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END-USER TRAINING ON DIGITAL TEACHING TOOLS: REACTION, LEARNING, BEHAVIOR, RESULTS, AND MANAGEMENT

Abstract. The newly developed digital teaching tools, namely mobile class record application and portable learning management system were launched and distributed. This paper measures the evaluation rating of the region-wide end-user training on the classroom use and integration of the two digital teaching tools. A total of 74 trainees in Central Visayas, Philippines were trained. Using the New World Kirkpatrick Model, the trainees evaluated the training regarding reaction, learning, behavior, results, and management. The data show that the trainees rated the training with an overall mean of 3.70 described as "strongly agree." The result implies that the end-user training on digital teaching tools is very successful and excellent.

Keywords: digital teaching tools; end-user training; ICT in teacher education.

1. INTRODUCTION

"Training may be defined as an experience, a discipline, or a regimen that causes people to acquire new predetermined behaviors" (Laird, 1978). It is an experience that transforms people to become a better individual with confidence and competence in personal and professional lives (Pont, 1996). It is a discipline to develop knowledge, skills, and abilities for current or future jobs (Blanchard & Thacker, 1999). It is a planned effort to facilitate employees' learning of job-related competencies (Roe, 2002). Training should form an integral part in all levels of management in an organization (Dragomiroiu, Hurloiu, & Mihai, 2014). De Grip & Sauermann (2013) elucidate that the transfer of knowledge and skills learned during training is the increase in productivity.

On the one hand, end-user training is one of the critical activities during the implementation phase of software development cycle (Hoffer, George & Valacich, 2011). According to Merriam-Webster dictionary, end-user is "the ultimate consumer of a finished product." Therefore, "end-user training is one of the keys to the successful implementation of any software" (Wickes, no date). The newly developed digital teaching tools, namely mobile class record application (mClassRecord) and portable learning management system (PLMS) were launched and distributed. mClassRecord is a stand-alone Android-based application that automates the manual process of a class information recording and management.PLMS is a USB-based portable learning management system that organizes the classroom information and learning activities without Internet access. Both are products of the research titled "ICT in Teacher Education in Region 7", funded by the Philippine Commission on Higher Education through the Philippine Higher Education Research Network, facilitated by the Research and Development Center, Silliman University. An end-user training was conducted to ensure high usability and acceptability of the proposed tools.

The problem statement. Shinder (2006) asserts that most IT professionals are in a hurry deploying new software without considering the importance of training the end-users. "End-user training is often a huge fail because IT professionals do not consider the needs or

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the learning style of their audience members" (Bowers, 2013). Bowers added that training end-users areone of the most significant aspects in accepting a new technology. However, according to Bowers, it is also one of the most poorly implemented tasks in software development. Like Bowers, Dockery (2014) pronounces that underestimating the value of user training has become the downfall for some development teams.Moreover, Stackpole (2008) presented five mistakes when training end-users. These are a lack of planning, training providers are out of tune with the audience, trainers did not follow standards training models, the training is out of business context, and training managers forgot to forge business partnerships. It is in this regard that an innovative end-user training strategy should be conducted to have a more cost efficient and a happier experience for everyone involved in the new technology (Shinder, 2006). In this study, a region-wide end-user training was conducted, and the trainees evaluated it. The study was motivated by the fact that training effectiveness is affected by multifaceted variables. These variables include training preparation and design, logistics and support, delivery methods and techniques, trainers and other stakeholders, among others.

Analysis of recent studies and publications. The primary function of training is to produce change. Training is aimed at changing individual physically, intellectually, mentally, or emotionally. It can also be a change in the organization's philosophy, practices, and services. However, some are hesitant to change. Training alone cannot accomplish most of the organizational changes (Mitchell, 1998). Mitchell (1998) expounded that change must be easy and attractive. To achieve this, he expounded that trainees must be motivated to learn, and trainers must provide a learning environment conducive to learning. Most importantly, training sessions must abide the fundamental principles of learning.

Training is significantly associated with learning, motivation, and performance. Blanchard & Thacker (1999) stated that "to design and implement effective training programs, you need to understand how people learn, what motivates learning and performance, and how the learning and work environment affects motivation and performance." In the same manner, Abdul Halim & and Md. Mozahar Ali (no year) asserted that effective training, although in extension programs, must understand the theories of learning to change the action, belief, and knowledge components of a trainee simultaneously. He posits that andragogy must be emphasized in the training rather than pedagogy. Likewise, workplace learning and experiential learning are the other important form of learning in professional development (Dobos, Professional Development In The Civil Service - From American and Hungarian Perspectives, 2015). Further, Pont (1996) described that motivation theories like Maslow and McClelland must be fully understood, especially in its implications for the training situation. Further, training is often interchangeably used with the terms of education and professional development. Training is different from formal education because training is concerned not only with knowledge enhancement but as well the changing of attitudes and competencies in a suitable manner (3G Elearning FZ LLC, 2013). Training provides the opportunity for learning while development is the result of the learning (Blanchard & Thacker, 1999). In this article, training refers to the act of educating individuals for personal and professional development towards the achievement of the desired competencies and skills.

