well-organized, and perform productive performance/results with their best capacity and regulations.

3) Creativity skills encourage people to think differently with positive attitude and mindsets.

4) Relationship skills involved inter-personal communication means people sharing and exchange information, ideas, knowledge through several ways of communication with less barriers., *and*

5) Self-management skills involve skills to shape and direct one's life.

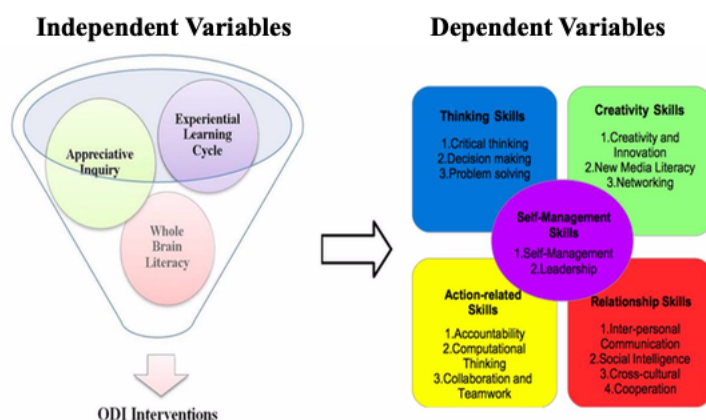


Figure 1: Conceptual Framework

These three modalities as ODI is most appropriate because the concept of appreciative inquiry help encourage positive attitude and communication in the conversation and

change process. Whole Brain Literacy encourages the integrated and holistic brain functions while Experiential Learning Theory encourages learning by touching bases of learning from experiences, reflecting, thinking, acting, and be able to response and adapt to various learning situations. The learning can learn and relearn where they also create and recreate new knowledge and experiences from existing ones as process-based skills which can create long-term value (Cooper and Lee 2000). Not only learning from own experiences but also others experiences and knowledge. This contributes powerful impacts on learning and it is useful if one can apply in lives.

Action Research Procedures

This research assessed the level of life skills, design appropriate organization development interventions (ODI). An action research was conducted in three phases with both quantitative and qualitative research methods to explore and gather the data and develop model to enhance the 21st century life skills. The action research design was used for the study. This consists of three phases: Pre-OD interventions, OD interventions, and Post-OD interventions. The first phase involved the assessment of confidence level on the 21st century life skills at pre OD interventions. The second phase involved the application of OD interventions through activities based on Whole Brain Literacy (Tayko), Experiential Learning Theory (Kolb), and Appreciative Inquiry (Cooperrider). The last phase involved the assessment of the confidence level on 21st century life skills at post OD interventions.

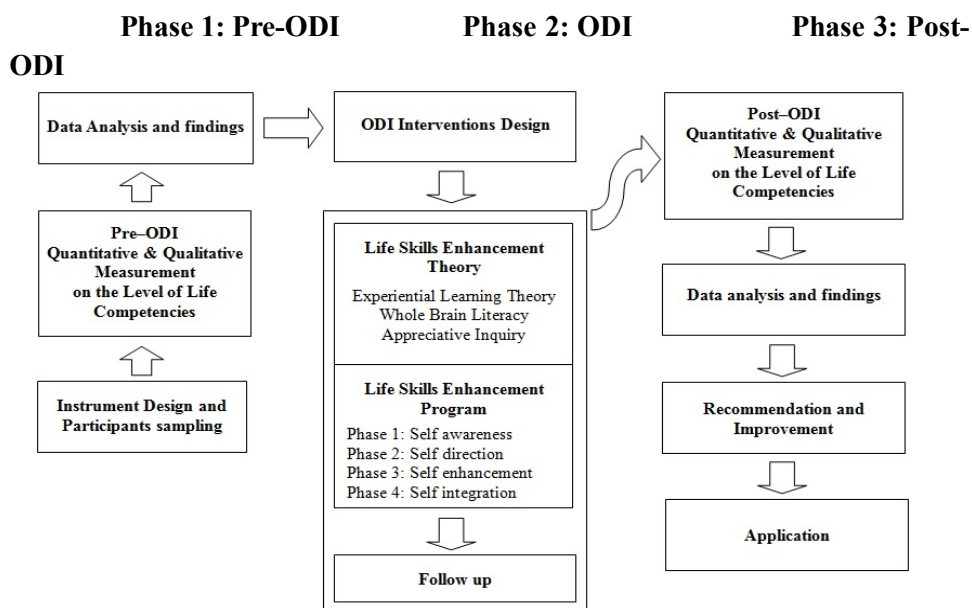


Figure 2: Action Research Procedures

OD Change Design Process (OD Interventions)

OD change process of the study is used as the interventions based on the change process of unfreezing, moving, and refreezing by Kurt Lewin (1947). OD interventions consist of three stages that combine four phase of interventions in which each phase drives a process of change, learning, and developing. The overall process required at least 3 months including the interventions, follow up, monitoring, and evaluation.

