Public libraries to Centres of Learning through Social Media Engineering

Kannan M. Moudgalya
kannan@iitb.ac.in
IIT Bombay

IOS 2019 National Conference, ACTREC, Khargar
Scholarly Communication and Scientometrics
22 November 2019

Please open in Adobe Acrobat Reader to see the embedded videos

Outline

1. **Spoken Tutorials**
2. **Efficacy of free vs. paid schemes**
3. **Massive teacher training**
4. **Extension:**
    4.1 **Health and nutrition**
    4.2 **Libraries as Centres of Excellence**

What is a Spoken Tutorial?

- **Spoken Tutorial is a 10 minute long audio-video tutorial**
- **Created using Screencast**
- **To teach open source software**
- **For employment**

- **Can we train our students on IT topics through self learning?**
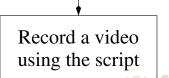
- **Important, as many students don't have good teachers**
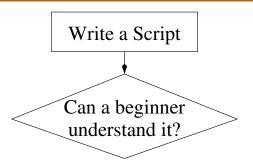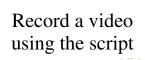
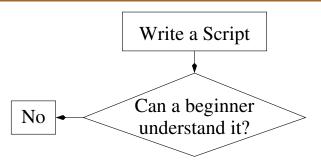# Solution: Novice check of the script

Write a Script

↓

↓

Record a video
using the script

Design of ST Self Learning

Improve the Script

Can a beginner understand it?
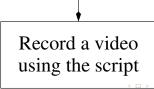
No

Record a video using the script

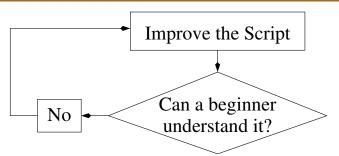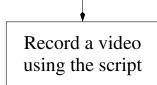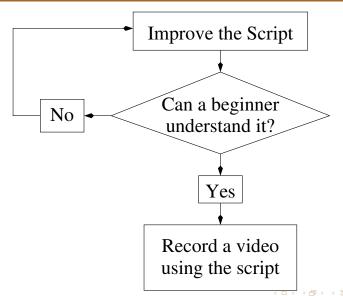**The script not approved by a beginner is returned for improvement!**

After passing the novice check, the script is used to create a Spoken Tutorial

A Sample Spoken Tutorial

- **What if learners are not fluent in English?**

- **What if learners are not fluent in English?**
- **Dub the audio into all 22 Indian languages**

Hindi Dubbed Spoken Tutorial

Marathi Dubbed Spoken Tutorial

What Language Dubbing is this?

- **It is Sanskrit**

- **It is Sanskrit**
- **If I can dub it in Sanskrit, I can dub it in any language!**

- **More than 1,000 tutorials in English**
- **10,000 tutorials, including dubbing**

Useful in neighbouring countries

- **Bangladesh, Nepal, Sri Lanka, Pakistan**
- **Without any additional expense!**
- **We have common languages**

We dub in international languages also!

Spanish

- **Sample dubbing also in Thai, Khmer, Arabic, Persian, Burmese, Vietnamese**

Can one access Spoken Tutorials even if Internet is not available?

- **Made an offline application**
- **Can download an entire series as a zip file**
- **Copy into all PCs and use offline**

Spoken Tutorial access went up by 100 times!

Spoken Tutorial - a Summary

- **10 minute long audio-video tutorial**
- **Created for self learning**
- **Audio dubbed into 22+ languages**
- **Downloadable, for offline use**
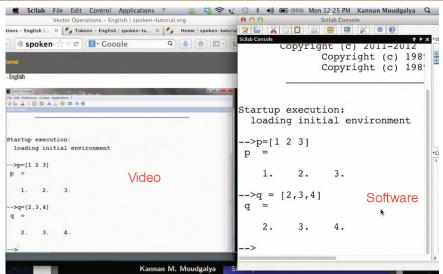
- **Spoken Tutorials are released under Creative Commons CC-BY-SA**
- **Can access without logging in**
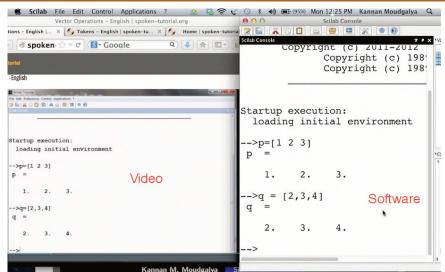
Side-by-side Method of Learning

Side-by-side Method of Learning

Can do only with open source software!

Are the design decisions useful?

- **5 million students trained in 5 years**

100 universities with 4,000 affiliating colleges officially use Spoken Tutorials!

