

Strategic Planning and Implementation of e-Learning in Secondary School

Mr. Ha
IT Panel Head
True Light Middle School of Hong Kong



Scan with QR code
reading app

Open PDF using an
appropriate app on
your phone



Implementing
e-Learning in
school is like this?

this?



or this ?





Your smartphones
please



b.socrative.com

b.socrative.com



Email Address

Email Address

Password

Password

SIGN IN

Forgot your password?

or



Sign in with Google

GET A FREE ACCOUNT


STUDENT JOIN ROOM

Room Name

GO!

Student join room
truelight





Waiting for your teacher
to start an activity.

Enter your name

Smith, Mickey

Done

在學校推行電子教學，
樽頸是誰／甚麼？

Where is the bottleneck?



Technology



Infrastructure



Content



Teachers



Students



Parents

Where is the bottleneck?



Technology

WiFi standards

2003 - 802.11	g	54 Mbps
2009 - 802.11	n	54 to 600 Mbps
2013 - 802.11	ac	1300 Mbps

Follow



Apple iPad
27 Jan 2010



Cisco Cius
29 Jun 2010



BlackBerry PlayBook
27 Sep 2010



Motorola Xoom
5 Jan 2011



Asus Eee Pad Transformer TF101
30 Mar 2011



Fusion Garage JooJoo
25 Mar 2010



Samsung Galaxy Tab
2 Sep 2010



HP Slate 500
22 Oct 2010



HTC Flyer
Feb 2011



Apple iPad 2
2 Mar 2011



Samsung Galaxy Tab 10.1
22 Mar 2011



Samsung Galaxy Tab 8.9
22 Mar 2011



HP TouchPad
9 Feb 2011



Lenovo ThinkPad Tablet
20 Jul 2011



Panasonic Toughpad A1
7 Nov 2011




Apple 'New' iPad (iPad 3)
7 Mar 2012



Google Nexus 7
27 Jun 2012



Apple iPad 4
23 Oct 2012



Panasonic T
9 Jan 2013



Amazon Kindle Fire
28 Sep 2011



Panasonic Toughpad B1
7 Nov 2011



Amazon Kindle Fire HD
6 Sep 2012



Apple iPad mini
23 Oct 2012



Microsoft Surface RT
26 Oct 2012



Google Nexus 10
29 Oct 2012



oughpad FZ-G1



Panasonic Toughpad 4K Tablet
5 Sep 2013



Samsung Galaxy NotePRO 12.2
6 Jan 2014

Microsoft Surface Pro
9 Feb 2013

Amazon Kindle Fire HDX (7" and...
25 Sep 2013

Microsoft Surface 2
23 Sep 2013

Microsoft Surface Pro 2
23 Sep 2013

Apple iPad Air
22 Oct 2013

Apple iPad mini with Retina Display
22 Oct 2013

Where is the bottleneck?



Infrastructure

Government Support
Scheme (100 WiFi)

Campus-wide WiFi
Separate broadband
Tablet PCs

Where is the bottleneck?



