The Local Context-Based Instructional Model of the 21st-Century Career Skills Development for Primary Students in Chiangrai

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Abstract

The purpose of this study is to create and assess the local context-based instructional model of the Twenty-First Century career skills development for primary students in the NangLae sub-district, Chiangrai Province. The methodology was divided into two steps: 1) Creating and examining the quality of the model and 2) Implementing and assessing the model. The samples were fifteen educational stakeholders, twelve teachers, and eighty-two students in the NangLae area. Research instruments included 1) the local context-based instructional model, 2) the evaluation checklist of the Twenty-First Century career skills for the students, 3) the checklist of student attitudes towards the model, and 4) the checklist of teachers' opinions on the model implementation. The data were statistically analyzed using the mean, standard deviation, and t-test. The results of the study were as follows: First, the instructional model was sorted into five stages: 1) Context Introduction, 2) Information Searching, 3) Action, 4) Learning Discovery, and 5) Reflection. Besides, the model was approved and highly rated by educational experts. The average score of the validity was 4.57, with entirely feasible. Second, the model could enhance the students with Twenty-First Century career skills. Third, the students had rather high positive attitudes toward learning. Lastly, the teachers mostly agreed that the learning collaboration among the students was the key factor for developing students' career skills.

Keywords: *Instructional Model, Career Skills Development, Local Context-based, Primary School, 21st Century*

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1. Introduction

Education is a crucial factor for country development, and its critical role is expected to enhance people's potentialities to make careers and drive the national economy. Therefore, the Ministry of Education has proposed an educational reform plan set for the year 2015-2021, focusing on building up the population's competitiveness on the world stage. Also, the Office of the Basic Education Commission (OBEC, 2015) has emphasized sustainable human resources development, and "career skills" is the emphasis. They have set out the strategy of career skills development for all primary and secondary learners. Prospectively, the students can clearly imagine their career pathways in the future, explore self-talent and interest, as well as plan and pursue themselves for further study or a high-quality workforce.

Career skills are job qualifications that schools must prepare for their students to gain essential competencies for work. Those skills are foundation skills of reading, writing, and arithmetic, as well as the transferable skills or soft skills, which includes critical thinking, problem-solving, creativity, cross-cultural understanding, collaboration, leadership, communication, ICT, information and media literacy, and entrepreneurial abilities (UNESCO, 2012; OBEC, 2015).

At present, the country's workforce production does not respond to the labor market. Employees' work competencies do not meet the employer's needs (NESDC, 2016). Furthermore, Thailand's competitiveness ranking has dropped from the 38th to 40th in the Global Competitiveness Index ranking for 2019, and the educational component is the overall traction. A lack of critical thinking teaching in Thailand had been affecting the country's competitiveness (World Economic Forum, 2019). In schools, young people's educational pathways were shortened due to economic or exclusion factors. Sixty percent of the students leave the education system during secondary school (Office of Quality Promotion in Learning Society and Youth, 2013). Same as NangLae's educational situation, most students and parents agreed that the education is unnecessary for them as it does not relate to their real-life nor provide them occupations, so many students stop their studies (NangLae Sub-district Municipality, 2015). Dropout causes students to pursue careers without skills. Consequently, they became disqualified labors who lack skills and competencies that meet the demands, affecting their abilities to earn income and to improve their life quality.

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NangLae sub-district is an important agricultural area of Chiangrai Province. Most people are farmers, and the popular farming product is pineapple. NangLae is quite attractive for tourists because of its beautiful and natural landscape. However, the municipality administrators desire to improve people's quality of life. The area development policies have been focusing on creating value-added farming products and developing excellent quality tourist attractions (NangLae Sub-district Municipality, 2015). To successfully carry out the plan, NangLae people must have been enhanced with essential competencies to professionalize themselves, which include the abilities to solve the problems, deal with others, and create a small business, for instance.

