E-Learning as Vehicle for Social Transformation: Evidence-based Results from the Philippines

Maria Stella C. Tirol & Marifi T. Magsino
Robie (2007)
For development to be feasible, society must be conducive to change.
E-Learning: Vehicle for Social Transformation

Murthy & Mathur, 2008

E-Learning
• Socially relevant messages
• Media convergence

Needs Benefits Transform Change Individual Community Society
Rationale

Five years after implementation, no assessment of e-learning outcomes
1. Determine inputs, outputs, and outcomes of e-learning from users’ perspective
2. Map out evidences of e-learning among its users
Theoretical Framework

Logic Model (Cawley, 1997)
E-learning of the Agricultural Training Institute

- Online certificate course
- Open to the public (24/7)
- Free
- Digital learning resources
- e-Extension coordinator as regional administrator
- Started 2007
- 15,409 enrollees (2008-2014)
- 10,000 graduates
- 33 online courses

Crops
Livestock & poultry
Marine & fisheries
Organic agriculture
Social technologies
Research Methods & Data Sources

1. Survey
   - 273 randomly selected e-learners

2. Focus group discussion
   - 35 purposively selected e-Learners
   - Agricultural extension workers
   - Pangasinan
   - Albay
   - Agusan del Norte
   - Cagayan de Oro City
   - Bukidnon

3. Instruments & data sheets
   - Questionnaire
   - FGD guide
   - Transcriptions
INPUT: Time

- 72% completed one module of online course in an hour
- 33% each worked on module morning, afternoon, and evening
- 65% finished online course in a month

In less than a month:
50% - finished 1 module
35% - 2 modules
15% - 3 or more
63% of users did not spend money
35% spent money (computer rental; internet fee)
INPUT: Equipment and Facilities

51% did not own computer
48% own computer

Non-owners
45% access computer at office
38% internet shop/cafe
OUTPUT: Who were reached

User type
- 47% agricultural extension workers
- 25% students

Age
- 61% 25-54 years old

Civil status
- 48% single
- 50% married

- 77% college graduates
- 65% Female
- 45% Male
OUTPUT: What activities were done

Working on online module

• Visiting e-Learning website
• Texting or SMS
• Viewing video tutorials on YouTube
• Accessing reading materials
OUTCOME: (96% increased knowledge)

Evidences

- Can give satisfactory, credible answers & explanations to farmers’ queries
- Sufficiently equipped to deliver lectures to farmers
- Can explain symptoms & control of banana diseases to farmers
- Can provide “advice” to farmers
- Helped pass agriculture board exam
Outcome: (73% attitude change on e-Learning)

Evidences

- No pressure or stress in e-Learning
- Challenging to use computer for learning
- e-Learning is addictive
- Satisfaction with course completion
- Motivated to learn more about farming
- Confident to share information to farmers
OUTCOME (87% change in skill or practice)

Evidences

Crops

- Practiced organic vegetable farming
- Planted & harvested yam in 200 sq m lot
- Established 3 greenhouse structures near office

Livestock

- Started production of fodder grasses and legumes for my goats
- Applied moonsoon handling in goat’s housing

Organic fertilizer

- Constructed vermicomposting facility & currently maintaining it in own garden
- Produced 100 bags of vermicast
- Started vermiculture project in community sponsored by municipal mayor
- Introduced vermicomposting to farmer who is now supplier of vermicast
Policy Outcomes

Proposed e-Learning Policies of ATI

1. Make e-learning an official and lifelong ATI program (85% agree)
   Reasons
   - Fits in with *predominance of ICTs* for learning
   - Makes learning *accessible*
   - Easy way to learn
   - Provides *quality education*
   - Beneficial, inexpensive, paperless technology
   - Creates *multiplier effect* on learning
   - Learn technology and share to others

Proposed e-Learning Policies of ATI

2. Do not charge fees for e-Learning courses (79% agree)
   Reasons
   - ATI has *mandate* to train and provide information on agriculture and fisheries to people who need it most so they can improve their production, livelihood, and well-being.
   - E-learning can *attract students* who will be future agricultural providers.
   - Charging *fees will discourage* people interested in e-learning but cannot afford it.
Other Proposed Policy Guidelines for e-Learning

24% The e-learning courses should be offered to all kinds of stakeholders in the community.

20% A course evaluation should be included at the end of each course.

14% A student should be enrolled in one online course at a time.

13% If a student fails a course, he/she may retake or re-enroll it.

12% A course should be finished or completed within six months.
## Outcomes from FGD results

<table>
<thead>
<tr>
<th>Outcome Area</th>
<th>Evidences</th>
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<td><strong>Short term</strong></td>
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| Attitude     | More self-confidence, trust  
              | Willingness to share knowledge  
              | Morale boosted on computer usage  
              | Useful content  
              | Appreciation of e-learning  
              | Interest to learn online  
              | Better quality of learning |
| Knowledge    | Increased knowledge  
              | Knowledge refreshed  
              | Knowledge updated |
| Skills       | How to reduce banana pest  
              | How to design vermicomposting plot  
              | How to construct greenhouse  
              | How to formulate feed for goats  
              | How to do artificial insemination  
              | How to crossbreed goats |
# Outcomes from FGD results

## Medium term

| Behavior/Practice | Community trainers/lecturers  
Advisory services to farmers  
Advocacy for community adoption of technologies  
Community projects – vermicomposting, organic fertilizer, goat, swine  
Organizing groups for project implementation  
Linking projects to LGUs for support |
|-------------------|-------------------------------------------------------------------------------|
| Policy            | Set aside regular budget for e-learning promotion, advocacy and sustainability  
Make e-learning compulsory for AEWs with at least two courses completed in a year  
Conduct continuous, regular promotion and advocacy of e-learning courses  
Create a regular pool of agents to consistently review, polish, update, and proofread e-Learning content |
Mapping Evidences of Change

**INPUT**
- Minimum time
- Least effort
- Minimum money
- Computer and internet access

**E-LEARNING**

**OUTPUT**
- People reached
  - Agricultural extension workers
  - Young to middle age
  - Female & male
  - Married & Single
  - College graduate

**Activities**
- Online learning
- Visit to web site
- Viewing video
- Texting or SMS
- Accessing online PDF references

**Individual OUTCOME**
- Positive attitude toward self & e-learning
- Increased, refreshed, updated knowledge
- Technological skills acquired

**Community OUTCOME**
- Trainer/Adviser
- Change advocator
- Community project implemented
- Community groups organized for project implementation
- Linking project to LGU

**IMPACT**
- Social
- Economic
- Political
- Environment
- Policy support/implementation

**Policy Outcome**
- Proposed policy guidelines for e-learning
CONCLUSION

The ATI’s e-Learning provides an alternative form of learning that is accessible, efficient, effective, relevant to needs, and can be sustainable.

E-learning produces a multiplier effect with knowledge shared to farmers.

Policies should be crafted and disseminated to ensure sustainable operation of e-Learning.
Local application or adaptation of content or technologies gained from e-Learning is a critical factor.

Evidences of results of e-Learning from users’ experiences and perspectives can open opportunities for sustainability and upscaling of the program.
THANK YOU VERY MUCH!