Content

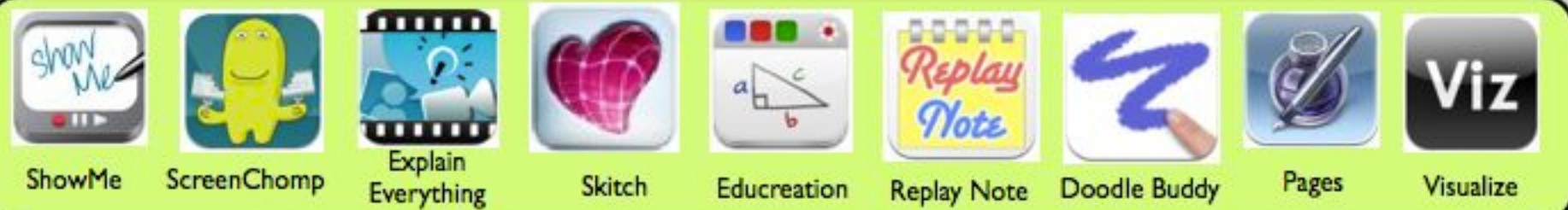
EMAX
Publishers
WWW

The Digital Learning Farm: Apps for iPads

Curriculum Reviewer



Tutorial Designer



Collaboration Coordinator



Official Scribe



Researcher



Contributor to Society



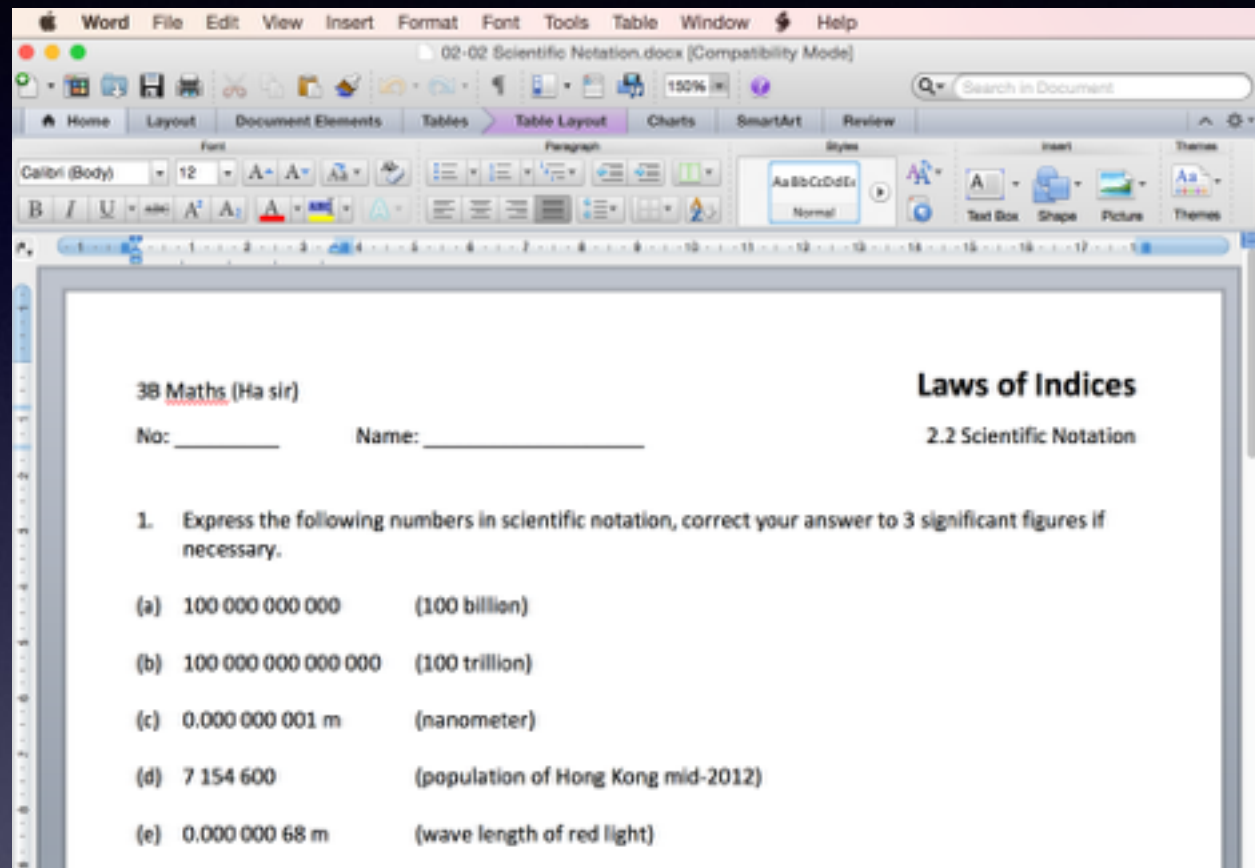
We only have the problem of
content curation.

Content Curation (策展)