The Spoken Tutorial approach helps different types of audience

Introductory Topics

- **Introduction to computers**
- **Firefox**
- **gmail**
- **typing**

- **Documents**
- **Spreadsheets**
- **Presentations**
- **Through LibreOffice, alternative to MS Office**

Spoken Tutorials for students to do well in studies / to get jobs

- C
- Java
- Python
- Linux

For Advanced Programmers

- **Drupal**
- **Django**
- **Perl**
- **Ruby**

- **Scilab**
- **OpenFOAM**
- **OpenModelica**
- **DWSIM**

For Graphic Artists

- **Blender**
- **Synfig**
- **Inkscape**
- **GIMP**

75 different courses, and growing

Will people pay to get the full benefit of Spoken Tutorials?

Went for a paid model for online test and certification in August 2018

2. Paid vs. Free Model

2. Paid vs. Free Model

License		
Registration/Login		
Open source software		
Online test		

2. Paid vs. Free Model

	Before 08/18	
License	CC-BY-SA	
Registration/Login	No	
Open source software	Yes	
Online test	Free	

2. Paid vs. Free Model

	Before 08/18	After 08/18
License	CC-BY-SA	CC-BY-SA
Registration/Login	No	No
Open source software	Yes	Yes
Online test	Free	Paid

Paid model

- **Annual subscription is ₹25,000**

Paid model

- **Annual subscription is ₹25,000**
- **Any number of students, certificates**

Paid model

- **Annual subscription is ₹25,000**
- **Any number of students, certificates**
- **Only requirement is to pass an online test**

Paid model

- **Annual subscription is ₹25,000**
- **Any number of students, certificates**
- **Only requirement is to pass an online test**
- **Test is administered in colleges**

Paid model

- **Annual subscription is ₹25,000**
- **Any number of students, certificates**
- **Only requirement is to pass an online test**
- **Test is administered in colleges**
- **Invigilator's name appears in certificates**

Acceptance of the paid model

▸ **Target was to bring in 400 colleges in the first year**

Acceptance of the paid model

- **Target was to bring in 400 colleges in the first year**
- **Brought 900+ colleges in 15 months**

Acceptance of the paid model

- **Target was to bring in 400 colleges in the first year**
- **Brought 900+ colleges in 15 months**
- **Each paid an annual subscription of ₹25,000**

Can be as low as ₹25 or less

Payment $\implies$ Higher Efficacy?

- **Training ending in tests used to be 15%, when it was free**

Payment $\Rightarrow$ Higher Efficacy?

- **Training ending in tests used to be 15%, when it was free**
- **Increased to 50%, in the paid model**

Payment $\Rightarrow$ Higher Efficacy?

- **Training ending in tests used to be 15%, when it was free**
- **Increased to 50%, in the paid model**
- **Aiming to reach 75%**

Payment $\Rightarrow$ Higher Efficacy?

- Training ending in tests used to be 15%, when it was free
- Increased to 50%, in the paid model
- Aiming to reach 75%
- **Job fairs for high performers**
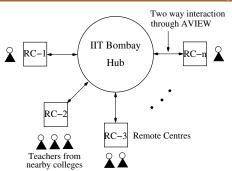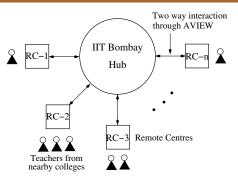
T10KT: Remote Centres (RC)
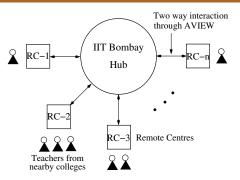
- **RC connect through videoconferencing using A-VIEW**
- **T10KT =** Train 10,000 Teachers project
- **There are 550 RC**

Workshop Methodology

Workshop Methodology
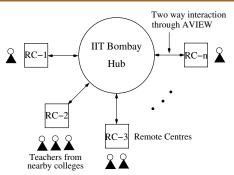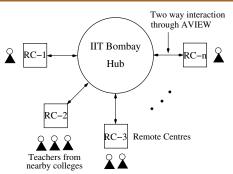
1. **Pilot workshop - validation**

Workshop Methodology

1. **Pilot workshop - validation**
2. **RC Coordinators' workshop**

Workshop Methodology
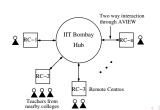
1. **Pilot workshop - validation**
2. **RC Coordinators' workshop**
3. **Massive main workshop**
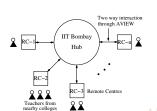
▶ **One day workshops**
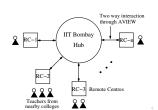
- **One day workshops**
- **100-200 Remote Centres join**
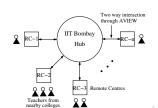
- **One day workshops**
- **100-200 Remote Centres join**
- **College Teachers/Librarians go there**
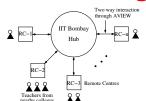
Massive Main Workshop Process

