Implementing of the employees training evaluation using Kirkpatrick’s model in tourism industry - A case study

Siti Zahro¹ and Ming Chang Wu²

¹PhD Student, Graduate School of Technological and Vocational Education, National Yunlin University of Science and Technology, Yunlin, Taiwan

²Professor, Graduate School of Technological and Vocational Education, National Yunlin University of Science and Technology, Yunlin, Taiwan

Abstract: The study purpose was to determine the effects of this program taking the Kirkpatrick evaluation method in the Eco Green Park (EGP) that focused on the four major levels: participants’ reaction, learning, behavior, and performance outcomes. It is a tourism site providing a series of environment-protection education. In order to prepare employees with ecological knowledge, the leaders undertook training programs regarding handicraft manufacturing using recycled materials. To evaluate this program, researchers collaborate with leaders used the method of experimental research with a quantitative approach to measuring research aim. The number of participants was all employees with 65 trainees. The test and non-test were used as instrument and descriptive analyzes were performed with SPSS. The study result showed that evaluation of the first level was well that seen from the perception of trainees who have reacted well to the training. Evaluation of the second level was excellent that showed by participants gained additional knowledge and skills in training. The third level of the evaluation showed very good behavior that obtained from the assessment conducted by the department heads of each employee. While, evaluation of the fourth level was increased before and after the training. Some suggestions that given were should be done periodically, and the training evaluation should involve education experts and leaders to evaluate properly and regularly in order to give a positive impact on employees and companies.

Keywords: program, handicraft, reaction, learning, behavior, result.

1 Introduction

Garbage, a severely disturbing thing in the whole world, keeps receiving the highly attention in the last decade. The number of human population resulted in increased waste every day. Waste management is not good to be bad for the environment. Not only the government’s attention but also public's participation in the recycling of waste is very important, especially the Indonesian government. Batu city which are located at average altitude of 700-1700 m above sea level and average air temperature reaches 12-19 degrees Celsius is a tourism city located in Indonesia [24]. Batu city has many tourism places, one of the tourism places is ECO Green Park. ECO Green Park gives attention and learning about the process and the use of waste for society. ECO Green Park interested in waste management education.

The ECO Green Park purpose is to provide knowledge and skills to visitors. Visitors are given education and training such as waste management, utilize of waste, renewable energy, and others. ECO green park motto is fun and study, so that learning and training undertaken with fun. Materials of Learning and training in ECO Green Park is supported by the media are very creative learning and innovative. However, employee cannot be deliver learning properly. Based on initial
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observation by researchers. Observation found 99% of employees do not have a background as a coach. Therefore, learning and training do not give effect to visitors and do not correspond to the learning objectives desired by visitors.

Based on this, employees need training to upgrade and improve its performance. The purposes of training are providing new knowledge and improve the skills of employees to serve visitors. So that, learning and training in ECO Green Park can be delivered properly and appropriate learning objectives by employees. Therefore, evaluation of the training program is very important. The aims of training evaluation are to describe the condition of the participants before, during, and after training. Evaluation of training programs used Kirkpatrick evaluation model. Kirkpatrick evaluation model has four levels of evaluation, namely, the reaction is used to determine how the reactions of participants during the training, learning is used to measure the knowledge and competence before and after training, behavior used to observe changes in attitude and apply the training materials in the workplace, and the results are used to determine the final outcome of the trainees, the final assessment carried out by the management company.

Based on an illustration above, the general aim of this article is to know the impact of the training of craft trash in the tourism industry using the Kirkpatrick’s model as an evaluation approach. The paper discuss four evaluation levels in applying the evaluation of the Kirkpatrick model approach in the handicraft training with the specific goals are to describe:

- The participants' reaction as long as training;
- The participants' learning was obtained before and after training;
- The participants' behavior after training; and
- The participants' final evaluation results after training.

2 LITERATURE REVIEW

2.1 HANDICRAFT FROM WASTE MATERIALS

Papers can be written in English, French, Spanish or Arabic. Handicraft is handmade using simple tools, made of natural materials, and combine traditional production methods in making [36]. This is to emphasize the hand skills and function to process raw materials that are often found in the environment into objects that are not only valuable to use, but also the aesthetic values with special expertise relating to the hand [25].

Khan and Amir [1] explained that the raw material handicraft using existing local materials, both organic and inorganic materials. One of them tapped inorganic waste as raw material for handicraft [2], for example: paper [3], plastic [4], coconut shell [5], carved stone [6], and others. Utilization of waste for handicraft products will have the power efficiency and high value that makes handicraft developed to be used as the business community (creative industries) and developed in the world of education.

