

# Micro lecture, prevalent mobile learning for training and education

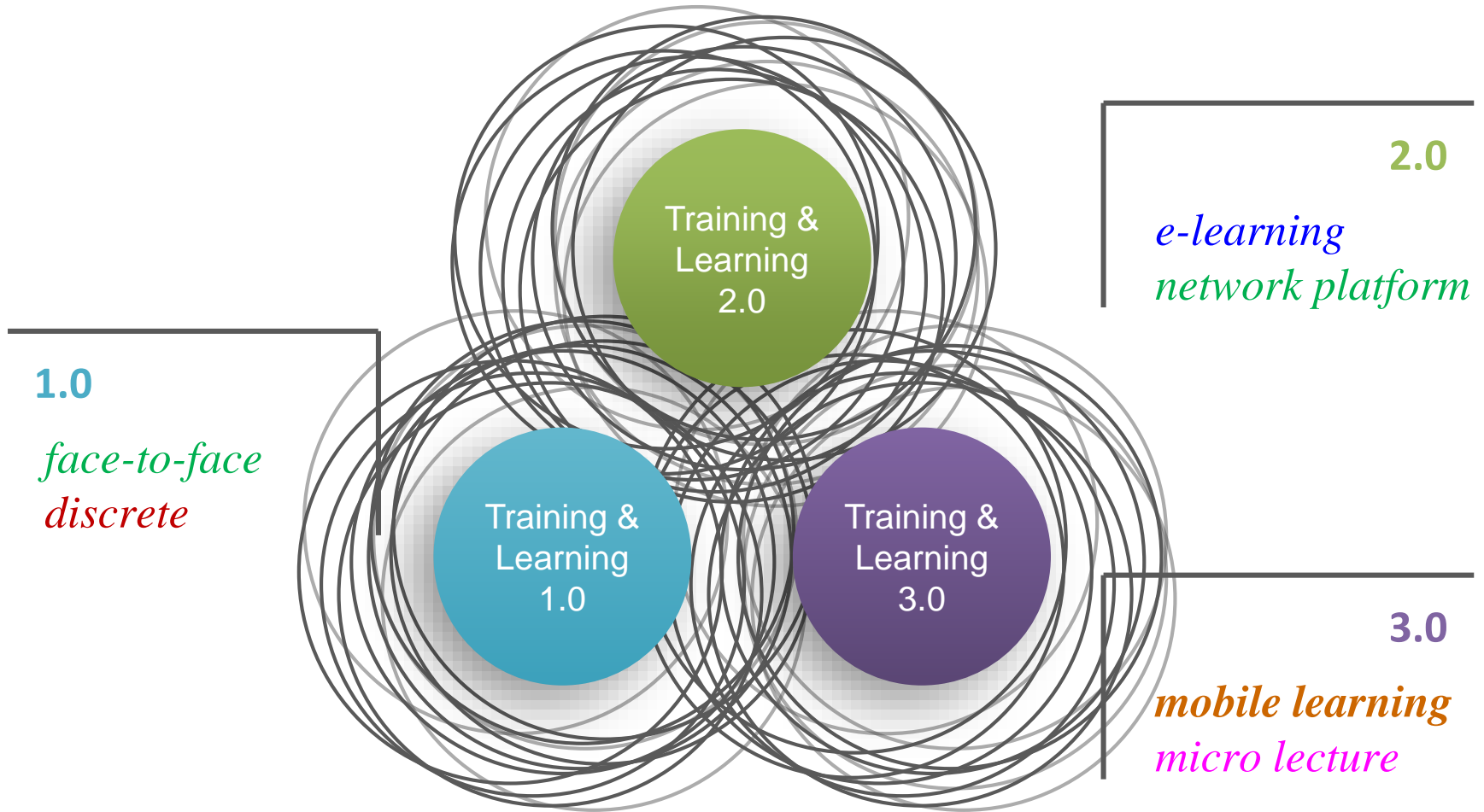
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*Centre of International Education*

*Hong Kong College of Technology*



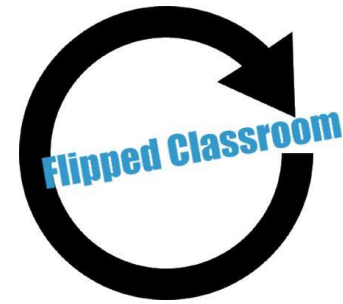
- Situated in era of *Internet* +
- 90% of data generated in the world was created in last 2 years
- New way of communication and exchange
- Searching for the identity and existence in the *Internet*
- Enter the era of *mobile web*, *Internet of Things* (IoT) and *Artificial Intelligence* (AI)



*Training & Learning development*

- *The 60-Second Course* was the first launched micro lecture designed by the American Professor LeRoy A. McGrew in 1993.
- T.P. Lee had put forward the *One Minute Lecture (OML)* in 1995.
- David Penrose had enhanced the popularity much further in 2008.