The success of any competency-based training programs is determined at the leadership level (Dobos, Professional Development In The Civil Service - From American and Hungarian Perspectives, 2015). It requires reliable training providers who can deliver the necessary competency effectively. Training providers are agents of change (Mitchell, 1998). Most importantly, training providers must establish credibility. Some models characterize training providers, and these are faculty model, client model, and matrix model (O'Connor, Bronner, & Delaney, 1996). Faculty model is a kind of internal training providers who

operate as subject matter experts and offer a range of on-going courses and workshops. The client approach consists of training providers who are outsourced from the outside training professionals. These providers have the responsibility for ensuring that training and development needs of an entire sub-population of an organization are addressed. Matrix model is described as a hybrid that combines faculty and client structure of training providers. Further, the ADDIE (Assess, Design, Develop, Implement, Evaluate) model is the more general training model to reach a broad range of learners (Chaturvedi & Chaturvedi, 23 October 2010). Likewise, Bowers (2013) suggested using examples in end-user training. According to Shinder, cited in Wickes (no date), there are five ways for a successful software implementation. These include: setting training goals, assessing end-user needs, training delivery methods, creating a training program, and making the training program scalable. Dessai, Richards and Eddy (1999) revealed that "there is a significant difference in an individual's performance accuracy depending upon the training method used." The research further showed that hands-on practice, software packages, and training methods are significant in the success of an end-user training.

Evaluating training activities like end-user training may involve quantitative and qualitative assessment methods. Quantitative data helped to visualize trends that were not so obvious from the qualitative data, for instance, that the effectiveness of the training varied per setting"(Celik, Abma, Klinge&Widdershoven, 2012). On the other hand, Qualitative information is very useful especially in improving the future training (De-Miguel, San-Fabián, Belver José-Luis y Argüelles, 2011). "Qualitative data also enriched the quantitative data as a new variable was found to be important to explain diversity sensitivity, namely the development of a critical attitude to one's practice" (Celik, Abma, Klinge&Widdershoven, 2012).

The article's goal. This paper aims to discuss the quantitative and qualitative evaluation of the end-user training on the classroom use and integration of mClassRecord and PLMS. Specifically, this articleis aimed at answering the following questions: a) What is the demographic and technologic profiles of the trainees? b) What are the levels of reaction, learning, behavior, results, and management as perceived by the trainees? c) What are the qualitative evaluation of the training in terms of the best aspects and the least aspects as perceived by the trainees? The variables used in this paper are anchored on The New World Kirkpatrick Model.

2. THETHEORETICAL BACKGROUNDS

There are many training methods available that can boost trainee's learning. Pont (1996) classified training into two broad categories. These are trainer-controlled and learner-controlled. Further, Pont (1996) listed most common types of training such as classroom, outdoors, computer-assisted learning, and simulation. O'Connor, Bronner, & Delaney (1996) categorized training according to organizational thrusts: strategic, informational, and operational. Strategic training involves long-term organizational plans such as the development of new products and services. Informational training is a training method that provides information about the organization. Lastly, operational training refers to the employee's job that affects the daily operations of the organizations. Wexley & Latham (1991) classified training methods as on-site and offsite. On-site training methods include OJT, apprenticeship training, job aids, coaching, mentoring, computer-based training, and job rotation. On the one hand, off-training methods are lecture, audio-visual techniques, teleconferencing, corporate classrooms, programmed instruction, computer-based instruction, and equipment simulators. Training methods are also categorized according to the learning process (3G Elearning FZ LLC, 2013). Lectures, demonstrations, discussions, and computer-

based training are considered cognitive methods. Second, behavioral methods that include games and simulations, behavior-modelling, business games, case studies, equipment simulators, in-basket technique, and role plays. Both approaches are said to be the most effective in changing theattitude and developing worker's abilities (Miri, Mansor, Chasempour, & Anvari, 2014). Laird (1978) characterized training methods into groupings that will provide a well-rounded training plan suitable in adult learning experiences. These are job instruction-training, learner-controlled instruction, conferences, workshops, seminars, and symposia. The workshop is the most popular form of training in America due to its interactivity among the participants in the learning process (Dobos, Professional Development In The Civil Service - From American and Hungarian Perspectives, 2015). For Point (1996), training methods include lecture, demonstration, discussion, participatory methods such as a case study, role play, simulation, and games, open learning/distance education, and IT-based. For 3G Elearning FZ LLC (2013), training methods include telling method, showing method, role playing method, and discussion technique.

