Curriculum Development of Supplementary Substance Curriculum in Working, Occupation, and Technology Learning Substance based on Sufficiency Economy Philosophy for Promoting Primary School Students’ Life Skill

Samai Khankhaeng[a,*]; Jiraporn Chano[b]; Kochaporn Numnaphol[c]

INTRODUCTION
The situation of the new decade was the period of speed and modernity of various kinds of communication technology as well as races and cultures. Assimilation in thought and belief of people group that the human beings in society had to be faced with new age lifestyle critically. Since the social situation has changed very much, it affected the learning age children’ livelihood among the changing trend of technology and parents’ expectation for their children’ Education, and the temptation or inappropriate models surrounded them. As a result, there were problems in children and youth’ emotional and mental adjustment, physical health, game addiction, and sexual. Specifically, in children with low life skill, without social immunity. When they graduated the basic education, they may not be successful in their life. In addition, they might have both of emotional and mental problems, and be vulnerable for their life conflict. Consequently, the teachers had to provide the efficient learning process for students’ life skill as their immunity to be free from influence of media and technology ideas, and cope with social advancement intelligently.

The Supplementary Substance Curriculum in Working, Occupation, and Technology Learning Substance based on Sufficiency Economy Philosophy for enhancing the Primary School Students’ Life Skill so that the children would have awareness as well as self-worth and respect the others’ value. The analytical thinking, decision
making and creative problem solving, emotional and stress management, creation for good relationship with the others, cooperative working skill, persistence in working, systematic working, application for usefulness could help one to be able to manage their livelihood as well as live in society sufficiently and sustainably happy throughout the time based on Sufficiency Economy Philosophy.

1. CURRICULUM DEVELOPMENT

The Curriculum Development referred to the process in outlining the Supplementary Substance Curriculum in Working, Occupation, and Technology Learning Substance based on Sufficiency Economy Philosophy being relevant to the situation, problem, and need in Phase 1 by determining the curriculum goal, and outlining the curriculum to be congruent with the objective which included different content skills, and guidelines for evaluating in each skill. Then, the tentative curriculum was investigated its Propriety and Accuracy by the experts. It was revised and improved based on the experts' recommendations in order to be the curriculum based on Sufficiency Economy Philosophy for providing the learning activity management in Working, Occupation, and Technology Learning Substance.

2. CURRICULUM COMPONENT

Kerr (1976, pp.16-17) proposed 4 parts of the curriculum component including: a) the curriculum objective, b) the content material, c) the learning experience, and d) the evaluation. It was supported by Tabà’s (1962, p.10) and Beauthamp’ (1975, pp.107-109) approach in curriculum component that the curriculum construction would consisted of 4 major parts including: a) the objective, b) the content material, c) the instruction in activity and model, and d) the evaluation.

The Supplementary Substance Curriculum in Working, Occupation, and Technology Learning Substance based on Sufficiency Economy Philosophy for enhancing the Primary School Students’ Like Skill consisted of the Rationale, Objective, Indicators and Learning Substance, Instruction Guidelines, Guidelines for Instructional Activity Management, Measurement and Evaluation.

3. SUFFICIENCY ECONOMY PHILOSOPHY

The Sufficiency Economy Philosophy was a philosophy which his Majesty the King stated in suggesting the guidelines for living for Thai citizen before the Economic Crisis. Later on, His Majesty the King emphasized on the guidelines for solving the problem absolutely as well as living steadily and sustainably under the globalization trend as well as many changes.

The Sufficiency Economy Philosophy was the philosophy indicated the guidelines for livelihood as well as conduct in every level of people from family and community to government in both of national development and management to be in neutral especially in economic development to keep pace with globalization age world. The Sufficiency referred to the approximate one. To be reasonably referred to the necessity to have good immunity inside the body on the impact which was caused by both of outside and inside. It had to be based on knowledge, carefulness, and thoughtfulness very much by using different kinds of knowledge for planning and implementing in every step. The Sufficiency Economy was a new theory which wasn’t stated in textbook. Because it referred to the human beings’ new thought being interested by the experts. We could improve or apply its rationale so that the national and global economic would be developed. The Sufficiency Economy Philosophy consisted of 3 characteristics including: a) to be moderate referred to the adequacy not too much or less without disturbing oneself or others, b) to be reasonably referred to one’s decision making for Sufficiency had to be reasonable by considering the related factors as well as the anticipated effect from those actions carefully, and c) the good immunity inside referred to the preparation to be ready for feasibility of various expected situations to be occurred in the near future or the long period of time, condition for decision making, and implementation of different activities to be in sufficiency level had to be based on knowledge and virtue as the foundation.