The context-based approach is based on the constructivism learning theory that links theoretical knowledge to daily life (DEMIRCIOĞLU and et al., 2015). There is evidence showing the positive impacts of the approach, which include an increase in the students' interest and enjoyment, as well as an improvement in their understanding (Ramsden, 1992; King, Winner, and Ginns, 2011). Therefore, this study aims to create an instructional model that the way of teaching underlines with the local context or real situations. Teaching activities emphasize active learning concepts that students are mainly engaged in the process of learning. This model is expected to provide students with the conception of the Twenty-First Century career skills that help them to apply their knowledge to other circumstances, whether further studying or working, as well as to live happily.

2. Objectives

To create and assess the local context-based instructional model of the Twenty-First Century career skills development for primary students in the NangLae sub-district, Chiangrai Province.

3. Materials and Methods

3.1 Research Design

This research was conducted using research and development methodology, and was divided into two phases as follows:

1.) Creating and Examining Phase

The initial investigation was conducted with qualitative research. Data were collected through a document study and a focus group discussion (FGD). The document study topics included learning theories, instructional development, the basic education core curriculum 2008, context-based learning, Twenty-First Century skills, and career skills. Besides, the data recording forms were also used for gathering information. The FGD participants were various specialists in the NangLae sub-district, such as school directors, teachers, educational supervisors, community leaders, and indigenous gurus. The purpose of the FGD was to obtain information about the current conditions and the desirable conditions of teaching career skills in schools. Data collecting tools included a questionnaire and an interview guide. All data were then analyzed and synthesized to create the instructional model and explained in the theoretical concepts of Joyce and Weil (2009), as shown in figure 1. The model quality was examined or validated by the experts using five rating scale checklist. Finally, the model was improved from the expert's suggestions before implementing it in the trial phase.

2.) Implementing and Assessing Phase

This phase was conducted using a quasi-experimental method with one group pretest-posttest design (Kidder et al., 1986). The samples were all primary pupils of Bann NangLae Nai School. The implementation began by training six teachers from P1 to P6 to design and apply lesson plans according to the steps of the model, then spending an hour a week in the class of "Moderate Class, More Knowledge" to teach the students for fourteen weeks. Before teaching, the learners had taken a pre-checklist to assess the fundamental understandings for the Twenty-First Century career skills that will be taught in a unit and repeated as a posttest at the end. The learners then gave responses to the model when the teachers express their opinions on the model implementation.

3.2 Research Sample

In Phase 1, the samples were an educational supervisor, two school directors, seven teachers, two community leaders, and three indigenous gurus from the NangLae area. All samples were selected with a

purposive sampling technique because, through this method, the researcher can choose people who are relevant to the criteria and the number of informants for the research (Bernard, 2002). In Phase 2, the samples were twelve teachers and eighty-two students of Bann NangLae Nai School in the first semester of the academic year 2018. Also, they were selected using a purposive sampling technique as the school director and teachers were interested and willing to participate in the program.

3.3 Research Instruments

In the Creating and Examining Phase, the instruments included a questionnaire and an interview guide for creating a group discussion and then validating by the experts using five rating scale checklist. The average score of the validity was 4.25, with "very feasible" ($\overline{x} = 4.25$). In the trial phase, the experiment tool was an instructional model that was examined and approved by the experts, and the data collection instruments included 1) the evaluation checklist of the Twenty-First Century career skills for the students, which was a five rating scale checklist using for assessing student's learning outcomes. The content structure of the lists had been divided into three dimensions; Self-actualization, Essential career skills, and Essential transferable skills. Three educational experts then examined the checklist for content validity, and the scores were analyzed using an IOC (Index of Item-objective Congruence). The lists were initially constructed for 30, but only 20 lists with a score of 1.00 of IOC were selected, 2) The checklist of students' responses to the model, which was a five rating scale checklist. The purpose of this checklist was to determine students' reflection in the learning activities of the model. Categorized lists were according to the activities, teacher's characteristics, and learning evaluation. The experts examined the checklist for validating; then, the scores were reckoned for the IOC. At last, only the lists with a score of 0.50 or upper were selected, 3) The checklist of teachers' opinions for the model implementation, which was a five rating scale checklist that aims to explore teachers' viewpoint towards a use of the lesson plan by the steps of the model to teach the students. The structure of the list was categorized into four parts, including content, activities, learning participation, and learning assessment. As well as other checklists, the experts validated this teachers' opinions checklist, and only the reasonably practicable lists with a score of 0.50 of IOC or upper were selected.