2.2 TRAINING

Training is a systematic approach that affects the knowledge, skills, and attitudes of individuals to improve individual, team, and organization to be effective [7]. Training is also the approach used by managers and coaches [26] as an investment for the company to improve the competency to prepare employees for positions have an impact on employee performance [8]. The research results found that job training has a significant relationship to performance [9]. While other studies stated that the training effect give a positive impact on employee performance [10].

Some important indicator in the training of employees is a coach, training time, and supervision of the management [11]. While the Australian National Training Authority [27] states that some indicators of the quality of training are (1) the incorporation of the basic materials in training, (2) the introductory training for program changes, (3) implementing the training, (4) improve the monitoring, (5) consultation, teaching, motivating trainees, and (6) evaluation of the trainees. Through the implementation of standardized training, have an impact on improving employee commitment and reducing the number of employee resignation [12].

2.3 KIRKPATRICK MODEL EVALUATION

Evaluation is also an indicator that is very important to determine the contribution of training to the development of the productivity of individuals, teams, and organizations [13]. Furthermore, Obisi [14] states that the evaluation program training needs to be done by seeing the reactions of employees who attend training are already implementing a training program as well. In addition, the evaluation of training programs not only affect the employees who attend training course but also
affect the company as a whole, so that the information is accurate and on process the implementation of the program, the impact/results achieved, the efficiency and utilization of program evaluation results will be obtained by implementing a training program [28]. While the evaluation model of training that can be used by the executor of training. There are several models, namely: (1) the model Kirkpatrick [32], (2) models Context, Input, Process, Product (CIPP) [15], (3) approaches Training Validation System (TVS), and (4) the model inputs, Process, Output, Outcome (IPO) [16].

One theory regarding the evaluation of training proposed by Kirkpatrick known as the four levels technique for evaluating training programs, consisting of: reaction, learning, behavior and results [29]. The reaction is defined as how well the trainees liked a particular training program that is collecting data on participants' reactions at the end of the training program. Learning is defined as an attitude change derived from the knowledge and skills learned by trainees. Behavior is defined as the extent to which changes in the former trainee at the time the trainees return to work after the training environment. While the result is defined as the extent of the training impact/results to the improved performance of former participants, work units, as well as the company as a whole [30].

2.4 TOURISM INDUSTRY

Handicraft is handmade using simple tools, made of natural materials, and combine traditional production methods in making [31]. This is to emphasize the hand skills and function to process raw materials that are often found in the environment into objects that are not only valuable to use, but also the aesthetic values with special expertise relating to the hand [28].

3 METHODOLOGY

This study used the method of experimental research with a quantitative approach. The research design adapted a lesson-study model (PLAN, DO and SEE). The study focused on "DO". In other words, "DO" is the implementation of the training. Thus, the implementation of the training was evaluated by four-level Kirkpatrick models. Research conducted for six months and consists of three stages of research. These stages are (1) the planning was done during the first months (PLAN), (2) the implementation and evaluation of training conducted over four months (DO), and (3) discussing of the results training implementation evaluation (SEE). Based on the research design, the detail of the evaluation carried out on handicraft training in Figure 1. The study design was designed to obtain the results of an evaluation using a model of effective Kirkpatrick [17] and more accurate [18]. The involvement of industry leaders and education experts are also designed to purpose maximum results in this design.

3.1 SAMPLE

Research participants were 65 employees from nine departments in ECO Green Park (marketing, fun and games, animals, science center, accounting, common areas, gardeners, engineering, F and B). Participants’ criteria is work experience between 1 to 2 years, aged between 20-45 years, and graduated from high school or vocational high school.

3.2 INSTRUMENT

The instrument of this study used the test and non-test to investigate the implications of handicraft training in the tourism place. Based on the evaluation of Kirkpatrick model, this instrument has developed by researchers with four constructs, level 1: reaction (10 items); level 2: learning (46 items); level 3: behavior (10 items); and level 4: result (8 items). The test was used to the construct test in the evaluation level 2, namely learning and non-test (questionnaire) used to evaluate the level of 1, 3, and 4. Instruments in this study had a validity value, namely 0.83 for the reaction questionnaire, 0.80 to learning questionnaire, and 0.85 for the behavior questionnaire. The reliability value of each questioner is 0.76 for the reaction questionnaire, 0.80 to learning the questionnaire, and 0.78 for the behavior questionnaire. Meanwhile, the validity and reliability of the result does not count, because the result level have been using employee assessment sheet that has been used by ECO Green Park leaders.