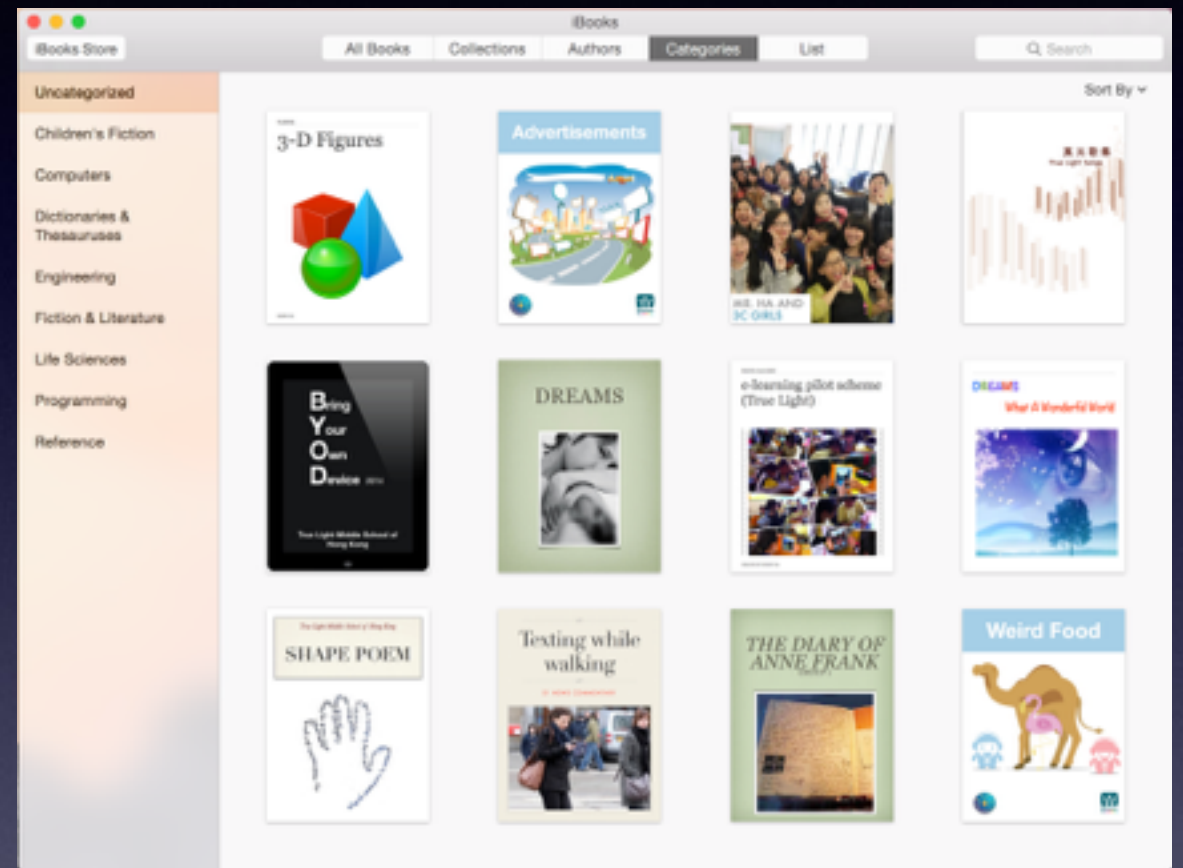


Process of collecting, organizing and displaying information relevant to a particular topic or area of interest.

Create notes / worksheets using



Past: MS Word



Now: iBooks



Uncategorized

Children's Fiction

Computers

Dictionaries &
Thesauruses

Engineering

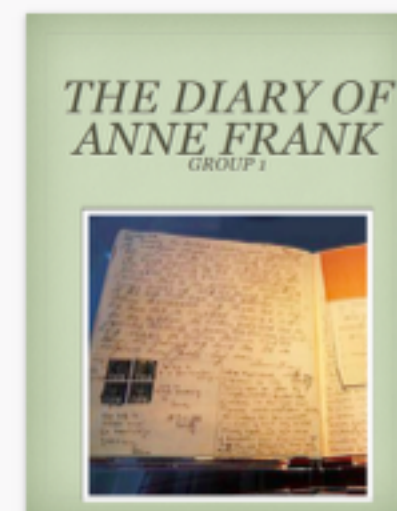
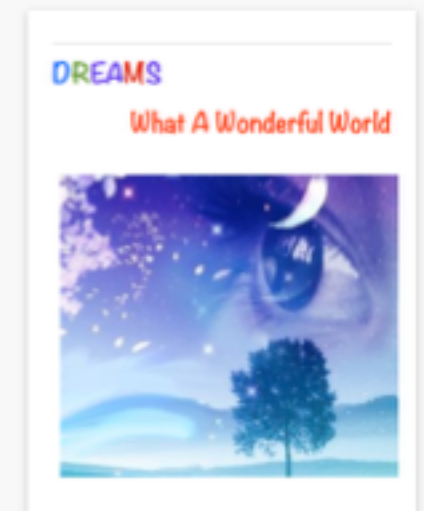
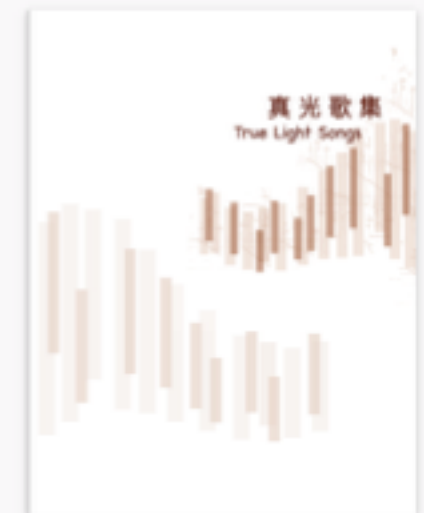
Fiction & Literature