3.4 Data Analysis

In Phase 1, the data obtained from the participants were analyzed using content analysis. In phase 2, a descriptive analysis was employed to analyze the data, calculating the mean and the standard deviation. Besides, the students' achievements were also tested in Paired-Sample T-test to determine whether the model can grow students' understanding of the Twenty-First Century career skills.
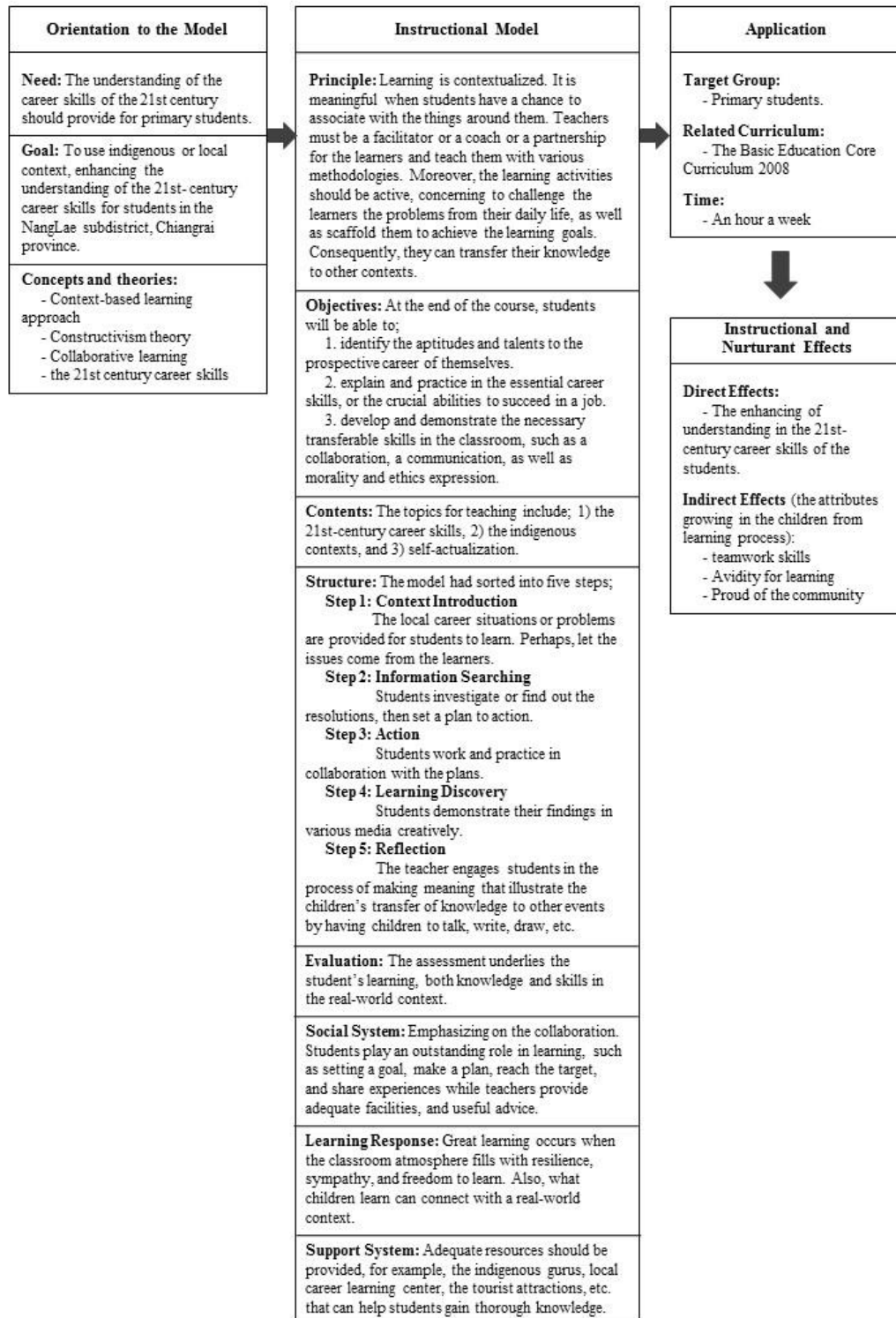
Orientation to the Model	Instructional Model	Application

Need: The understanding of the career skills of the 21st century should provide for primary students.
 	