3.3 DATA COLLECTION

Collecting data of this study using two techniques were questionnaires and documentation. This study used a questionnaire enclosed with present five alternative answers. Alternative answers are used to reveal the perceptions and opinions on the training implications of handicraft made of trash tourism place. This questionnaire will be distributed to
employees to assess how the training was held. The questionnaire was administered after the training is completed. Behavior questionnaire was given to the department head of each division for each employee training to evaluate changes in attitudes, knowledge and skills acquired trainees (behavior evaluation) after training. This questionnaire to see if the trainee apply all acquired during training after returning to the work environment. While, the documentation in this study is used to obtain data from documentation in the form of the existing performance assessment will crosscheck with the data from the questionnaire given to employees and data assessment of the results of lesson study. Documents such as performance assessments before and after training was also used to support the evaluation result.

3.4 DATA ANALYSIS

To data analysis, researchers identified five categories to determine good-not good research variables, namely: very less, less, pretty, good, and excellent. The criteria for determining the interval of each category was calculated using the average ideal as a benchmark to determine the category. The further descriptive analysis was used to provide a snapshot of the data collected from the questionnaire handicraft training implementation and to describe tendency of the data seen from the average, median, standard deviation and variance of the data of each variable. While the normality test and descriptive analyses were performed with SPSS for Windows version 21.

4 RESULTS AND DISCUSSIONS

Descriptive analysis was conducted from 65 research respondent data on the implementation of handicrafts made from garbage training in the tourism industry. Evaluation of Kirkpatrick model divided according to level, level 1 to reaction, level 2 of learning, level 3 to behavior, and level 4 to result. Table 1 shows that the average value of standard deviation was 285.8 and the average value of standard deviation is 89.16, so the general opinion of the employees is very good on the implementation of handicrafts training in the tourism industry. While the value of skewness and kurtosis is indicated that the data is normal.

<table>
<thead>
<tr>
<th>Kirkpatrick levels</th>
<th>Number</th>
<th>Mean</th>
<th>Standard Deviation</th>
<th>Skewness</th>
<th>Kurtosis</th>
</tr>
</thead>
<tbody>
<tr>
<td>Level 1 - reaction</td>
<td>65</td>
<td>81.60</td>
<td>2.67</td>
<td>-.680</td>
<td>-.884</td>
</tr>
<tr>
<td>Level 2 - learning</td>
<td>65</td>
<td>81.71</td>
<td>4.95</td>
<td>-.317</td>
<td>-.498</td>
</tr>
<tr>
<td>Level 3 - behavior</td>
<td>65</td>
<td>81.54</td>
<td>5.37</td>
<td>.129</td>
<td>.273</td>
</tr>
<tr>
<td>Level 4 - result</td>
<td>65</td>
<td>86.11</td>
<td>3.02</td>
<td>-.996</td>
<td>.742</td>
</tr>
<tr>
<td>Total</td>
<td>-</td>
<td>285.80</td>
<td>89.16</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

Kirkpatrick model presented four levels to actually gauge the results of training. As this research focuses to implement Kirkpatrick model levels for handicraft training program to establish effectiveness of training program. Descriptions for each level of Kirkpatrick model was mapped to different activities at each stage of trainings as following.

4.1 LEVEL 1 – REACTION

The reaction is basically the immediate feedback of participants after the training [16]. To calculate Training feedback (reaction) of each handicraft training batch, a questionnaire form was used. The questionnaire had nine questions and participants ranked each question against five given options (strongly agree, agree, neither agree or disagree, disagree, and strongly disagree). To calculate the result from the questionnaire, all the items was analyzed by SPSS. Furthermore, the average score for each question was grouped into five categories to determine good-not good of handicraft training (very less, less, pretty, good, and excellent). These scores were used to get the quantified result of feedback. The average score of feedback by all participants was considered as the training feedback (reaction) to handicraft training program.