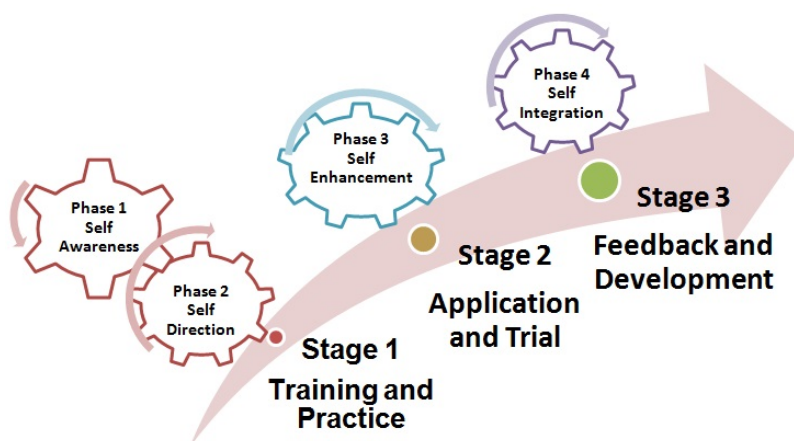


Figure 3: OD Change Design Process

Stage 1: Training and Practice

This stage last at least five hours consisting of *Phase 1: Self-awareness*, the participants start with basic self-assessment through SWOTAR analysis and *Phase 2: Self direction*, the facilitator conducted a workshop on Appreciative Inquiry, finding life purpose/IKIGAI and Whole Brain Literacy with five skills sets in which the conclusions and practice of each theory were applied within all activities.

Stage 2: Application and Trial

During *Phase 3: Self-enhancement*, the participants spent about an hour. They were assigned to do several sets of activities and workshops to exercise the concepts of theories including Appreciative inquiry, Experiential learning theory, Whole brain literacy, and finding life purpose/IKIGAI.

Stage 3: Feedback and Development

During *Phase 4: Self-integration*, at the end of every activity/workshop session, participants must analyze their experiences through a learning process shaped by these theories where they might spend about an hour. In addition, the researcher also added one of key factors creates life meaning and direction is life purpose by focusing on the technique of IKIGAI. At the end of the session, the facilitator also makes a

conclusion and summary of the sessions based on theories and how to integrate theories with experiences, knowledge, and learning process into real life.

Research Findings

Quantitative findings

The majority of the 30 respondents with ODI are females or 66.7% (20) while males make up 33.3% (10) of the respondents. There are 86.7% (26) Thai respondents and 13.3% (4) non-Thai respondents. Most of respondents or 90.0% (27) aged 20 years and above, only 10.0% (3) aged below 20 years old. Moreover, the majority of respondents or 90.0% (27) have experiences in joining extra-curricular activities while 10.0% (3) have never experienced in joining extracurricular activities. While, the profiles of a group without ODI has more females at 70.0% (21) than males at 30.0% (10) and all respondents are Thai or 100.0% (30). The majority of respondents are 20 years old and above or 86.7% (26), only 13.3% (4) are below 20 years old and most of them at 83.3% (25) have joined extra-curricular activities before while 16.7% (5) have never joined.

The five skills sets were analyzed by using an average mean, S.D. and improved percentage for a group with ODI during both pre and post OD interventions and an average mean and S.D for a group without ODI at a single period. The results showed that average mean of all skills increased at post OD interventions (as shown in Table 1). While a group without ODI found that all skills had lower scores than the post-OD interventions results.