Life Sciences

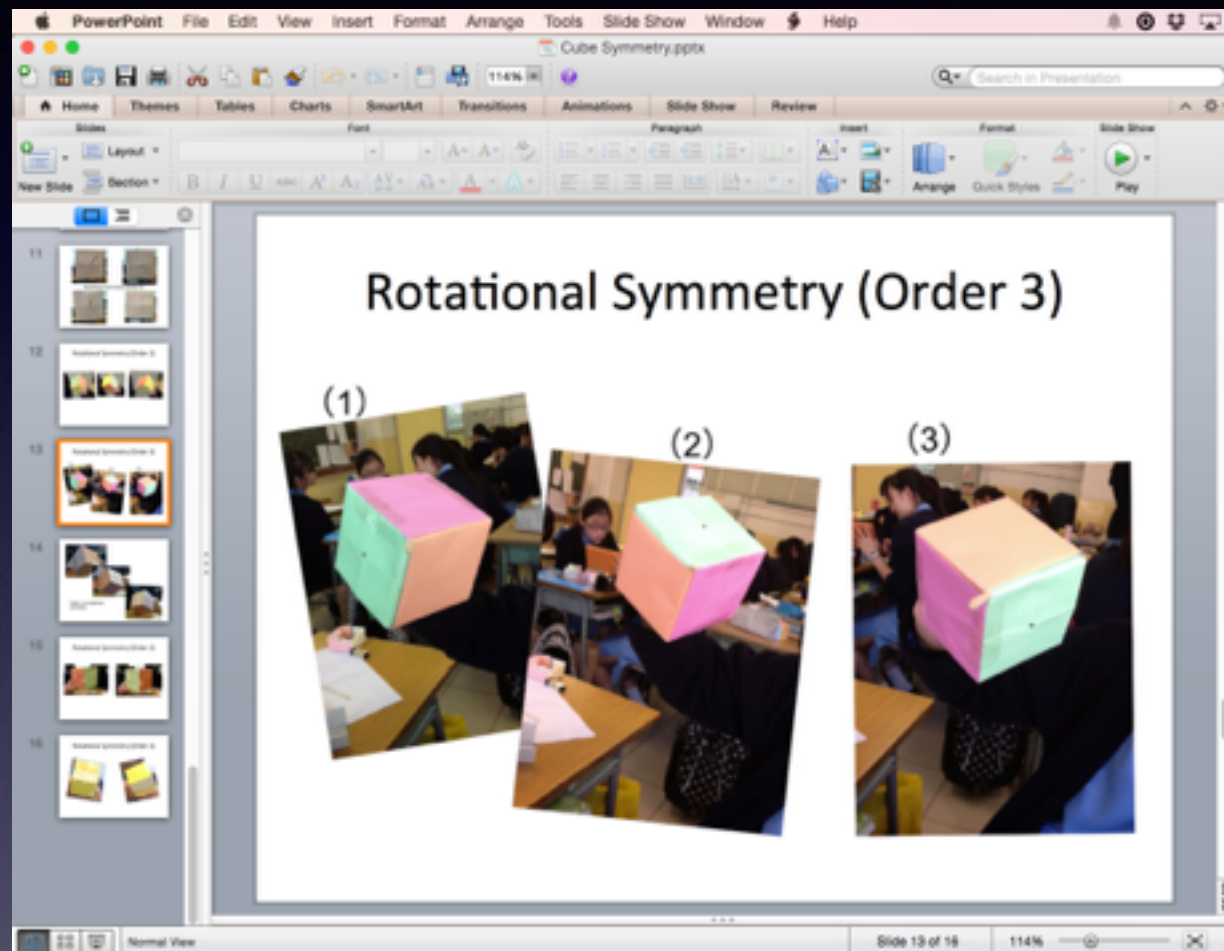
Programming

Reference

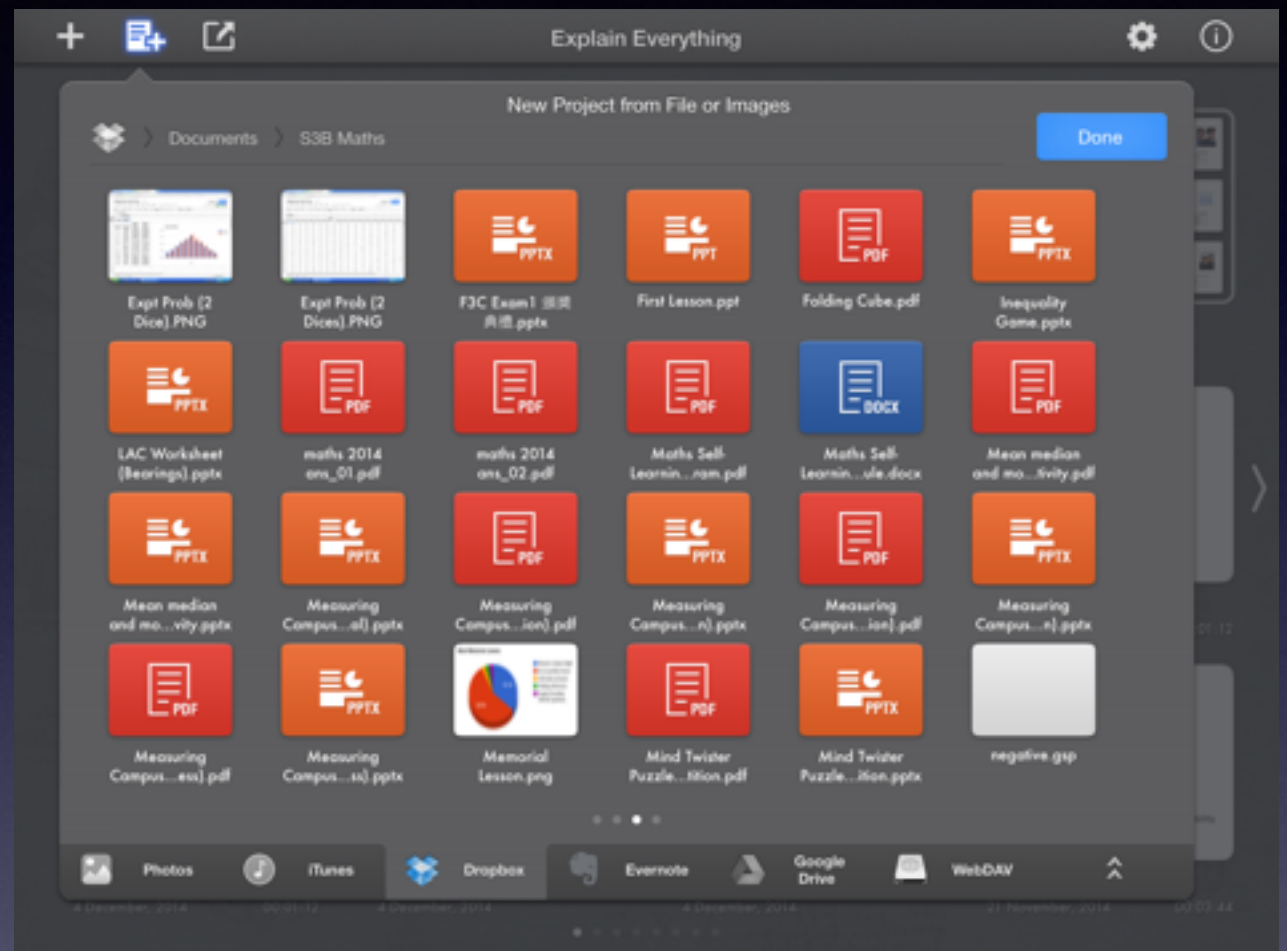
Sort By ▾



Create presentations using



Past: PowerPoint



Now: Import into
Explain Everything

New Project from File or Images

Documents > S3B Maths

Done



Expt Prob (2 Dice).PNG



Expt Prob (2 Dices).PNG



F3C Exam1 頒獎典禮.pptx



First Lesson.ppt



Folding Cube.pdf



Inequality Game.pptx