Goal: To use indigenous or local context, enhancing the understanding of the 21st-century career skills for students in the NangLae subdistrict, Chiangrai province.
 	
Concepts and theories:
  - Context-based learning approach
    - Constructivism theory
    - Collaborative learning
    - the 21st century career skills
	Principle: Learning is contextualized. It is meaningful when students have a chance to associate with the things around them. Teachers must be a facilitator or a coach or a partnership for the learners and teach them with various methodologies. Moreover, the learning activities should be active, concerning to challenge the learners the problems from their daily life, as well as scaffold them to achieve the learning goals. Consequently, they can transfer their knowledge to other contexts.	**Target Group:**
		  - Primary students.
		
		Related Curriculum:
		  - The Basic Education Core Curriculum 2008
		
		Time:
		  - An hour a week

Instructional Model (continued):

Objectives: At the end of the course, students will be able to;
1. identify the aptitudes and talents to the prospective career of themselves.
2. explain and practice in the essential career skills, or the crucial abilities to succeed in a job.
3. develop and demonstrate the necessary transferable skills in the classroom, such as a collaboration, a communication, as well as morality and ethics expression.

Contents: The topics for teaching include; 1) the 21st-century career skills, 2) the indigenous contexts, and 3) self-actualization.

Structure: The model had sorted into five steps;
  Step 1: Context Introduction
    The local career situations or problems are provided for students to learn. Perhaps, let the issues come from the learners.
  Step 2: Information Searching
    Students investigate or find out the resolutions, then set a plan to action.
  Step 3: Action
    Students work and practice in collaboration with the plans.
  Step 4: Learning Discovery
    Students demonstrate their findings in various media creatively.
  Step 5: Reflection
    The teacher engages students in the process of making meaning that illustrate the children's transfer of knowledge to other events by having children to talk, write, draw, etc.

Evaluation: The assessment underlies the student's learning, both knowledge and skills in the real-world context.

Social System: Emphasizing on the collaboration. Students play an outstanding role in learning, such as setting a goal, make a plan, reach the target, and share experiences while teachers provide adequate facilities, and useful advice.

Learning Response: Great learning occurs when the classroom atmosphere fills with resilience, sympathy, and freedom to learn. Also, what children learn can connect with a real-world context.

Support System: Adequate resources should be provided, for example, the indigenous gurus, local career learning center, the tourist attractions, etc. that can help students gain thorough knowledge.

Application — Instructional and Nurturant Effects:

Direct Effects:
  - The enhancing of understanding in the 21st-century career skills of the students.

Indirect Effects (the attributes growing in the children from learning process):
  - teamwork skills
  - Avidity for learning
  - Proud of the community

Figure 1 The Local Context-based Instructional Model

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4. Results and Discussion

4.1 Creating and Examining Phase

The Current Conditions and the Desirable Conditions of Teaching Career Skills in Schools

In this section, the findings obtained from the analysis of the reflection of a focus group discussion (FGD) aiming to study the schools' background before designing the model and the result were reported in Table 1.