4. LIFE SKILL

Brolin (Goodship, 1992, online; citing Brolin, 1989) defined it that it included the necessary and important Skills and Knowledge for one’s livelihood.

World Health Organization (1993, online) defined Life Skill that it referred to one’s competency in adapting and developing the appropriate behaviors so that one would be able to manage different kinds of stimulated need and things in daily life effectively.

Tshiwula (1995, p.8) defined that the Life Skill was a process of enhancing the students’ development as well as interpersonal development.

De Jong (1995, p.93) defined Life Skill as the person’s indispensable things to face with one’s life as well as various challenges for accomplishment.

Hendricks (1996, online) defined Life Skill that it was the person’s competency in being able to learn how to help oneself to be successful in one’s life as well as perfection and satisfaction in one’s life.

Nelson-Jones (1997, p.7) defined Life Skill that it led to alternatives for personal responsibility. When one had to be responsible for oneself, one was in the process for constructing the alternatives for one’s life to be the most perfect and happy. Consequently, the Life Skill consisted of Self-helping skills or one’s competency to be able to help oneself in various aspects for coping one’s life efficiently.
UNICEF (2001, online) stated that the Life Skill referred to one’s capability in applying one’s knowledge, attitude, and skills which would help to support one’s behavior in being able to be responsible for oneself for livelihood by developing the good alternatives, the resistance to peer pressure, and the management for life threatening.

Life Skill referred to the person’s ability to solve different surrounding problems in present social situation, and to be ready for adjustment in the future by determining 4 major Life Skill Components to be constructed and developed into students’ immune as follows: a) the awareness and view of self-worth as well as the others’ referred to one’s conscious in one’s own aptitude and capacity, one’s strength and weak point, one’s comprehension in individual differences, one’s self-understanding, one’s acceptance and view of value in oneself as well as the others,’ one’s life goal, and one’s social responsibility, b) the analytical thinking, decision making, and creative problem solving referred to one’s competency in identifying the surrounding news, information, problem, and situation, critiquing and criticizing and evaluating the nearby situation reasonably with correct information, perceiving the problem and its cause, knowing how to cope with emotional and stress as well as alleviate, avoid, and modify the behavior which caused the undesirable emotion into a good way, c) the creation in good relationship with the others referred to one’s comprehension in the other persons’ viewpoint, emotion, and feeling, verbal and nonverbal language use for communicating one’s feeling and thought, good and appropriate conduct in different situation, communication for developing good relationship, creating the cooperation in developing the collaboration as well as working with the others happily which could be evaluated by the Behavioral Evaluation Form.

### Theoretical Background
Philosophy of Development, the students would learn based on one’s experience focusing on thinking of How rather than What. The students were enhanced to discover the problem by themselves. (Chookampang, 2008, pp.37-38) The German psychologists in Gestalt’s Theory were Max Wertheimer, Wolfgang Kohler, and Kofkta who were interested in Perception, Association between one’s former experience and new experience leading to the thinking process for problem solving, Social Cognitive Theory emphasized on the Observational Learning, Bruner’s Discovery Learning.

### Curriculum Development
Curriculum Development (Tyler, 1949; Taba, 1962; Saylor et al.,1981; Utaran; 1989)

### Supplementary Curriculum of Working, Occupation, and Technology Learning Substance based on Sufficiency Economy Philosophy enhancing Primary School Students’ Life Skill
Included rationale: หลักการrationale:
Supplementary Curriculum of Working, Occupation, and Technology Learning Substance based on Sufficiency Economy Philosophy enhancing Primary School Students’ Life Skill, offering instruction for quality student development to be good and intelligent, healthy in mental, physical, and skill which were necessary for livelihood.