- **One day workshops**
- **100-200 Remote Centres join**
- **College Teachers/Librarians go there**
- **₹500 fees, no TA/DA**
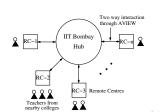
- **One day workshops**
- **100-200 Remote Centres join**
- **College Teachers/Librarians go there**
- **₹500 fees, no TA/DA**
- **We connect through A-VIEW, open source videoconferencing tool**
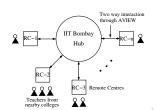
► **We connect through A-VIEW, open source videoconferencing tool**
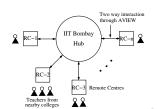
- **We connect through A-VIEW, open source videoconferencing tool**
- **We explain the learning procedure**
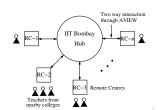
- **We connect through A-VIEW, open source videoconferencing tool**
- **We explain the learning procedure**
- **Learning through Spoken Tutorials**

- **We connect through A-VIEW, open source videoconferencing tool**
- **We explain the learning procedure**
- **Learning through Spoken Tutorials**
- **Use timed discussion forum for Q/A**

Statistics of Massive Blended Training

Date	Topic	No. of Centres	# Teachers trained
8-10-2018	Koha	104	2,500

Statistics of Massive Blended Training

Date	Topic	No. of Centres	# Teachers trained
8-10-2018	Koha	104	2,500
9-3-2019	Koha	79	1,040

Statistics of Massive Blended Training

Date	Topic	No. of Centres	# Teachers trained
8-10-2018	Koha	104	2,500
9-3-2019	Koha	79	1,040
15-3-2019	Moodle	104	4,359

Statistics of Massive Blended Training

Date	Topic	No. of Centres	# Teachers trained
8-10-2018	Koha	104	2,500
9-3-2019	Koha	79	1,040
15-3-2019	Moodle	104	4,359
4-5-2019	Scilab[1]	164	4,387

Statistics of Massive Blended Training

Date	Topic	No. of Centres	# Teachers trained
8-10-2018	Koha	104	2,500
9-3-2019	Koha	79	1,040
15-3-2019	Moodle	104	4,359
4-5-2019	Scilab[1]	164	4,387
22-6-2019	Python[1,2]	187	5,264

Statistics of Massive Blended Training

Date	Topic	No. of Centres	# Teachers trained
8-10-2018	Koha	104	2,500
9-3-2019	Koha	79	1,040
15-3-2019	Moodle	104	4,359
4-5-2019	Scilab[1]	164	4,387
22-6-2019	Python[1,2]	187	5,264
23-8-2019	Linux[3]	130	2,800

Statistics of Massive Blended Training

Date	Topic	No. of Centres	# Teachers trained
8-10-2018	Koha	104	2,500
9-3-2019	Koha	79	1,040
15-3-2019	Moodle	104	4,359
4-5-2019	Scilab[1]	164	4,387
22-6-2019	Python[1,2]	187	5,264
23-8-2019	Linux[3]	130	2,800
21-9-2019	eSim[3]	120	3,000

Statistics of Massive Blended Training

Date	Topic	No. of Centres	# Teachers trained
8-10-2018	Koha	104	2,500
9-3-2019	Koha	79	1,040
15-3-2019	Moodle	104	4,359
4-5-2019	Scilab[1]	164	4,387
22-6-2019	Python[1,2]	187	5,264
23-8-2019	Linux[3]	130	2,800
21-9-2019	eSim[3]	120	3,000
9-11-2019	R[3]	150	3,200

1: Afghanistan, 2: Bangladesh, 3: Myanmar

eSim Workshop at Myanmar

R Workshop at Myanmar

Next Workshop: Arduino

- **Arduino kit, breadboard, components**
- **On 8 Feb. 2020**
- **Cost: ₹1,500 + 400**
- **Hoping to get a sponsor**

Workshop for health workers

Another workshop for health workers

A Spoken Tutorial on Breastfeeding

Hindi dubbing of Global Health Videos received more than 3 million views

Spoken Tut. on Health & Nutrition

- **15 Spoken Tutorials on breastfeeding**
- **7 on complementary feeding**
- **Dubbed in 10+ languages**
- **Can work with MoHFW and MoWCD**

Babies of Melghat

- **Tiger reserve**
- **Tribal region**
- **Malnutrition is very high**

- **Example: Muzaffarpur, Bihar**
- **Need help to reach out to all needy**

- **Vaccination**
- **Menstrual hygiene**
- **Family planning**
- **etc.**

4.2 Libraries as Centres of Learning

- **National Virtual Library of India (NVLI)**

4.2 Libraries as Centres of Learning

- **National Virtual Library of India (NVLI)**
- **On culture, archives/history, etc.**