Table 1 The Current conditions and the Desirable Conditions of Teaching Career Skills in Schools

Subjects	Current Conditions	Desirable Conditions
School curriculum	- The school curriculum structure has associated with the Basic Education Core Curriculum 2008. - The National Curriculum has prescribed the learning time for this course forty hours a year for P1-P3, while P4-P6 is eighty. - Most schools seldom focus on the subjects because the subjects for the ONET exam, such as Mathematics, Thai Language, and English Language, are more critical. - OBEC has launched the "Guidelines for Teaching Career Skills," as well as encouraged schools to implement it as an additional course or an additional activity. - The indigenous knowledge or the local contexts are not mentioned in the curriculum.	- Develop a local curriculum that belongs to each school and engage people in the community to participate in the creating. - Strongly promote the teaching in vocational skills in schools, and pay attention to it as much as other subjects.
Learning contents	- The contents are indicated in the Learning Area of Occupations of the national curriculum and teaching in the Basic Course. - The main contents include work in daily life, essential skills to learners' occupations, recognition of the importance of morality, ethics and favorable attitude towards occupations, ability to use technologies appropriately, appreciation of the value of honest occupations, and ability to see the prospect for a future career. - Not all contents are delivered, some are skipped.	- Add or integrate the content of the local context into the school curriculum. - Design the contents that suit the students' level. - Keep not too much content; only ones that relate to real life.
Learning activities	- Most teachers do not specialize in teaching the vocational course because they did not graduate in the related field. - The teachers often use lecturing for a teaching method and less practice in class. - Students occasionally learn from the real context, but usually, study in a book.	- Provide students more opportunities to learn with the authentic situation. - Focus on learning by doing and active learning. - Apply several teaching methods. - Train the teachers on the teaching strategies for a vocational course.
Learning Assessment	- The majority of teachers typically use a test to assess the learning outcome.	- Utilize various instruments to assess the students.

Subjects	Current Conditions	Desirable Conditions
		- Concentrate on performance and learning process rather than contents. - Emphasize the authentic assessment.
Role of students	- Most students are the recipient of the information, or the listener, as well as inactive and no passion for learning.	- Be active when participating in learning activities.
Role of teachers	- Many teachers regularly tell or explain the lessons and use a coursebook as a guideline for teaching, and a few designs the course themselves.	- Change the role of a teacher to a facilitator or coach. - Have the ability to design the course that could lead the students to meet the standard of the national curriculum.

The Local Context-based Instructional Model and the Quality

The local context-based instructional model comprised four parts, 1) orientation, 2) instructional model, which dividing into five steps, 3) application, and 4) instructional and nurturant effects, as shown in figure 1 above.

Also, the quality of the model was examined or validated by three experts using a five rating scale checklist. The overall average score of the validity was 4.57, with "entirely feasible" ($\bar{X} = 4.57$), as illustrated in Table 2.

Table 2 The Quality of the Model Evaluation

Domains	$\bar{X}$	S.D.	Category
The principle of the model	4.45	0.57	very feasible
The objective of the model	4.53	0.57	entirely feasible
Learning contents	4.73	0.34	entirely feasible
Learning Activities	4.60	0.45	entirely feasible
Learning Assessment	4.55	0.57	entirely feasible
Total Average	4.57	0.50	entirely feasible

In the creating and examining phase, a high score of validity inferred that the model was high quality and entirely feasible to use for teaching students. The reason was that the researchers paid attention to the process of finding essential information. As it is the research and development for educational innovation, gathering and analyzing background information such as problems, needs, or current situations is necessary as the researchers can apply those data in designing a significant innovation to solve the problems and to satisfy the users (Buasont, 2009). In this research, the useful data were derived from a concept and theoretical study according to the constructivism theory, collaborative learning, context-based learning, career skills in the Twenty-First Century, and from the discussion among the school directors, teachers, community leaders, and indigenous gurus in NangLae area. Both document study and focus group discussion provided the vital information greatly influencing the good instructional model design as all components were congruent and created a direct impact upon the quality of the model (Joyce and Weil, 2009).

4.2 Implementing and Assessing Phase
Students' Understanding of the 21st Century Career Skills

In determining the degree to which students understood the Twenty-First Century Career Skills, the results from the pretest and posttest of 82 students were presented in Table 1 as follows.