Research shows that information and communication technologies provide pedagogical benefits. New technologies change the landscape in training and learning activities. Technology-based training is very effective for declarative knowledge. A sound technology-based training system must be self-paced, interactive, and must contain multimedia elements (Blanchard & Thacker, 1999). Davies & Cormican (2013) assert that computer-based material is the most popular and efficient way to learn from, and computer technology is the most efficient training delivery platform. These technologies have influenced training delivery, training administration, and training support and evaluation (Roe, 2002). Roe pointed out that these technologies can: 1) help in cost reduction during training delivery, 2) increase the effectiveness of the learning environment, 3) help training achieve business goals. New training technologies include multimedia, distance learning, expert systems, electronic support systems, and training software applications (Roe, 2002).

3. RESEARCH METHODS

Three launching ceremonies and end-user training were done for the two digital tools. The training was face-to-face, and it aimed to demonstrate, practice, and do hands-on activities with the use and classroom integration of the newly developed digital teaching tools. The training outline was based on the modules and features of the two digital teaching tools. Higher education institutions that participated in Year 1 of the project (Marcial, Rendal, dela Rama, Fortich, Etcuban&Calibo, 2014) were invited to send two faculty members to attend the said training. In other words, trainee-respondents are teachers teaching any professional or specialization courses of teacher education program in the provinces of Bohol, Cebu, Negros Oriental and Siquijor. Also, few graduating students in the teacher education program joined during the training. The teacher education programpertains to degree programs such as Bachelor of Science in Secondary Education and Elementary Education offered in public and private HEIs in the Philippines. Another prerequisite for the end-user training is the trainee's willingness to use and integrate the newly developed teaching tools into their classroom instruction. The Philippine Commission on Higher Education Region 7 endorsed the said training. The Negros-Siquijor end-user training was on October 26-27, 2015 in Silliman University, Dumaguete City, Negros Oriental. In Cebu, the end-user training was on October 28-29, 2015 in University of Cebu – Main Campus, Cebu City. In Bohol, the end-user Training was on October 30-31, 2015 at Holy Name University, Tagbilaran City. All trainees received a training kit that includes a user's manual of the two digital teaching tools, training outline, and other writing materials. Trainers are the PLMS study leader assisted by the mClassRecord programmer and the pool of trainers on each province. In total, 74 participants

underwent the training, and these 74 delegates are also considered respondents during the evaluation of the training.

Figure 1. Dumaguete Batch

Figure 2. Cebu Batch

Figure 3. Tagbilaran Batch

The study employed a descriptive and utilized a survey method. The study was conducted to all trainees in the region-wide end-user training on classroom use and integration of the newly developed mClassRecord and PLMS. The instrument used in data gathering to accomplish the specific objectives of the study was a survey questionnaire. The copy of the survey questionnaire was distributed during the closing ceremonies of the training. Statements about reaction, learning, behavior and results are based on The New World Kirkpatrick Model. The respondents evaluated the level of their agreement with the statements according to a four-point scale choices: 1 – strongly disagree, 2 – disagree, 3 – agree, 4 – strongly agree. The statistical tools employed in the data processing are the weighted mean for measuring the levels of reaction, learning, behavior, results, and management. Of the 74 trainees, five participants from Negros Oriental batch did not respond to the survey making a total of 69 responses were included in the analysis of the study.

4. THE RESULTS AND DISCUSSION

4.1 The Trainees

Twenty-one joined in Negros Oriental; 29 joined in Cebu, and 24 joined in Bohol. Of the total number of trainees, 29 (39.19 %) are male, and 44 (59.46%) are female. Fifty-seven (77.03%) trainees are 18-40 years old, and 17 (22.97%) are 41-65 years old. The youngest is 18 years old, and the oldest is 64 years old. Regarding the number of years in teaching, the longest is 43 years, while the shortest is three months. Forty-two (56.76%) are single, and 31 (41.89%) are Master's degree holders. See Table 1 for the demographic profile of the trainee-respondents.

Table 1

Demographic Profile of the Trainees

Profile	Batch of Trainees						Total (n = 74)	
	Negros Oriental & Siquijor (n = 21)		Cebu (n = 29)		Bohol (n = 24)			
	f	%	f	%	f	%	f	%
Sex								
Male	8	38.10	14	48.28	7	29.17	29	39.19
Female	13	61.90	14	48.28	17	70.83	44	59.46
No Answer	0	0.00	1	3.45	0	0.00	1	1.35
Total	21	100.00	29	100.00	24	100.00	74	100.00
Age								
18- 40	12	57.14	28	96.55	17	70.83	57	77.03
41 – 65	9	42.86	1	3.45	7	29.17	17	22.97
> 65	0	0.00	0	0.00	0	0.00	0	0.00
No Answer	0	0.00	0	0.00	0	0.00	0	0.00
Total	21	100.00	29	100.00	24	100.00	74	100.00