Table 1: The Summary of Mean, S.D., and Improvement Percentage of Five Skill Sets

Life Competencies	with ODI					without ODI	
	M Pre-ODI	S.D.	M Post-ODI	S.D.	Improved %	M	S.D.
Thinking Skills	3.79	0.54	4.13	0.40	8.97	3.63	0.37
Action-related Skills	3.75	0.61	4.21	0.46	12.27	3.90	0.40
Creativity Skills	3.69	0.58	4.10	0.41	11.11	3.88	0.50
Relationship Skills	3.93	0.65	4.21	0.44	7.12	3.86	0.42
Self-Management Skills	3.83	0.58	4.15	0.48	8.36	3.92	0.41
Overall confidence level of life skills	3.73	0.58	4.10	0.71	9.92	3.87	0.63

The summary in table 1 showed that the total average mean and improvement percentage during post ODI of a group with ODI were increased. *Thinking skills* increased from 3.79 to 4.13 or 8.97% improvement, *Action-related skills* increased from 3.75 to 4.21 or 12.27% of improvement, *Creativity skills* increased from 3.69 to 4.10 or an improvement of 11.11%, *Relationship skills* increased from 3.93 to 4.21

with 7.12% improvement, *Self-management skills* increased from 3.83 to 4.15 with 8.36% improvement, and the overall confidence level of life skills increased from 3.73 to 4.10 with 9.92% improvement. While a group without ODI showed that all skills are lower than post-OD interventions results.

In addition, the findings of six research hypotheses are significantly different between pre and post OD interventions with $p\text{-value} < .05$. It concluded that OD interventions using Whole Brain Literacy, Experiential Learning Theory, and Appreciative Inquiry increased the confidence level of life skills in terms of thinking skills (.006), action-related skills (.001), creativity skills (.000), relationship skills (.027), self-management skills (.037), and overall confidence level of life skills (.032).

Qualitative Findings

Results of pre-OD interventions and a group without OD interventions

The qualitative methods were conducted with two groups of 30 students each, the first group went through ODI and the second group of 30 was the control group without the ODI.

A pre-OD intervention of a group with ODI and a single interview of a group without ODI were conducted through a group discussion, interview, and observation. The discussions and interview were based on their experiences, stories, and abilities on life purpose, positive/negative attitude, and five skills sets. This reflected life skills and performance on five skills sets when respondents interacted with others. The questions based on life purpose/goal, attitude and mindsets reflections, five life skills sets, and their personal life events or experiences were asked during the discussion and interview.

The respondents shared what they think and have in mind with examples of life events. For finding life purpose/goal, it showed that most of them could not define clear goals or life purposes for their future especially in career path although they might mention what they enjoy of doing it and what they are good at but they were not confident whether these would be their core value or purpose of life to use as a direction for their future.

When encouraged them to reflect their attitude and mindsets towards things in lives although the respondents were not asked directly on their attitude but while they were sharing their stories and experiences, most respondents defined things and began their discussion with negative or difficult attitudes towards things and challenges in lives rather than positive attitudes. When they shared life events or experiences, they usually started with problems and spent some times talking about it instead of finding solutions to solve it.

For the sharing sessions on five life skills sets, an observation from the discussion showed that they were unable to do well and performed the low level of

competences and performances based on life skills.

In conclusion, the results presented low ability to define life purpose which can be seen from unclear and unconfident purposes/goals. Negative attitude and conversations were commonly found in the discussions especially when talking about problems, difficulties, or unpleasant results.

Results of post-OD interventions

The results of post-OD intervention in terms of five skills sets showed that for the thinking skills, participants were better in comparing and finding solutions to solve problems or confidence to face challenges. The choices of decisions can be made reasonably and wisely. This was not only to finish their tasks but also more on how to best utilize the existing resources at maximum capacity.

For action-related skills, they learned to make plans, organize and manage their tasks and have teamwork to reach common goals. This time with good procedures under rules or limitations because activities assigned always have instructions and limitations they have to follow. They also realized the importance of collecting information from others or from different sources to analyze and consider supporting them in making decisions, shaping plans and directions for themselves and the team. They also realize their roles, duties, and responsibilities they are assigned to.

Creativity skills helped create inspirations to think out of the box, think beyond traditional ways, be able to develop new ways, techniques, and methods responding to expectations they have and make things possible. It involves learning to utilize technology and media with its best capacity as the world is all connected, fast, and easy. This helped the respondents to have better connection and network and extend that network to initiate something new and make use of it not only to gain but also to share, learn, and help others.

In terms of Relationship skills, they learned to understand different perspectives and opinions and are able to work, cooperate, communicate, and get along with others well. This is one of the most important factors as things can go right or wrong from the way people communicate and perceive each other. Finally, they became aware of how to socialize with others, handle differences, and encourage desired interaction especially when faced with diversity and culture differences.

Self-management skills, the participants realized these skills helped them to manage themselves more effectively, prioritize things and have a goal to achieve in all aspects of life such as mental, physical, social, and spiritual. Everyone actually has his/her own leadership skill which varies in different situations and opportunities to express it when needed. They can improve and exercise the leadership skills in various situations and contexts.