### Objectives
To develop the students to be good, intelligent, happy, ethical, responsible, dedicated, generous, conservative and environmental development, and behave themselves according to Sufficiency Economy Philosophy.

### Indicators and Learning Substance
The content structure and Learning Unit included 7 Learning Units, 14 Lesson Plans, total of 20 hours.

### Instructional Management
1. Learning Management by

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### Figure 1: Conceptual Framework

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5. RESEARCH METHODOLOGY
From Figure 1, Conceptual Framework of Supplementary Substance Curriculum in Working, Occupation, and Technology learning Substance based on Sufficiency Economy Philosophy for enhancing the Primary School Students’ Life Skill.

The researcher used the guidelines for curriculum development by using the research process, Research and Development Design. There were 4 Phases of research implementation as: a) the study of basic information, b) the curriculum construction and development, c) the tried out curriculum, and d) the curriculum evaluation.

5.1 Phase 1: The Study of Basic Information
The researcher studied basic information for curriculum development by: a) studying the necessary information for curriculum construction, b) studying the documents, textbooks, and related research literature, and c) studying the curriculum development textbooks from both of foreign countries and in the country.

5.2 Phase 2: The Curriculum Construction and Development
In this Phase, it was the development of Supplementary Substance Curriculum in Working, Occupation, and Technology Learning Substance based on Sufficiency Economy Philosophy for enhancing the Primary School Students’ Life Skill by determining the structure of curriculum based on basic information, and evaluating the tentative curriculum by the experts, and trying out the curriculum with 30 students of Muang-se-la-poom Kindergarten School who were studying in Pratomsuksa 5 during the second semester of 2014 academic year in order to use the data for developing the curriculum to be more complete.

5.3 Phase 3: The Tried Out Curriculum
The curriculum for data collection, the document of curriculum, the Learning Activity Management, and the instrument of Measurement and Evaluation which were improved by the researcher, to be tried with 21 students of Ban-nong-sa-mak-kee School who were studying in Pratomsuksa 5 during the first semester of 2014 academic year. The research instruments included: a) the instrument using for Learning Activity Management, and b) the instrument for data collection. For data analysis, the researcher analyzed data by using the Computer Program to calculate the Mean, Standard Deviation, and Percent. The data implementation, the Quasi-experimental design as one-group time-series design was administered by comparing the life skill competency between pretest and posttest. The statistic for hypothesis testing, the differences in Mean Values of life skill competency between the pretest and posttest, the F-test, and One-way Repeated Measured ANOVA.

5.4 Phase 4, Curriculum Evaluation
The evaluation of curriculum development, the key informants were 5 teachers and related committees, 5 school boards, and 21 students’ parents, 5 experts, 21 students, total of 57 persons in order to study the findings of curriculum use.

6. THE FINDINGS
Phase 1, the findings of basic information study, the information for curriculum development, the curriculum component, the situation problem, and need, the 11th Issue of National Economic and Social Plan (2012-2016), the Basic Education Curriculum 2008, the related documents and related research literature with curriculum development and Instructional Activity Management based on Sufficiency Economy Philosophy were studied. Moreover, the findings of study in the need for curriculum development found that the need for curriculum development in enhancing the life skill in Learning Activity Management should emphasize on various models by focusing on the students’ real practice for promoting the Primary School Students’ Life Skill so that they would be able to have knowledge as well as competency in living, and be self-reliant without destroying the environment. As a result, they would obtain the skill for living in society happily based on Sufficiency Economy Philosophy.

Phase 2, the curriculum development, the findings in establishing the tentative curriculum consisted of component and details including the Rationale, the Objective, the Indicators and Learning Substance, the Instructional Schedule, the Guidelines for Instructional Activity Management, the Measurement and Evaluation, and the Principle of Measurement in Practice. The tentative curriculum was investigated the congruence by the experts. The findings of experts’ investigation in congruence of curriculum structure, found that the congruence, in overall, was in “High” level. ($\overline{X}$ = 4.43 $SD$ = 0.56)

Phase 3, the trying out of curriculum was to revise the curriculum as well as supplementary curriculum documents from Phase 2, based on the findings. Then, it was tried out with 21 Pratomsuksa 5 Students, the samples, at Ban-han-nong-sa-mak-kee School during the first semester of 2014 academic year. The comparison of students’ life skill between pretest and posttest, was performed.