## *Teaching and learning - new modes*



Source:

<https://www.incredibleart.org/links/toolbox/flipped.html>



Source: <https://www.khanacademy.org/>

The word "TED" in a bold, red, sans-serif font.

Ideas worth spreading

Source: <https://www.ted.com/>



Source:  
<https://www.coursera.org/>

- Micro lecture is applied widely
  - *TED ed*
  - *Khan Academy*
  - *MOOC (edX, Coursera, Udacity)*
  - *Flipped Classroom*
- “Microlecture refers to online video lecture resources which are designed and exploited to form a contextualization multimode learning style aim at specific knowledge or teaching link”. (Hu Tiesheng, 2013)

## *Digital construction in China (end of 2018)*

- Fast informationization development
- 829 million internet users, with internet penetration rate of 59.6 percent (3.8% increase from end of 2017)
- internet users in rural areas rose to 222 million (38.4 percent internet penetration rate / 3% increase from end of 2017)
- online-payment users totaled 600 million
- China's digital economy generated 34.8 percent of GDP, reaching 31.3 trillion yuan
- *Facilitating fast development of mobile learning & micro lecture*

Source: Report released by the Cyberspace Administration of China on 5 May 2019 at the 2nd Digital China Summit (Fuzhou, China)

<http://www.chinadaily.com.cn/a/201905/07/WS5cd1237da3104842260ba492.html>



- 腾讯课堂
- 网易公开课
- 淘宝教育
- CCtalk
- Chuanke.com
- *famous online education organizations in China, vast adoption of micro lecture*



Source: <https://www.cctalk.com/>

× +

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Source: <https://open.163.com/>

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Source: <https://ke.qq.com/>



The image is a screenshot of the Taobao Education (淘宝教育) website. The header features the Taobao Education logo and name in a teal banner. Below the header, there are three main navigation tabs: '全部课程分类' (All Course Categories), '首页' (Home), and '公开课' (Open Course). The main content area is a grid of course categories, each represented by a colored icon, a category name, and a list of specific courses. The categories include Language Learning, Workplace Skills, Exam Certification, and Hobbies. The '公开课' (Open Course) tab is currently selected, and the '语言学习' (Language Learning) category is highlighted with a red border.

全部课程分类 三 首页 公开课			
 语言学习	实用英语	英语入门	新概念英语 英语口语
	考试英语	留学英语	四六级 常用单词
	一对一教学	美剧英语	日语 韩语 粤语
 职场技能	IT技能	编程语言	前端课程 网站制作
	办公技能	PS技巧	Office技能 Excel技能
	营销管理	电子商务	市场营销 销售技巧
 考试考证	财务金融	会计职称	会计从业 注册会计师
	公务员	考研押题	考研 二级建造师
	医药司法	公务员	医师 / 药师 司法考试
 兴趣爱好	时尚女性	时尚美妆	个人形象 舞蹈
	健康养生	魅力健身	减肥瑜伽 我爱运动
	趣味生活	DIY手工	音乐 美术 摄影

Source: <https://xue.taobao.com/>

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会计证、钢琴、建造师 >

国考、省考、学历教育 >

首

Source: <https://chuanke.baidu.com/>

- “The concept of micro lecture was promoted throughout China, with rapid development and adoption in education and training sectors, arrangement of staff training, workshop and contest around the country from 2012 to 2014”. (Chiang, 2018)
- The most popular knowledge areas of micro content consumed by people in China are English, music, yoga, financial management, parenting, beauty and physical fitness.

## *Mobile learning for training and education*

- *A high cost for staff development today*
- Training can be occurred at anytime and anywhere.
- The consistency of content can be achieved.
- Training cost can be reduced.
- There is an increasing trend of adopting mobile learning by companies and organizations as staff training for their employees in recent decade.

## *Mobile learning for training and education*

- Today, many large companies in the United States have set up specialized corporate universities.
- The combination of micro lecture and enterprise training presents a new research perspective for the study of enterprise e-learning training.
- The time factor is critical as the learning curve is short and the employees can acquire the knowledge and skills in a timely manner.

## *What micro lecture can do for training and learning?*

- For organizational training needs
- For knowledge expansion needs
- For utilizing memory needs
- For knowledge management
- For response to changing needs

# *What micro lecture can do*

*for training and learning*

## Organizational training

- The company's rules and regulations are divided into different sections and presented by different micro lecture.
- For new employees, they will be learning actively by watching the micro lecture for faster integration into the organization.