For the intervention results, by applying Whole Brain Literacy in various

activities that have been conducted with the participants, the researcher added these theories to encourage them integrate the holistic brain function. The participants were not aware until the conclusion and feedback session, when they were able to realize that they were encouraged to think with their holistic brain. There are many OD interventions and activities used with them. Experiential Learning Theory encourages participants to learn by touching bases of learning from experiences, reflecting, thinking, acting, and being able to response and adapt to various learning situations. The learning can learn and relearn where they also create and recreate new knowledge and experiences from existing ones as process-based skills which can create long-term value (Cooper and Lee 2000). Not only learning from own experiences but also other experiences and knowledge. This is a simple theory and cycle that contribute powerful impacts on learning and it is useful if one can apply in any activity, lesson, problems, or life events. Appreciative Inquiry encourages them to communicate and think positively and define their strengths, opportunities, aspirations, and results through SOAR framework which helps to inspire them to realize and value the strengths and opportunities then move forward to aspirations and results rather than weaknesses and threats.

Discussion

The results showed that OD interventions improved the 21st life skills of the students involved in the study, particularly the five skill sets of thinking, action-related, creativity, relationship, and self-management skills. Moreover, the students were able to define their life purpose/goals clearer, showed better self-understanding, communicate positively, lived on positive mindset, performed the holistic thinking, and reflect their experiences and knowledge in a learning process.

The overall improvement showed the higher confidence level of the 21st century life skills in an individual. The enhancement can bring an achievement in all aspects of life such as mental, physical, social, and spiritual. Life is to learn and relearn where all knowledge and experiences are learned in a continuous learning process. Effective learning is when the brain works as a whole using its full potential and capacity which results in a power of ideas, potential of persons working together, and possibility of making things happen. These techniques and skills can be implemented no matter how old the person is whatever occupations, in different situations, and in any social settings.

The researcher developed a model from the original conceptual framework after the interventions were implemented called “Life Skills enhancement Model for Students”. This model consists of three stages and four phases of the life skills enhancement and theoretical framework with core concepts. This drives learning from experiences through a process of change, learning, and developing.

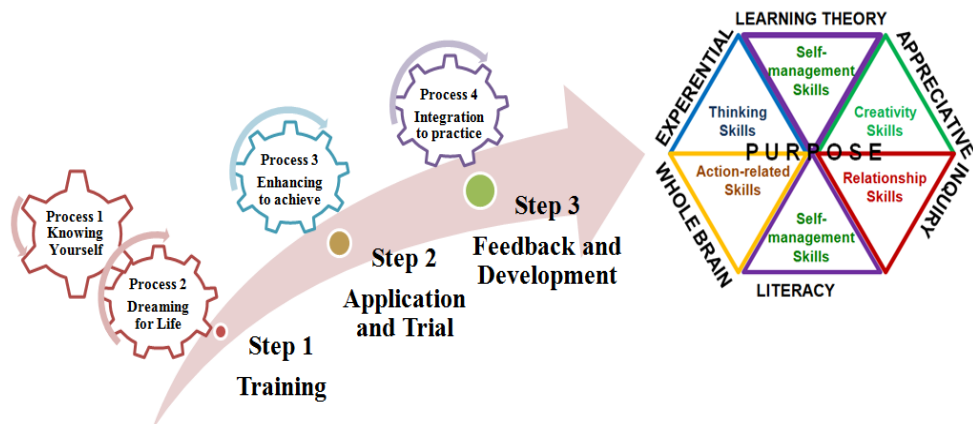


Figure 4: The new model “Life Skills Enhancement Model for Students”

This model is used to enhance the life skills for the 21st century. This model has been proven in this research and it can be applied with various groups of people but this would work best with children, youth, and students because they should learn and practice these skills from young ages. Learning is the process of creating knowledge, knowledge is created and recreated as well as learning is re-learning, it brings out learners' ideas and opinions on topics leading to integrate and create more ideas. Therefore, learning is a continuous cycle that when people learn they will always relearn.

The future research should concern on firstly, the number and representativeness of selected participants. This might not cover all characteristics of AU students. Secondly, the time constraint of a six month period of intervention is also a limitation. Next, only five life skills sets were focused on appropriate to the environment of the focal organization. Then, language translation of the questionnaire from English to Thai and Thai to English can also cause a misunderstanding between researcher and participants. Finally, this research could be more effective if it can be widely spread to all levels of the students in the university because the current situation of Thai youth revealed that life skills are urgently needed.

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