(a) The comparative findings of life skill development between pretest and posttest, was performed by 3 times of pretest, and 3 times of posttest (parallel test) the interval of each testing was 1 week, as shown in Table 1.
Table 1
The Mean, Standard Deviation, and F-Test of Score in Life Skill Development

<table>
<thead>
<tr>
<th>Comparison</th>
<th>Student number</th>
<th>Full score</th>
<th>( \bar{x} )</th>
<th>S.D.</th>
<th>F</th>
<th>Sig</th>
</tr>
</thead>
<tbody>
<tr>
<td>Testing 1</td>
<td>21</td>
<td>30</td>
<td>13.65</td>
<td>4.57</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Testing 2</td>
<td>21</td>
<td>30</td>
<td>13.89</td>
<td>4.65</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Testing 3</td>
<td>21</td>
<td>30</td>
<td>13.89</td>
<td>4.53</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Testing 4</td>
<td>21</td>
<td>30</td>
<td>14.14</td>
<td>4.33</td>
<td>27.69**</td>
<td>.000</td>
</tr>
<tr>
<td>Testing 5</td>
<td>21</td>
<td>30</td>
<td>26.23</td>
<td>6.57</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Testing 6</td>
<td>21</td>
<td>30</td>
<td>26.78</td>
<td>6.64</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note. ** Significant level at .00.

According to Table 1, found that the students had posttest life skill was significantly higher than the pretest at .01 level.

Considering the findings of comparison between Session 1-3, there were no differences. Considering the posttest from Testing 4-6, there were no significant differences. The findings were shown in Figure 2.

Figure 2
The Comparison of the Mean Value of Life Skill Development

According to the Chart of Comparison in the Mean Values of Life Skill, found that the Mean Values of students’ Life Skill Development of Testing 1-3, were nearly the same (13.65, 13.89, 14.14). There were differences between Testing 3, and Testing 4. In addition, the Posttest Mean Values from testing 4-6 (26.23, 26.88, 26.59) were nearly the same.

(b) The Learning Achievement of students taught by Supplementary Substance Curriculum in Working, Occupation, and Technology Learning Substance based on Sufficiency Economy Philosophy enhancing the Primary School Students’ Life Skill by using the Learning Achievement Test, was shown in Table 2.