1

For organizational training needs

2

For knowledge expansion needs

3

For utilizing memory needs

4

For knowledge management

5

For response to changing needs



# *What micro lecture can do*

*for training and learning*

## Knowledge expansion

- When new executives/senior staff entering a new unfamiliar area, micro lecture can help them quickly understand the characteristics of the industry for fast integration with the organization.
- While current employees having job rotation or job transfer, micro lecture can help them to understand the new job responsibilities.

- 1 For organizational training needs
- 2 For knowledge expansion needs
- 3 For utilizing memory needs
- 4 For knowledge management
- 5 For response to changing needs

*for training and learning*

## Utilizing memory

- Micro lecture is useful for presenting basic knowledge and skills to be acquired for the frontline staff.
- They can learn at any time to consolidate some of their skills and knowledge of product or service.
- Micro lecture is a good choice to fragment the large amount of knowledge into modularity for easy review and learning.

1

For organizational training needs

2

For knowledge expansion needs

3

For utilizing memory needs

4

For knowledge management

5

For response to changing needs

*for training and learning*

## Knowledge management

- A staff can create the summary of the technical experience as a micro lecture that can be viewed as the knowledge base of the organization.
- The aggregated knowledge from different colleagues which can be queried and evaluated resembles the dictionary for the company.
- A colleague can find a solution directly when come across a similar situation by retrieving respective micro lecture.

1

For organizational training needs

2

For knowledge expansion needs

3

For utilizing memory needs

4

For knowledge management

5

For response to changing needs

# *What micro lecture can do*

*for training and learning*

## Response to changing needs

- It usually happens for company's rules and regulations, a process in manufacturing, a product or a service provided by the company.
- Micro lecture is useful for updating knowledge and information in a timely manner for people inside the organization.

- 1 For organizational training needs
- 2 For knowledge expansion needs
- 3 For utilizing memory needs
- 4 For knowledge management
- 5 For response to changing needs

## *What micro lecture can do for training and learning?*

- A complement of a traditional training course
- A general content of an intensive training course
- A new preview before participating a large event of learning
- more and more

## *Micro lecture for training and learning in an organization of education sector*

- Micro lecture can be adopted in different applications according to the organizational context and authenticity.
- *The head or senior management staff* can present the key features of the department or the division including vision, mission, annual review and annual plan.
- *The administrator* can elaborate a specific job task or explain a particular workflow in a micro lecture for transferrable knowledge to other colleagues.
- *The teacher* can choose a specific interesting topic to create a standalone micro lecture or a series of micro lecture with the taster as a demonstration.

*Micro lecture for training and learning  
in an organization of education sector*

- *The head of programme or course coordinator can create a video file to promote specific area of programmes.*
- *1<sup>st</sup> micro lecture created by our project team (Civil Engineering in Hong Kong 2018)*

<https://m.youtube.com/watch?v=N3padL7tBuY>



## *3-phase project*

- There are three main phases for the project of micro lecture in our organization (education sector).
- The *first phase* of the exploratory study has been completed.
- The *second phase* of the implementation will last for 6 months including micro lecture production and consumption.
- The *third phase* of evaluation will last for another 6 months including data collection, data analysis and compilation of the final report.



## *Critical success factors*

- Cochrane (2012) recommended critical success factors of mobile learning, which are also true for applying micro lecture to training and education in organizations.
- Whether there is *a good pedagogical design* of the training materials?
- Whether there is *adequate learners' assessment*?
- Whether there is *timely formative feedback to learners*?
- Whether the *mobile technology* is selected appropriately?

## *Future work*

- The data collection and analysis from the participants of this study represents an organization of education sector adopting micro lecture for training and learning.
- When time and resource is allowed, the assessment of implementation can be carried out in different economic sectors.
- A more comprehensive study or research work can generate more relevant recommendations for the enhancement and future development of micro lecture for training and education.