Table 3 Students' Understanding of the 21st Century Career Skills (n=82)

Domains	Total Score	Experiment	X̄	S.D.	D	t	p
Self-actualization	30	pretest	15.74	1.09	7.13	42.02	.000
		posttest	22.87	1.40			
Essential vocational skills	40	pretest	18.23	1.74	11.70	50.85	.000
		posttest	29.93	2.78			
Essential transferable skills	30	pretest	19.15	1.70	5.13	21.15	.000
		posttest	24.28	1.43			

*$p < .05$

Table 3 reveals that the average score of the posttest was higher than the pretest in all domains, and the highest score was at the Essential vocational skills. The results also showed that the model could enhance the students' understanding of Twenty-First Century career skills. The model played out the classroom and achieved learners' outcomes because it was well-constructed from various concepts and theories and the participation among the local stakeholders. The five steps of the model were designed to relate to the real situations in the community, and it proceeded with teaching and learning activities smoothly. Throughout the local context-based instructional design, the students had attempted to illustrate the understanding in their tasks, enjoyed the learning, and also implied the effectiveness of teamwork. Many studies found that the context-based approach had a positive impact on student learning, increased interests and enjoyment, and enhanced children's understanding (Bennett & Holman, 2002; Ramsden & Judith, 1992; Sutman & Bruce, 1992). Besides, students can learn vocational skills efficiently when the lessons were designed to draw their attention and related to their daily life. The learning activities should provide the children freedom of learning, in which they had a chance to study themselves, as well as the collaboration that they learned together as a group or team. Also, the teacher's role as a facilitator or coach can broaden the students' knowledge and help them to find themselves to meet the prospect career in the future (Gillbert, 2006; Warren, 2006; Saicichai, 2014, Phramchoo, 2010).

Students' Attitudes about Context-based Approach to Learning

The results of the students' responses to the model revealed an impressive student perception of context-based learning activities. Data from student surveys of P1-P3 showed that the students strongly considered the teacher's characteristics, namely giving helpful advice, having a challenge question, and appearing friendly, which were particularly crucial for the learning achievement. On the other hand, the P4-P6 students felt strongly in lessons and activities that helped them to understand the content easily. These students preferred to learn in a group and thought that the lessons were thoroughly familiar with their experiences, making the lessons became interesting and enjoyable for them. According to the study of Wannagatesiri and et al. (2017), a context-based approach offers an advantage in students' learning, especially for arousing their interest and expanding the learners' conceptual understanding. Learning in the team helped the students practice planning, assigning responsibility, sharing the idea, listening to others, and improving tasks together to reach the goal. All of these practices involved the development of collaboration skills that are essential for a future career (Tongdeelert, 2004). Also, Tinzmann (1990) discussed the role of the teacher in helping students to learn well that teachers must provide essential advice and allow children to share their expression. The teacher's role as a facilitator or coach assists students to succeed and make themselves proud.

Teachers' Opinions for the Model Implementation

After the teachers finished using the context-based lesson plans, they strongly agreed that learning participation or working in a group among learners was the critical factor that enhanced the learners' understanding, which was similar to students' opinions that preferring the collaboration. As MacGregor (1990) states, "Knowledge is shaped, over time, by successive conversations, and by ever-changing social and political environments." Collaborative learning drives positive responses to students' outcomes, both educational and psychological. In group learning, children have the opportunity to share their understanding with others, helping them broaden their perspective and construct knowledge within themselves (Cooper and Robinson, 1998; Slavin, 1995).

5. Conclusion

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From the result and discussion of this study, it can be concluded that the local context-based instructional model had a positive effect on students' learning outcomes, enhancing the students' understanding of the Twenty-First Century career skills, as well as great positive attitudes for learning. Also, the teachers mostly agreed that the learning collaboration among the students was the key factor for developing students' career skills.

The result also illustrated that contextual learning provided the children with daily life circumstances that help them to relate what they learned to prior knowledge and enhance their understandings. Collaborative learning also provided the children an opportunity to share their insights among the members, "the more they listened, the more they learned." Therefore, learning together can help learners construct the knowledge themselves.

In future studies, the local context-based learning packages in the career skills development would set explicitly to the students of each level and each community and provide a tool that facilitates the teachers' teaching. Besides, a training course for the role of a facilitator would be designed uniquely to help the teachers creating a positive environment for the students' learning.

6. Acknowledgments

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