Table 2
The Students’ Pretest and Posttest Learning Achievement

<table>
<thead>
<tr>
<th>Number</th>
<th>Pretestscore (30 points)</th>
<th>Posttestscore (30 points)</th>
<th>Percent</th>
<th>Interpretation</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>15</td>
<td>26</td>
<td>86.67</td>
<td>Pass the criterion</td>
</tr>
<tr>
<td>2</td>
<td>11</td>
<td>25</td>
<td>83.33</td>
<td>Pass the criterion</td>
</tr>
<tr>
<td>3</td>
<td>14</td>
<td>24</td>
<td>80.00</td>
<td>Pass the criterion</td>
</tr>
<tr>
<td>4</td>
<td>16</td>
<td>28</td>
<td>93.33</td>
<td>Pass the criterion</td>
</tr>
<tr>
<td>5</td>
<td>13</td>
<td>28</td>
<td>93.33</td>
<td>Pass the criterion</td>
</tr>
<tr>
<td>6</td>
<td>11</td>
<td>27</td>
<td>90.00</td>
<td>Pass the criterion</td>
</tr>
<tr>
<td>7</td>
<td>17</td>
<td>28</td>
<td>93.33</td>
<td>Pass the criterion</td>
</tr>
<tr>
<td>8</td>
<td>13</td>
<td>22</td>
<td>73.33</td>
<td>Pass the criterion</td>
</tr>
<tr>
<td>9</td>
<td>15</td>
<td>26</td>
<td>86.67</td>
<td>Pass the criterion</td>
</tr>
<tr>
<td>10</td>
<td>13</td>
<td>26</td>
<td>86.67</td>
<td>Pass the criterion</td>
</tr>
<tr>
<td>11</td>
<td>16</td>
<td>26</td>
<td>86.67</td>
<td>Pass the criterion</td>
</tr>
<tr>
<td>12</td>
<td>17</td>
<td>29</td>
<td>96.67</td>
<td>Pass the criterion</td>
</tr>
<tr>
<td>13</td>
<td>12</td>
<td>25</td>
<td>83.33</td>
<td>Pass the criterion</td>
</tr>
<tr>
<td>14</td>
<td>14</td>
<td>28</td>
<td>93.33</td>
<td>Pass the criterion</td>
</tr>
<tr>
<td>15</td>
<td>12</td>
<td>23</td>
<td>76.67</td>
<td>Pass the criterion</td>
</tr>
<tr>
<td>16</td>
<td>17</td>
<td>27</td>
<td>90.00</td>
<td>Pass the criterion</td>
</tr>
<tr>
<td>17</td>
<td>16</td>
<td>25</td>
<td>83.33</td>
<td>Pass the criterion</td>
</tr>
<tr>
<td>18</td>
<td>17</td>
<td>29</td>
<td>96.67</td>
<td>Pass the criterion</td>
</tr>
<tr>
<td>19</td>
<td>15</td>
<td>25</td>
<td>83.33</td>
<td>Pass the criterion</td>
</tr>
<tr>
<td>20</td>
<td>19</td>
<td>29</td>
<td>96.67</td>
<td>Pass the criterion</td>
</tr>
<tr>
<td>21</td>
<td>16</td>
<td>27</td>
<td>90.00</td>
<td>Pass the criterion</td>
</tr>
<tr>
<td>Total</td>
<td>309</td>
<td>553</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

\( \bar{x} \) = 14.71, S.D. = 2.35

According to Table 2, when the students studied the Supplementary Curriculum of Working, Occupation, and Technology Learning Substance based on Sufficiency Economy Philosophy for enhancing the Primary School Students’ Life Skill, the Mean Value of their posttest learning achievement was = 26.33 or 87.78.

(c) The characteristic based on Sufficiency Economy Philosophy, the evaluative findings of students’ characteristic based on Sufficiency Economy Philosophy after obtaining the Learning Activity Management based on Curriculum, the evaluative findings in “Knowing an Leaning Oriented” passed criterion 92.38%, \( \bar{x} = 9.23 \), and \( S.D = 0.93 \), in “Honesty” passed criterion 89.50%, \( \bar{x} = 8.95 \), and \( S.D = 0.92 \), in “Public Mind,” passed criterion 94.76%, \( \bar{x} = 9.48 \), and \( S.D = 0.89 \), in “Sufficiency” passed criterion 93.33%, \( \bar{x} = 9.33 \), and \( S.D = 0.96 \).

Phase 4, the curriculum evaluation in related persons including the teachers, committees, and students found that the Propriety of curriculum was in “the Highest” level.
DISCUSSIONS

The Curriculum Development of Supplementary Substance Curriculum in Working, Occupation, and Technology Learning Substance based on Sufficiency Economy Philosophy enhancing Primary School Students’ Life Skill, there were issues to be discussed by the researcher as follows: a) the findings of situation, problem, and need for establishing the curriculum, b) the findings of curriculum development, c) the findings of curriculum use, and d) the findings of curriculum evaluation included the following details:

(a) The findings of situation, problem, and need for establishing the curriculum by analyzing the students’ need, and society were congruent with Tyler’s (1949, pp.11-13) suggestion for using the various guidelines, found that the cause of current problem in Thai Society, was the lack of morality for 22.66%. The opinion and need for curriculum development, found that the need for Supplementary Life Skill Curriculum was = 26.11%. The findings from asking the related persons could conclude the framework of Supplementary Substance Curriculum in Working, Occupation, and Technology Learning Substance based on Sufficiency Economy Philosophy enhancing the Primary School Students’ Life Skill, the students had to have knowledge and competency in livelihood as well as human support based on Sufficiency Economy Philosophy. It was specified in curriculum goal developed by the researcher. It was necessary to study the necessary information for curriculum development from: a) documents, textbooks, and related research literatures, b) the curriculum of Working, Occupation, and Technology Learning Substance, c) the Sufficiency Economy Philosophy, and d) the Curriculum Development for being guidelines in Curriculum Development.