## *Reflection*

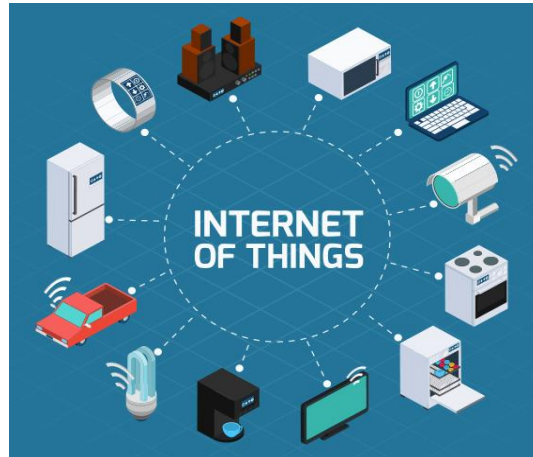
- One size cannot fit all
  - *Building extensive knowledge or skills*
  - *Micro lecture is not a fast gateway*
  - *For reading the content or following some procedures*
- learner-focused & technology-focused
- Challenges
  - *systematic vs fragmented*
  - *controllable vs flexible*
  - *professional vs mass-oriented*

## *Reflection*

- Fusion with the Internet
  - *Internet of Things (IoT), 5th generation mobile networks (5G), Virtual Reality (VR), Artificial Intelligence (AI), smart phone, smart watch, 3D printing*



Source: [www.google.com](http://www.google.com)  
Google search by images "Artificial Intelligence"



Source: [www.google.com](http://www.google.com)  
Google search by images "Internet of Things"



Source: [www.google.com](http://www.google.com)  
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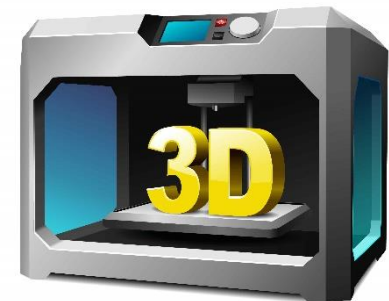
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Google search by images "Virtual Reality"



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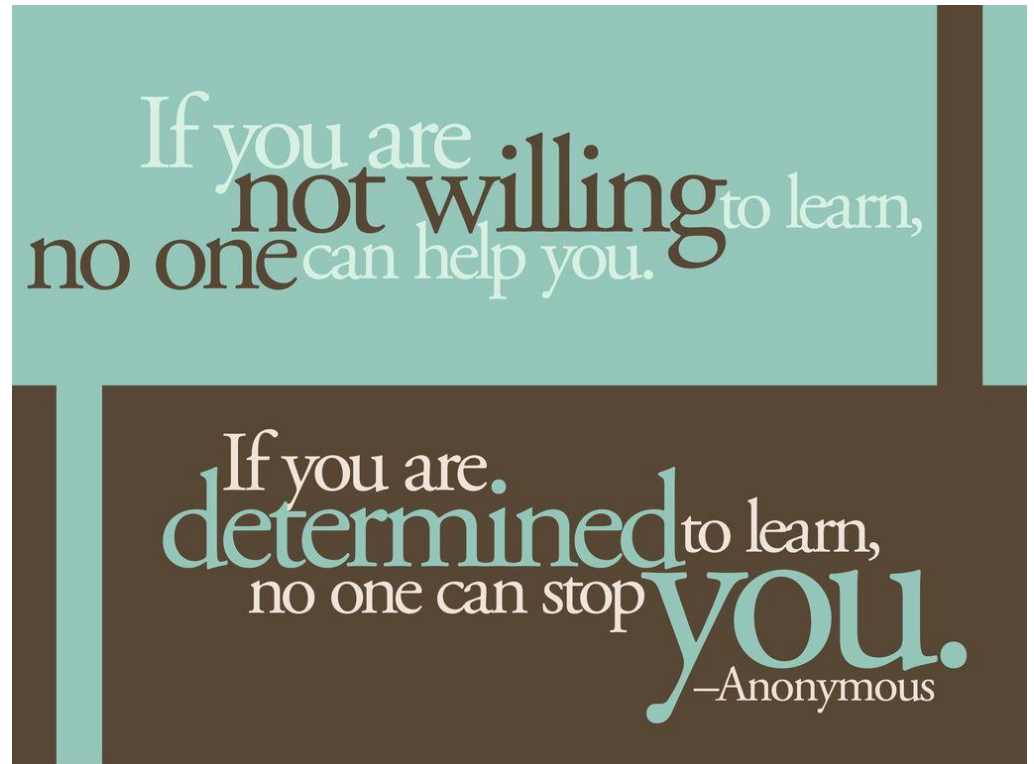
## *Reflection*

- Internet thinking in the era of Internet +
  - *Increasing new teaching and learning modes*
  - *rapid ICT development (5G, VR, AI)*
  - *New trial, development & reshaping*
- Moment of need to learn, easy to use, simple & quick to understand
- Understand how micro lecture can help to employees
- Start small, think big
- Staff participation, creation & sharing



Source: <https://www.khanacademy.org/>

*The quote from  
Khan Academy*



*An unknown quote*

- A replica of the micro lecture for today's presentation

<https://youtu.be/xcGp8kbbk1iQ>



*Thank you*



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