

# The Improving of Programming Teaching: A Case Study of Web Development Class



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## Problems

The core course for Information technology curriculum is programming. Programming is a practice. All student need to understand the core concept and apply to any problem. Thus how to teach this course to the completed both learning outcome. The previous classes are lecture base. All resources are presented as handouts or textbooks. For laboratory hours, all student complete their works via worksheet as an assignment. The subject comprehensive test with a big project. In addition, the natural behaviour of most students is shy to interact or reply to lecturer in class or outside the classroom.

## Code in Class

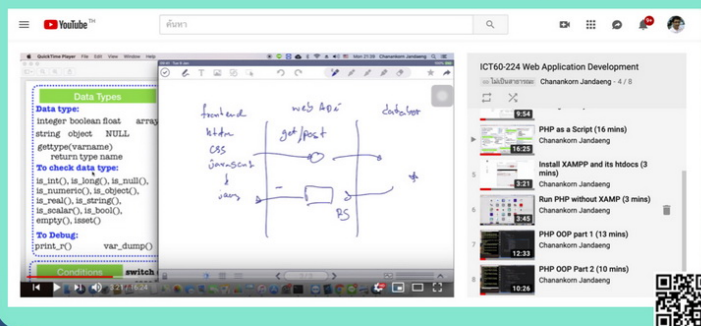


## Methodology

### Replace Bulk Handout with Cheat Sheet



### Brief lecture via 8 minutes clips



### Class Interaction with Plicker



## Results

**27.78%**

shy to say I don't understand

**77.78%**

Like Plicker, other say So So.

**72.22%**

Like Cheat Sheet, other say So So.

**89.48%**

Like Active Learning, BUT DONT LIKE

### Teach with Active Learning

	Before	After
Excellent	0	2
Good	2	10
Not bad	11	6
Don't Under stand	5	1

**94.44%**

**18/19**

Can complete Certificate Exam. in time

## Conclusion

This research shows that active learning methodology is to improve learning in web programming. Most students do not shy to interact with lecturer via the anonymous channel. They don't like to read a bulk of slide and 89.84% like this methodology.

# Ubin3\$

Ubiquitous Networked Embedded System