Level one does not just include reactions toward the overall program (e.g. training benefits), it also include measurement of participants’ reactions or attitudes toward specific components of the program, such as the instructors, the materials, the media, and the time allocation. Finally, the measurement of specific aspects of the training program can provide important information about what aspects of the training program can be improved in the future for employees. More details can be seen in Table 2.
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Table 2. Handicraft Training Results at Reaction Level

<table>
<thead>
<tr>
<th>Items</th>
<th>Mean</th>
<th>Categories</th>
</tr>
</thead>
<tbody>
<tr>
<td>The training material is a new material for me.</td>
<td>84.30</td>
<td>Excellent</td>
</tr>
<tr>
<td>The training materials can be applied to my work</td>
<td>77.50</td>
<td>Good</td>
</tr>
<tr>
<td>The training materials provide new knowledge for me to be a teacher</td>
<td>78.70</td>
<td>Good</td>
</tr>
<tr>
<td>The training facility supports training programs</td>
<td>80.00</td>
<td>Good</td>
</tr>
<tr>
<td>The allocation of sufficient training time is used to study the training materials</td>
<td>84.60</td>
<td>Excellent</td>
</tr>
<tr>
<td>The learning media can support learning</td>
<td>85.80</td>
<td>Excellent</td>
</tr>
<tr>
<td>Trainers involve trainees during the learning</td>
<td>84.00</td>
<td>Good</td>
</tr>
<tr>
<td>The training program should be done regularly</td>
<td>73.80</td>
<td>Good</td>
</tr>
<tr>
<td>The training program provides benefits in order to support my work at work</td>
<td>88.00</td>
<td>Excellent</td>
</tr>
<tr>
<td>Total</td>
<td>81.60</td>
<td>Good</td>
</tr>
</tbody>
</table>

Table 2 showed the results of the analysis that the majority of employees believe good (81.8) on the implementation of handicraft training is done with a mean of 81.6. This means that the relevant training undertaken by the wishes expected by employees to support the performance development in the tourism industry. The results of the reaction are good, due to the implementation of the training was planned well in advance and supported by all employees and the company management. Besides training handicraft perceived as a new training model more creative and innovative as well as never been done before.

4.2 LEVEL 2 – LEARNING

Level 2 is to determine what the training program participants learned during the training event. One can define it as techniques, knowledge and abilities actually acquired by trainee due to training [16]. To get this, level 2 evaluation of handicraft training, experimental research designs with one-group pre-test-post-test design were used. These were done to determine if participants gained the knowledge, skills, and attitudes on before and after the training. They were measured using achievement tests that constructed by instructors (tests designed to measure the degree of learning that has taken place, i.e.: pedagogic competency, social competency, and professional competency). Table 3 shows the final result of this level.

Table 3. Handicraft Training Results at Learning Level

<table>
<thead>
<tr>
<th>Parameters</th>
<th>Mean</th>
<th>Category</th>
<th>Percent (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pedagogic competency</td>
<td>84.8</td>
<td>Excellent</td>
<td>94.2</td>
</tr>
<tr>
<td>Social competency</td>
<td>80.4</td>
<td>Excellent</td>
<td>88.4</td>
</tr>
<tr>
<td>Professional competency</td>
<td>79.9</td>
<td>Good</td>
<td>90.8</td>
</tr>
<tr>
<td>Total</td>
<td>81.7</td>
<td>Excellent</td>
<td>91.13</td>
</tr>
</tbody>
</table>

The analysis result of Table 3 showed that the study carried out in training handicraft rated as excellent (91.13%) by the majority of employees of the tourism industry with a mean of 81.7. This means that the learning was done in accordance with the expectations and objectives of the training. This can be seen by doing a pre-test and post-test, the results showed an increase in their knowledge and skills after training this handicraft. The training was in line with expectations due to the employee not only done a tutorial, but also practice directly in the field. Competence was measured in learning activities consist of pedagogical competence, social competence, and professional competence. The pedagogical competence is used to lead one of the educational activities with learners [19]. Social competence is defined as effectiveness in social interaction, with transactional, context-dependent, and goal-specific characteristics [20] and professional competence is related to viewpoint on the personal of labor quality [21].

In stage 2, learning was done through three stages: learning tutorial, microteaching, and direct practice in the field. While learning assessment carried out involving the two sides both the tourism industry and the education world. The collaborative work can determine the result quality as a measure of evaluation success [22].
4.3 LEVEL 3 – BEHAVIOUR

Level 3 of Kirkpatrick Model is about monitoring actual behaviors that were demonstrated the trainees after training on the workplace. Level 3 (behaviors) evaluation was generated using monitoring worksheets generated by Lesson Study Team during six months. This team consisted of six people from the educational institution and nine people from the tourism industry. The Team always coordinate before and after monitoring by involving trainees in order that evaluation and reflection can be done by management and employees as a two-way communication. While indicator behavior is measured from the pleasure in training, implementing training materials in the workplace, sharing his knowledge with peers at work, positive attitude changes in the workplace, performance improvement, have new knowledge to support their work, increased confidence to convey ideas in the workplace, increased competence on the job, a change of behavior in the workplace, and increase creativity in the workplace.