Number of years in teaching								
< 4	5	23.81	6	20.69	7	29.17	18	24.32
4 – 6	2	9.52	4	13.79	7	29.17	13	17.57
7– 9	0	0.00	3	10.34	1	4.17	4	5.41
10 – 15	3	14.29	0	0.00	6	25.00	9	12.16
16 – 20	2	9.52	0	0.00	1	4.17	3	4.05
> 21	4	19.05	0	0.00	2	8.33	6	8.11
No Answer	5	23.81	16	55.17	0	0.00	21	28.38
Total	21	100.00	29	100.00	24	100.00	74	100.00
Status								
Single	7	33.33	25	86.21	10	41.67	42	56.76
Married	14	66.67	4	13.79	12	50.00	30	40.54
Others	0	0.00	0	0.00	1	4.17	1	1.35
No Answer	0	0.00	0	0.00	1	4.17	1	1.35
Total	21	100.00	29	100.00	24	100.00	74	100.00
Highest Educational Attainment								
Undergraduate	0	0.00	15	51.72	0	0.00	15	20.27
Bachelor's Degree	7	33.33	7	24.14	10	41.67	24	32.43
Master's Degree	10	47.62	7	24.14	14	58.33	31	41.89
Doctoral/PhD	4	19.05	0	0.00	0	0.00	4	5.41
No Answer	0	0.00	0	0.00	0	0.00	0	0.00
Total	21	100.00	29	100.00	24	100.00	74	100.00

When asked about technology ownership, 26 (35.14%) own an Android tablet computer, 8 (10.81%) have an iPad computer, 64 (86.49%) have a laptop computer, 32 (43.24%) havea desktop computer, and 56 (75.68%) have a smartphone. See Table 2 for the technologic profile of the trainees.

Table 2

Technologic Profile of the Trainees

Profile	Batch of Trainees						Total (n = 74)	
	Negros Oriental & Siquijor (n = 21)		Cebu (n = 29)		Bohol (n = 24)			
	f	%	f	%	f	%	f	%
Android Tablet								
Yes	7	33.33	8	27.59	11	45.83	26	35.14
No	2	9.52	9	31.03	7	29.17	18	24.32
No Answer	12	57.14	12	41.38	6	25.00	30	40.54
Total	21	100.00	29	100.00	24	100.00	74	100.00
iPAD Computer								
Yes	6	28.57	2	6.90	0	0.00	8	10.81
No	2	9.52	8	27.59	14	58.33	24	32.43
No Answer	13	61.90	19	65.52	10	41.67	42	56.76
Total	21	100.00	29	100.00	24	100.00	74	100.00
Laptop Computer								
Yes	19	90.48	25	86.21	20	83.33	64	86.49
No	0	0.00	3	10.34	3	12.50	6	8.11
No Answer	2	9.52	1	3.45	1	4.17	4	5.41
Total	21	100.00	29	100.00	24	100.00	74	100.00
Desktop Computer								
Yes	12	57.14	8	27.59	12	50.00	32	43.24
No	2	9.52	7	24.14	7	29.17	16	21.62

No Answer	7	33.33	14	48.28	5	20.83	26	35.14
Total	21	100.00	29	100.00	24	100.00	74	100.00
Smartphone								
Yes	16	76.19	21	72.41	19	79.17	56	75.68
No	0	0.00	1	3.45	2	8.33	3	4.05
No Answer	5	23.81	7	24.14	3	12.50	15	20.27
Total	21	100.00	29	100.00	24	100.00	74	100.00

4.2. Reaction

Shown in Table 3 is the reaction level of the trainees. In the New Kirkpatrick Model, reaction refers to the "degree participants react favorably to the training." All statements related to the level of reaction of the trainees are all rated 'strongly agree' with an overall mean of 3.67. It implies that the trainees have very positive reactions to the training. It also suggests that the trainees are extremely satisfied and engaged during the training. Likewise, the result indicates that the trainees extremely see the relevance of the training to their teaching profession. Further, the result suggests that the two digital teaching tools are relevant to their teaching job. The data show that the statements about the satisfaction of the training are rated highest with an overall mean of 3.79 (strongly agree). On the other hand, the statement with the lowest rating ($\overline{x}$ = 3.47), but still 'strongly agree,' is about the trainees' contribution to the learning experience of the training. The Cebu ($\overline{x}$ = 3.78) participants have a better reaction level than the Bohol ($\overline{x}$ = 3.63) and Dumaguete ($\overline{x}$ = 3.59) participants.