(b) The findings of Curriculum Development consisted of: a) the Meaning, Significance, and Type of Curriculum, b) the Vision, c) the Rationale, d) the Objective, e) the Indicators and Learning Substance, f) the Curriculum Structure, g) the Learning Management Determination, h) the Course Description, i) the guidelines for Instructional Activity Management, j) the Measurement and Evaluation, and k) the Measurement Rationale for Practice. The tentative Curriculum was investigated the Congruence by experts. The findings of curriculum structure investigation in congruency of curriculum development by the experts, found that the overall congruence was in “High” level ($\bar{x} = 4.43$ $SD = 0.56$). It was tried out with the samples as well.

(c) The findings in trying out the developed instrument for using in Instructional Activity Management were as follows: a) the Supplementary Substance Curriculum in Working, Occupation, and Technology Learning Substance based on Sufficiency Economy Philosophy enhancing the Primary School Students’ Life Skill, 14 Plans, total of 20 hours, was tried out with the samples as 21 Pratomsuksa 5 Students, Ban-han-nong-Samakkee School, during the first semester of 2014 academic year, b) the comparison of life skill development between pretest and posttest, found that the students had significantly higher posttest life skill than pretest at 0.1 level. It was supported by Zipora, Merav and Judy’ (2005, pp.140-144) study in “The Effect of Life Skill Practice on Teachers’ Perception in Environmental Condition and Self Efficacy focusing on 4 aspects of Life Skill including: The Life Goal and Self Identity Development, the Decision Making and Problem Solving, the Interpersonal Relationship, and the Physical Health Maintenance. c) The study of learning achievement of students taught by curriculum, the researcher administered the Learning Achievement Test for students’ posttest, found that the students had desirable characteristic in “Knowing and Learning Oriented,” passing the criterion 92.38%, $\bar{x} = 9.23$, and $SD = 0.93$. The evaluative findings of students’ desirable characteristic in “The Honesty,” the students had desirable characteristic in Honesty passing criterion for 89.50%, $\bar{x} = 8.95$, and $SD = 0.92$. The evaluative findings in students’ desirable characteristic in “The Sufficiency,” the students had desirable characteristic in Sufficiency passing criterion for 93.33%, $\bar{x} = 9.33$, and $SD = 0.96$. The evaluative findings of students’ desirable characteristic in “The Public Mind,” the students had desirable characteristic passing criterion for 94.76%, $\bar{x} = 9.48$, and $SD = 0.89$. It was supported by research findings of Kittel (2004) : 883-A in developing the criterion of evaluation and curriculum evaluation by using the guidelines of compulsory Education to test whether each guideline especially in the Learning Process, Emotion, Behavior, and General Nature Development.

(d) The evaluative findings in Phase 4, included the curriculum evaluation, the evaluation of Feasibility of curriculum. The informants were 5 teachers and committees, 5 school boards, 21 students’ parents, 5 experts, 21 students, total of 57 persons. The evaluation from related persons in curriculum development were 57 persons. a) The findings of Questionnaire administered for collecting data with 21 Pratomsuksa 5 Students, found that, in overall, the students’ opinion on curriculum was in “The Highest” level. b) The findings of Questionnaire administered for collecting data with 36 related persons with curriculum development including 5 teachers and related persons, 5 school boards, 21 students’ parents, and 5 experts, total of 36 persons. The Questionnaire of related persons was calculated the Mean and Standard Deviation, found that, in overall, the related persons expressed their opinion on the curriculum use in “The Highest” level. The evaluative findings found that the developed and revised curriculum consisted of Propriety in using for Learning Activity Management for enhancing the students’ to obtain knowledge as well as necessary skill for livelihood based on Sufficiency Economy Philosophy. It could develop the students’ desirable characteristic based on Sufficiency Economy Philosophy, and be competent in using their life skill as the objective of curriculum.
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