

# Cost-effectiveness of digital and face-to-face educator training

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In a national EE program, the rates of program implementation is higher among educators who participated in hands-on *workshops* vs. those receiving a *training DVD*.

The costs of the educator training through a *DVD* are *less* than the costs of conducting *workshops* when reaching a large number of program implementations.

## Research Question

A number of EE programs train educators through hands-on workshops or digital media (CD, DVD, etc.), but little is known about comparative effectiveness of these types of training.

RQ: "What is the cost-effectiveness of workshop vs. DVD for educator training?"

## Garden Mosaics

Garden Mosaics is a national EE program that teaches youth about environmental science in urban community settings within intergenerational, multicultural and action context.



www.gardenmosaics.org

Educators may learn about the Garden Mosaics curriculum through:



**Participation in face-to-face workshops**  
(300 educators were trained from 2002-2005).



**Watching a training DVD.**  
(600 educators received a DVD in 2005).

## Methods

The cost-effectiveness of EE program training through workshops and DVD was estimated through cost/benefit analysis (Pindyck & Rubinfeld, 2004).

Total costs of trainings via workshops or DVD equal (adjusted for implemented programs):

$FC + (VC * n/RI)$ , where:

**FC (fixed costs)** for DVD training includes the cost of its production; workshop does not involve fixed costs.

**VC (variable costs)** includes re-production and shipping for DVDs; workshop VC includes salary, travel, lodging, and logistic expenses for program staff who conduct workshops.

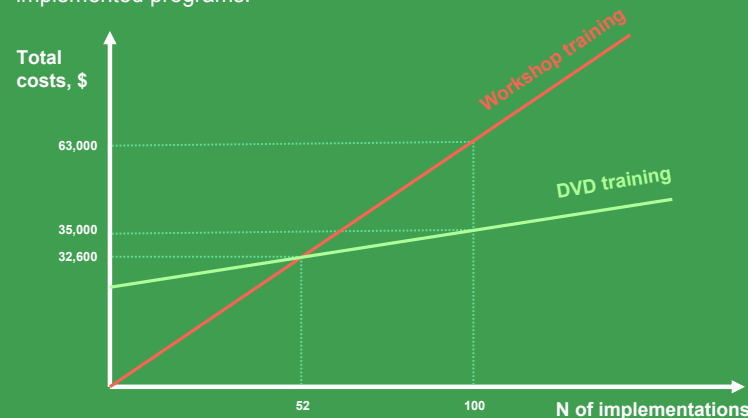
**n** is the number of all DVD recipients or all workshop participants.

**RI** is rates of program implementation after DVD or workshop training. To determine *RI* among workshop participants and DVD recipients, we used an online survey of 591 educators, whose contacts were available (response rate = 44%).

The estimated parameters for calculating total costs of program training through workshop and DVD are:

Expenses	Training through workshop	Training through DVD
<b>FC</b> Fixed costs	\$0	\$30000
<b>VC</b> Variable costs per every trained educator	\$270	\$10
<b>RI</b> Rate of implementation	43%	20%

Given parameters in the table, we created this graph that shows that total costs of trainings via workshops and DVDs given the numbers of implemented programs:



If Garden Mosaics wants to achieve 52 implementations of its curriculum, it may conduct educator workshops or send DVDs spending the same amount of money (\$32,600-\$32,651).

If Garden Mosaics wants to achieve more than 52 implementations of its curriculum, it is more cost-effective to train educators through DVDs.

## Notes

Because workshop and DVD trainees were self-selected, these data do not prove that differences in implementation are a direct result of varying trainings. However, given the substantial differences in costs per educator and follow-up rates, the results of this study suggest that attention should be paid to electronic means of program dissemination.

## Conclusion

In case of the Garden Mosaics, it is more cost-effective to train educators via DVDs rather than workshops if the program wants to achieve more than 52 implementations.