Table 3

Reaction Level

Evaluation Statements	Negros Oriental & Siquijor (n = 16)		Cebu (n = 29)		Bohol (n = 24)		Total (n = 69)	
	$\overline{x}$	Description	$\overline{x}$	Description	$\overline{x}$	Description	$\overline{x}$	Description
a) I am satisfied with the training.	3.63	Strongly Agree	3.97	Strongly Agree	3.79	Strongly Agree	3.79	Strongly Agree
b) Iam actively involved in the training.	3.63	Strongly Agree	3.79	Strongly Agree	3.54	Strongly Agree	3.65	Strongly Agree
c) I contributed to the learning experience of the training.	3.50	Strongly Agree	3.52	Strongly Agree	3.39	Strongly Agree	3.47	Strongly Agree
d) I have the opportunity to use or apply what I learned in the training on my teaching job.	3.63	Strongly Agree	3.83	Strongly Agree	3.79	Strongly Agree	3.75	Strongly Agree
Overall Mean	3.59	Strongly Agree	3.78	Strongly Agree	3.63	Strongly Agree	3.67	Strongly Agree

4.3. Learning

A strongly agree description with an overall mean of 3.61 is reflected in the trainees' learning level(see Table 4). About the New World Kirkpatrick Model, the result connotes that the trainees highly perceive that they have extremely attained the intended knowledge, skills,

attitudes, confidence and commitment based on their participation in the end-user training. Of the ten statements, two are rated 'agree.' Incidentally, it was rated by Dumaguete trainees, and these are "I know how to use PLMS" and "I can create courses in PLMS right now." The Dumaguete trainees perceive that they acquired the intended knowledge, skills, attitudes, confidence and commitment based on their participation in the training event. The statement "I believe that using mClassRecord will be worthwhile to do with my job" is rated highest with an overall mean of 3.74. Similar to the degree of reaction, Cebu trainees rated their learning level highest with an overall mean of 3.75 compare to Dumaguete and Bohol with an overall mean of 3.46 and 3.62, respectively.

Table 4

Learning Level

Evaluation Statements	Negros Oriental & Siquijor (n = 16)		Cebu (n = 29)		Bohol (n = 24)		Total (n = 69)	
	$\overline{x}$	Description	$\overline{x}$	Description	$\overline{x}$	Description	$\overline{x}$	Description
a) I know how to use PLMS.	3.25	Agree	3.59	Strongly Agree	3.33	Strongly Agree	3.39	Strongly Agree
b) I know how to use mClassRecord.	3.56	Strongly Agree	3.76	Strongly Agree	3.67	Strongly Agree	3.66	Strongly Agree
c) I can create courses in PLMS right now.	3.25	Agree	3.69	Strongly Agree	3.50	Strongly Agree	3.48	Strongly Agree
d) I can create courses in mClassRecord right now.	3.44	Strongly Agree	3.79	Strongly Agree	3.71	Strongly Agree	3.65	Strongly Agree
e) I believe that using PLMS will be worthwhile to do with my job.	3.44	Strongly Agree	3.83	Strongly Agree	3.54	Strongly Agree	3.60	Strongly Agree
f) I believe that using mClassRecord will be worthwhile to do with my job.	3.63	Strongly Agree	3.79	Strongly Agree	3.79	Strongly Agree	3.74	Strongly Agree
g) I think I can create courses using PLMS.	3.38	Strongly Agree	3.90	Strongly Agree	3.54	Strongly Agree	3.60	Strongly Agree
h) I think I can create classes using mClassRecord.	3.56	Strongly Agree	3.76	Strongly Agree	3.83	Strongly Agree	3.72	Strongly Agree
i) I intend to use PLMS.	3.38	Strongly Agree	3.72	Strongly Agree	3.58	Strongly Agree	3.56	Strongly Agree
j) I intend to use mClassRecord.	3.69	Strongly Agree	3.69	Strongly Agree	3.67	Strongly Agree	3.68	Strongly Agree
Overall Mean	3.46	Strongly Agree	3.75	Strongly Agree	3.62	Strongly Agree	3.61	Strongly Agree

4.4. Behavior

Table 5 shows the perceived behavior level of the trainees about their experience during the training. All three batches of trainees rated the statement 'strongly agree' with a total weighted mean of 3.73. The result signifies that the trainees highly believe that they can apply what they learned from the training when they are back on their teaching job. The table also shows that the Bohol trainees have the highest weighted mean among the three batches of training.

Table 5

Behavior Level

Evaluation Statements	Negros Oriental & Siquijor (n = 16)		Cebu (n = 29)		Bohol (n = 24)		Total (n = 69)	
	$\overline{x}$	Description	$\overline{x}$	Description	$\overline{x}$	Description	$\overline{x}$	Description
a) I can apply what I learned during the training when I am back in my workplace.	3.63	Strongly Agree	3.69	Strongly Agree	3.88	Strongly Agree	3.73	Strongly Agree

4.5. Results

As seen in Table 6, a 'strongly agree' is indicated in all statements that pertain to trainees' perceived results level with an overall weighted mean of 3.72. The result shows that the trainees highly believe that targeted outcomes occur as a result of the training event and subsequent reinforcement. The statement "The objectives of the training are achieved" is rated highest with a total weighted mean of 3.74. Concerning the overall weighted mean, Cebu trainees got 3.84, which is greater than those of Bohol ($\overline{x}$ = 3.72) and Dumaguete ($\overline{x}$ = 3.53).