- **National Virtual Library of India (NVLI)**
- **On culture, archives/history, etc.**
- **Done by National Mission on Libraries**

4.2 Libraries as Centres of Learning

- **National Virtual Library of India (NVLI)**
- **On culture, archives/history, etc.**
- **Done by National Mission on Libraries**
- **Ministry of Culture is funding it**

- **National Virtual Library of India (NVLI)**
- **On culture, archives/history, etc.**
- **Done by National Mission on Libraries**
- **Ministry of Culture is funding it**
- **IIT Bombay is leading this project**

4.2 Libraries as Centres of Learning

- **National Virtual Library of India (NVLI)**
- **On culture, archives/history, etc.**
- **Done by National Mission on Libraries**
- **Ministry of Culture is funding it**
- **IIT Bombay is leading this project**
- **Expect to launch within a month**

4.2 Libraries as Centres of Learning

- **National Virtual Library of India (NVLI)**
- **On culture, archives/history, etc.**
- **Done by National Mission on Libraries**
- **Ministry of Culture is funding it**
- **IIT Bombay is leading this project**
- **Expect to launch within a month**
- **We have jobs for library professionals**

▸ **First training through massive blended method**

- **First training through massive blended method**
- **Feedback from Koha learners**

- **First training through massive blended method**
- **Feedback from Koha learners**
- **Feedback from Koha Workshop Participants**

Koha training imparted by NVLI

- **First training through massive blended method**
- **Feedback from Koha learners**
- **Feedback from Koha Workshop Participants**
- **To train librarians from public libraries**

- **First training through massive blended method**
- **Feedback from Koha learners**
- **Feedback from Koha Workshop Participants**
- **To train librarians from public libraries**
- **College libraries also accommodated**

Koha training imparted by NVLI

- **First training through massive blended method**
- **Feedback from Koha learners**
- **Feedback from Koha Workshop Participants**
- **To train librarians from public libraries**
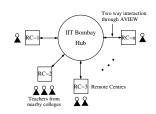- **College libraries also accommodated**
- **Conducted twice**

Support through Ask a Question

- **One hour every week through A-VIEW**
- **We created Koha Virtual Machine**
- **Answered their doubts**
- **Helped enter their holdings**

What do we want to do?

- **Train the librarians on Koha**
- **Help them in automation**
- **Need only a computer, printer, scanner, and an MCA**

State of Public Libraries

- 40,000 to 1,50,000 libraries
- Don't even know the exact number
- Don't have their addresses
- Don't have their phone numbers, email addresses, etc.

Libraries as Centres of Learning?

- **Can we help automate all public libraries?**
- **Can we help all of them to use Koha and Dspace?**
- **Can we let the public see the holding of any library?**

Infrastructure to District Libraries?

- **Can at least district libraries have good computer rooms**
- **Like in the western countries?**
- **In return for automation?**
- **Supported by the Centre and the States?**
- **Will any state be interested?**

Can we create a database (contact information) of public libraries?

Conclusions

- **Spoken Tutorial is a proven method to self-learn IT skill topics**

Conclusions

- **Spoken Tutorial is a proven method to self-learn IT skill topics**
- **T10KT can train tens of thousand people simultaneously**

Conclusions

- **Spoken Tutorial is a proven method to self-learn IT skill topics**
- **T10KT can train tens of thousand people simultaneously**
- **A blend of the above two has been found to be effective**

Conclusions

- **Spoken Tutorial is a proven method to self-learn IT skill topics**
- **T10KT can train tens of thousand people simultaneously**
- **A blend of the above two has been found to be effective**
- **20,000 teachers/librarians trained**

Conclusions

- **Spoken Tutorial is a proven method to self-learn IT skill topics**
- **T10KT can train tens of thousand people simultaneously**
- **A blend of the above two has been found to be effective**
- **20,000 teachers/librarians trained**
- **Learners paid for fees, travel and stay**

- **National Virtual Library of India will be launched soon**

- **National Virtual Library of India will be launched soon**
- **Funded by the Ministry of Culture**

Conclusions - Continued

- **National Virtual Library of India will be launched soon**
- **Funded by the Ministry of Culture**
- **Can public libraries become centres of learning?**

- **National Virtual Library of India will be launched soon**
- **Funded by the Ministry of Culture**
- **Can public libraries become centres of learning?**
- **With partial funding from the Ministry of Culture**

Funding Support

Supported by

- **National Mission on Education through ICT (NMEICT), MHRD**
- **Pandit Madan Mohan Malaviya National Mission on Teachers and Teaching, MHRD**
- **National Virtual Library of India, Ministry of Culture**

T10KT Team

FOSSEE Team

Any questions?