The analysis results for level behavior are the majority participants showed a very good impact (90.5%) with a standard deviation of 81.5 on the implementation of handicrafts training. This means that training is done indispensable in motivating and supporting the tourism industry employee performance improvement. The method’s application was given through a tutorial and microteaching which then directly applied by a trainee in the workplace more employees’ perceived increase their confidence in improving professional skills creatively and better.

4.4 LEVEL 4 – RESULT

Level 4 of Kirkpatrick model talks about the actual results that affect the organization as a whole on a bigger scale. This data is the most complex level of Kirkpatrick model [16]. This level data were obtained from tourism industry management regarding employee performance report in each month. The parameters of performance report are presence, knowledge, responsible, ethics and courtesy, appearance, honesty, work loyalty, and self’s creativity. Table 4 below summarizes the results of handicraft training at result level of Kirkpatrick model.

<table>
<thead>
<tr>
<th>Parameters</th>
<th>Mean</th>
<th>Category</th>
<th>Percent (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Presence</td>
<td>87.40</td>
<td>Excellent</td>
<td>92.0</td>
</tr>
<tr>
<td>Knowledge</td>
<td>85.50</td>
<td>Excellent</td>
<td>95.0</td>
</tr>
<tr>
<td>Responsible</td>
<td>85.20</td>
<td>Excellent</td>
<td>94.7</td>
</tr>
<tr>
<td>Ethics and courtesy</td>
<td>85.26</td>
<td>Excellent</td>
<td>94.7</td>
</tr>
<tr>
<td>Appearance</td>
<td>85.50</td>
<td>Excellent</td>
<td>93.0</td>
</tr>
<tr>
<td>Honesty</td>
<td>85.60</td>
<td>Excellent</td>
<td>91.1</td>
</tr>
<tr>
<td>Work loyalty</td>
<td>85.70</td>
<td>Excellent</td>
<td>93.2</td>
</tr>
<tr>
<td>Self’s creativity</td>
<td>86.30</td>
<td>Excellent</td>
<td>92.0</td>
</tr>
<tr>
<td>Total</td>
<td>85.80</td>
<td>Excellent</td>
<td>93.2</td>
</tr>
</tbody>
</table>

Table 4 showed the analysis results that the majority of employees’ opinion toward the results of handicraft training was done stated very good (93.2%) with a mean of 85.80. This means that the training conducted deliver positive results to all participants in the tourism industry. Based on these results, industry needs to plan the ongoing training that targeted results can be achieved because it is supported by the employees as human resources competent, creative and innovative in improving its performance in the workplace.

The application of the four-level evaluation requires a certain period of time to get the desired results occur. Evaluation of four levels of Kirkpatrick’s model is a system of evaluation of training programs in order to get the maximum yield (ranging evaluation program reaction, learning, behavior, employee productivity, and increased profits for their organizations). This is in line with Esposito and Freda [23] that showed each evaluation level has a significant association with training outcomes which were effective and useful to hypothesize the development of a competence of use.

5 CONCLUSIONS

Training is one way to improve the competence of employees. Training is planned and according to the needs of employees, which have a positive impact for employees and companies. Therefore, the implementation of the training
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should be evaluated as carefully as possible, because the results of the evaluation will determine the implementation of further training. Evaluation of training that has been conducted gradual find out the achievement of the implementation of the training. Kirkpatrick evaluation model is the appropriate evaluation model, because it has four levels of evaluation. The results of the evaluation in this study concluded that evaluation at level 1, the reaction is otherwise well, it was seen from the perception of trainees who have reacted well to the training, evaluation at 2 levels, learn Viewed excellent, participants gained additional knowledge and skills in training, level 3 evaluation showed very good behavior, it is obtained from the assessment conducted by the department heads of each employee, and evaluation of level 4 is the result, the performance appraisal is obtained from the performance appraisal documents that have been made before and after the training.

In the application, the training should be done periodically. Thus, knowledge and skills of employees can improve the performance of the company. Handicraft training has been using materials from waste that can be recycled, so the company did not issue a high cost for this training. Training evaluation which has involved education experts and management to evaluate properly and regularly gave positive impact for employees and companies.

REFERENCES