Table 6

Results Level

Evaluation Statements	Negros Oriental & Siquijor (n = 16)		Cebu (n = 29)		Bohol (n = 24)		Total (n = 69)	
	$\overline{x}$	Description	$\overline{x}$	Description	$\overline{x}$	Description	$\overline{x}$	Description
a) The targeted outcomes of the training have been achieved.	3.50	Strongly Agree	3.83	Strongly Agree	3.79	Strongly Agree	3.71	Strongly Agree
b) The objectives of the training are achieved.	3.56	Strongly Agree	3.86	Strongly Agree	3.79	Strongly Agree	3.74	Strongly Agree
Overall Mean	3.53	Strongly Agree	3.84	Strongly Agree	3.79	Strongly Agree	3.72	Strongly Agree

4.6. Management

The statements about training organization, facilitation and administration are all rated 'strongly agree' with an overall weighted mean of 3.76, as shown in Table 7. The result indicates that the trainees highly believe that the training is very organized and managed well. Bohol participants rated lowest (3.70) compare with Dumaguete ($\overline{x}$ = 3.74) and Cebu ($\overline{x}$ = 3.83). An almost perfect rating ($\overline{x}$ = 3.93) is reflected in the statement "The organizers are

pleasant and helpful." The result implies that the research team meets the trainees' expectations regarding assistance, handling inquiries, and accommodating concerns. The literature says that training providers must possess the required competencies and skills in the entire life cycle of the training process. The major skills that a trainer must possess include presentation skills, business skills like budgeting, time management, and negotiation, content development (3G Elearning FZ LLC, 2013).

Table 7

Management Level

Evaluation Statements	Negros Oriental & Siquijor (n = 16)		Cebu (n = 29)		Bohol (n = 24)		Total (n = 69)	
	$\overline{x}$	Description	$\overline{x}$	Description	$\overline{x}$	Description	$\overline{x}$	Description
a) The time is managed well.	3.63	Strongly Agree	3.79	Strongly Agree	3.58	Strongly Agree	3.67	Strongly Agree
b) The venue is appropriate and conducive.	3.81	Strongly Agree	3.83	Strongly Agree	3.83	Strongly Agree	3.82	Strongly Agree
c) The training is systematic and organized.	3.69	Strongly Agree	3.83	Strongly Agree	3.63	Strongly Agree	3.71	Strongly Agree
d) The registration is systematic and organized.	3.69	Strongly Agree	3.76	Strongly Agree	3.63	Strongly Agree	3.69	Strongly Agree
e) The organizers are pleasant and helpful.	3.88	Strongly Agree	3.93	Strongly Agree	3.83	Strongly Agree	3.88	Strongly Agree
Overall Mean	3.74	Strongly Agree	3.83	Strongly Agree	3.70	Strongly Agree	3.76	Strongly Agree

4.7. The best part of the training

When asked about the best aspect of the end-user training, 25 trainees from the three batches of training wrote about the hands-on activity. The training pedagogy includes a short lecture to explain each feature followed by a demonstration and hands-on. Each participant was provided with a desktop computer for the PLMS and a tablet computer for the mClassRecord. A Dumaguete participant said, "*The "hand on" aspect because I learned by doing*." A trainee from Cebu said, "*The hands-on are what I think best. I like it when they walk us through the application. It is an advantage to non[-]technology users.*" A participant from Cebu wrote, "*I like best when participants were asked to do activities already.*" As cited, lectures, demonstrations, discussions, and computer-based training are considered cognitive methods (3G Elearning FZ LLC, 2013). Also, a Bohol participant said "*individual computers and tablets for the users to cope easily [in] with every activity*."

Six trainees (3 from Dumaguete, one from Cebu, two from Bohol), said that they like everything about the training. A trainee from Cebu said "*Everything! The training is quite good for it[']s a life changer for all people to take the traditional way of teaching. This may the time to [really] give [a] chance to change and be innovative enough in achieving one's goal as well as the CHED's goal.*"

Five trainees from Cebu and three trainees from Bohol said that they like best about the trainers and facilitators. Accommodating, approachable, openness, facilitative are some of the perception of the trainees towards the trainers and assistant facilitators. Five from Dumaguete, four from Cebu, eight from Bohol said that they like most the mClassRecord. Only fourstated that they like best PLMS (2 from Cebu and two from Bohol), of which two trainees from

Bohol and Cebu emphasized quizzes and assessments. However, 11 (Dumaguete 1, Cebu 8, Tagbilaran 2) trainees said that they like most both. Six trainees (Dumaguete 1, Cebu 4, Bohol 1) value the most about the applicability of the tools introduced to them. A Cebu trainee emphasized the use of video during the training. The literature says that the use of video augments learning activities and it comes in three essential concepts: 1) interactivity with content, 2) engagement and 3) knowledge transfer and memory (Greenberg & Zanetis, 2012). Furthermore, a Bohol participant liked the training venue.

4.8. The least part of the training

Among the 74 participants of the region-wide, three-batch training who were asked on the least likable aspect of the training, 24 said that there was nothing they like least. One trainee from Cebu said, "*None so far. I am satisfied and thankful to the speakers for imparting us all the knowledge they have in terms of PLMS & mClassRecord.*" This result implies that the training content, delivery, logistics and the like are very organized and managed well. This result validated the quantitative data presented in Tables 3-7.

On the other hand, nine trainees (4 from Dumaguete, one from Cebu, and four from Bohol) answered that they like PLMS least. Two of whom said that they dislike "*Some details*" (Cebu trainee) and "*Some features*" (Bohol trainee) of PLMS. One from Dumaguete stated that the site restarts when there is an error; two from Bohol said that they liked it least "*when it comes to making quizzes*";and two from Bohol stated that it is time-consuming "*when it comes to records and getting grades*" and,again, in "*making quizzes*."This result can be explained considering that the trainees are not yet confident and familiar with any learning management system. Surprisingly, one trainee said that the least aspect was that "*mclassrecordis to[o] easy*."

Likewise, nine answers (4 from Dumaguete, four from Cebu, and one from Bohol) were facilitator/trainer-related. Five of whom (3 from Dumaguete and two from Cebu) said that the facilitators were too fast for them. This result is expected because the trainees' IT skills areheterogeneous. In fact, a trainee from Cebu said, "*If majority got easily the instruction, they [will] would proceed right away. They have no actions or consideration for those who are behind.*" In contrast, one trainee from Cebu said, "*I got a bit bored along the way when it had to be discussed in-depth*"; another from Dumaguete simply stated that it was "*the explanation*" that was the least to like about the training. Two participants (1 from Cebu and one from Bohol) expressed inadequacy on the part of the facilitators by saying "*Facilitators need more mastery of the applications to effectively assist and help*» and "*When "trivial" (maybe not trivial for others) aspects were the ones given more time*."It can be noted that the facilitators are only trained a week ahead of the end-user. Thus, it is a fact that they need more practice also.

Three answers from the participants were gadget-related. One trainee from Cebu said that there is "*[l]imited capability of the software to different gadgets*." One trainee from Bohol said "*the reality that [is] not having the tablet is the hindrance. The thinking that I will not be able to implement it in a real classroom setting*." Another trainee from Bohol had no luck with the PC that made him/her transfer to another on the second day. In a technology-based teaching, technology is very vital. There is a need that before any technology integration, a thorough technology planning should be done.

One trainee from Bohol said that the least aspect was «*transferring files to Excel*"; another stated that "*The launching must have a big number of audience*." A trainee from Cebu indicated that he/she "*[w]as not informed to bring the necessary requirements*."

4.9. Other comments and suggestions

When asked for comments and suggestions, the participants gave 40pleasant feedbacks. There were 11 comments of gratitude (1 from Dumaguete, five from Cebu, and five from Tagbilaran) for the opportunity, the training, and the apps. It can be noted that the training was free of charge inclusive of kits, meals, download of the tools, and certificates. Thirteenparticipants (2 fromDumaguete, eight from Cebu, and three from Bohol)gave congratulatory comments and congratulated the trainers for keeping up a job well done. Eight trainees (1 from Dumaguete and seven from Cebu) expressed positive feedback on the training experience and digital tools, with two from Cebu saying that it was an "*excellent seminar*" and "*the best seminar that I attended*." This particular comment upkeeps the result that pertains to the reaction level of the trainees. Likewise, a Cebu trainee said that both applications are "*Useful tool[s] in handling 21st-century learners*."This comment validates the perceived learning level shown in Table 4. Four trainees (2 from Dumaguete, 1 from Cebu, and 1 from Bohol) expressed their positive personal experience: the one from Dumaguete said, "*we "learn how to learn" new techniques*", and the one from Bohol stated that it was "*an opportunity for me to grow in technology awareness*." Also, four trainees (2 from Dumaguete, one from Cebu, and one from Bohol) commended the trainers, facilitators, and organizers of the research training.

Among the participants, 29suggestionswere gathered. There were eight requests on conducting training in other schools and spreading the knowledge to teachers, with a trainee from Cebu saying, "*Do more training[s] like this to other remote areas where state colleges and universities are located*." Two participants from Dumaguete gave suggestions on the training—it should "*extend the time for hands-on activities*" and "*would [be] better if it is intensive*." A trainee from Bohol suggested, "*to include the total possible score of each assessment tool to be reflected in the [E]xcel format*."Six suggestions were given for mClassRecord: a trainee from Dumaguete and another from Bohol expressed that a version for iOS should be available; a trainee from Dumaguete wants to "*do the actual sending/clicking of emails*"; one from Cebu suggested that it should be available "*all the time in [G]oogle store for free*"; and two from Bohol suggested that there should be "*more enhancement, specially [in] entering the date of the students new[ly] enrolled*" and that it should "*[i]nclude notifications in the Event/Tasks module*."Four suggestions were provided for PLMS: a trainee from Dumaguete suggested that it should be user-friendly;two trainees (1 from Dumaguete and 1 from Bohol) said that it should have"*a longer duration of training*" "*to learn more*"; and another from Bohol stated that it should be made available online, with a side comment that it is complicated. Four participants from Cebu suggested for and are looking forward to better, upgraded versions or similar apps that are helpful to teachers. Three from Bohol are hopeful that they will continuously be part of the research training.

4. CONCLUSIONS AND PROSPECTS FOR FURTHER RESEARCH

End-user training effectiveness is attained when new skills are learned towards productivity.The training on the classroom use and integration of the newly developed digital teaching tools is very productiveand efficient.The success rate of the end-user training is high.The training provided a positive reaction among teachers. It is well-planned and administeredeffectively. The satisfaction level among the teachers is high. The outcomes provided an indication of a positive acceptance of the tool towards innovative teaching-learning.The training provided the teachers a first-hand learning experience especially in using the newly developed teaching-learning tools. Likewise, the training is also a learning

experience among the training providers especially in handling different kinds of learners who are having different competency and skill levels.

There is a need to understand the learner's skill level as well as the need to select the appropriate delivery method and physical learning environment (Smith, no date). Training providers should consider the different types of end-user training methods such as the resident expert, traditional instructor-led classroom training, e-learning or distance learning, blended learning, software help components, and external sources (Hoffer, George, & Valacich, 2011). Further, this study recommends other training evaluation model like the assimilation theory employed in the study of Davis and Bostrom (1993). It also recommends that an in-depth study should be conducted. These studies may include impact assessment of the tools in the teaching instruction of the teachers, assessment of integration level based on the actual implementation of the tools, measurement of the prevalence and experience of the teachers who integrate the tools in their teaching job, assessing the acceptability of the tools among teachers as well as students, among others.

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ТРЕНІНГ ДЛЯ ПЕДАГОГІВ З ВИКОРИСТАННЯ ЦИФРОВИХ НАВЧАЛЬНИХ ІНСТРУМЕНТІВ: РЕАКЦІЯ, НАВЧАННЯ, ПОВЕДІНКА, РЕЗУЛЬТАТИ ТА УПРАВЛІННЯ

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Анотація. Нещодавно розроблені цифрові навчальні інструменти, такі як мобільні додатки для запису у класі, портативна система управління навчанням впроваджуються і розповсюджуються. У статті представлено оцінювання регіонального тренінгу для педагогів з використання таких цифрових технологій та їх інтегрування у навчальний процес. У тренінгу взяли участь 74 вчителі із Центральної Вісаї, Філіппіни. Використовуючи NewWorldKirkpatrickModel, слухачі оцінили тренінг відповідно до таких позицій як: реакція, навчання, поведінка, результати і управління. Отримані дані показують, що в цілому загальна підготовка вчителів до їх готовності до використання технологій була оцінена із загальним середнім балом 3,70, який відповідає позиції «повністю згоден». Результат підтвердив успішність і корисність проведеного для педагогів тренінгу з використання цифрових інструментів навчання.

Ключові слова: цифрові навчальні інструменти; навчання для педагогів; ІКТ в педагогічній освіті.

ТРЕНИНГ ДЛЯ ПЕДАГОГОВ ПО ИСПОЛЬЗОВАНИЮ ЦИФРОВЫХ ОБРАЗОВАТЕЛЬНЫХ ИНСТРУМЕНТОВ: РЕАКЦИЯ, ОБУЧЕНИЕ, ПОВЕДЕНИЕ, РЕЗУЛЬТАТЫ И УПРАВЛЕНИЕ

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Аннотация. Недавно разработанные цифровые учебные инструменты, такие как мобильные приложения для записи в классе, портативная система управления обучением внедряются и распространяются. В статье представлены оценки регионального тренинга для педагогов по использованию таких цифровых технологий и их интеграции в учебный процесс. В тренинге приняли участие 74 учителя из Центральной Виса, Филиппины. Используя New World Kirkpatrick Model, слушатели оценили тренинг в соответствии с такими позициями как: реакция, обучение, поведение, результаты и управление. Полученные данные показывают, что в целом общая подготовка учителей по их готовности к использованию технологий была оценена с общим средним баллом 3,70, который соответствует позиции «полностью согласен». Результат подтвердил успешность и полезность проведенного для педагогов тренинга по использованию цифровых инструментов обучения.

Ключевые слова: цифровые учебные инструменты; обучение для педагогов; ИКТ в педагогическом образовании.

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