LAC Worksheet (Bearings).pptx



maths 2014 ans_01.pdf



maths 2014 ans_02.pdf



Maths Self-Learnin...ram.pdf



Maths Self-Learnin...ule.docx



Mean median and mo...tivity.pdf



Mean median and mo...vity.pptx



Measuring Campus...al).pptx



Measuring Campus...ion).pdf



Measuring Campus...n).pptx



Measuring Campus...ion).pdf



Measuring Campus...n).pptx



Measuring Campus...ess).pdf



Measuring Campus...ss).pptx



Memorial Lesson.png



Mind Twister Puzzle...tition.pdf



Mind Twister Puzzle...ition.pptx



negative.gsp

Page indicator dots



Photos



iTunes



Dropbox



Evernote



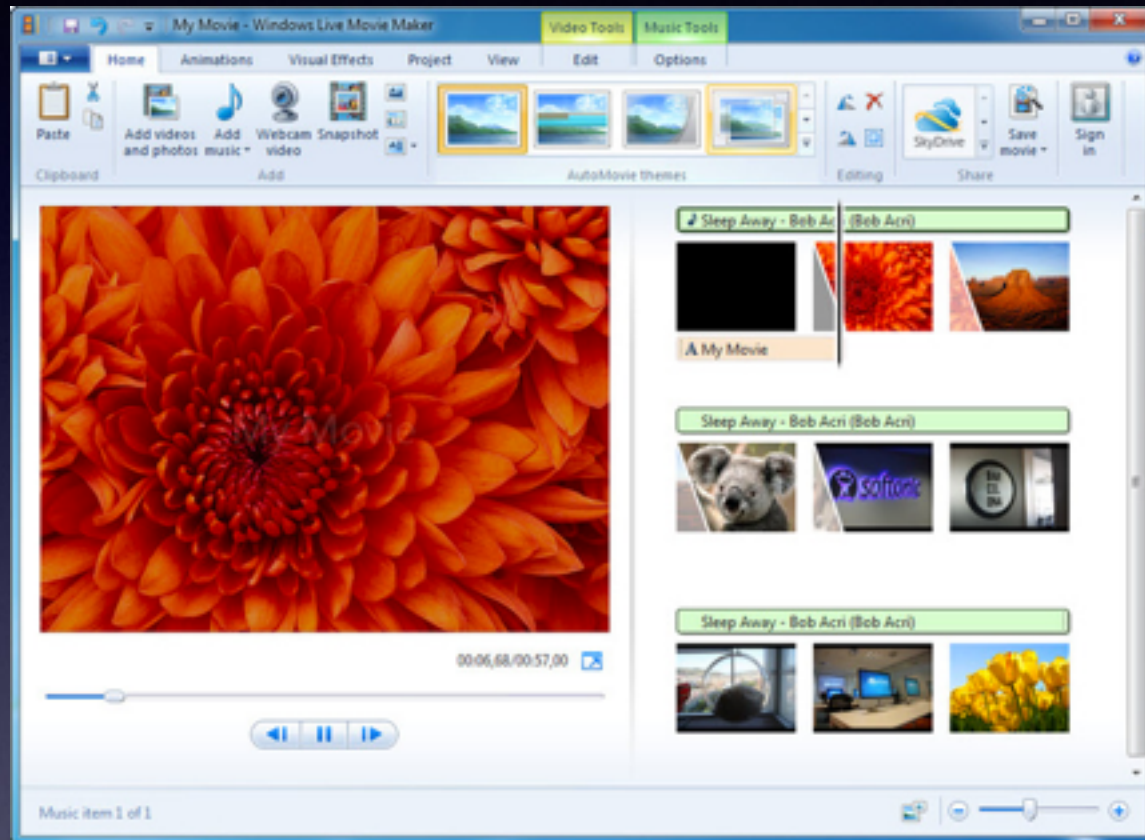
Google Drive



WebDAV



Video recording & editing



Past: Movie Maker



Now: iMovie



My Movie 3

Video

Photos

Audio

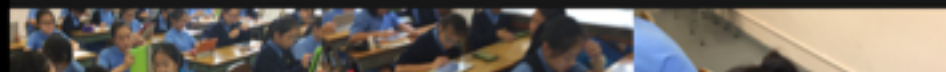


Expo 2014 ▼

11 NOV, 2014



5 NOV, 2014



11.4s



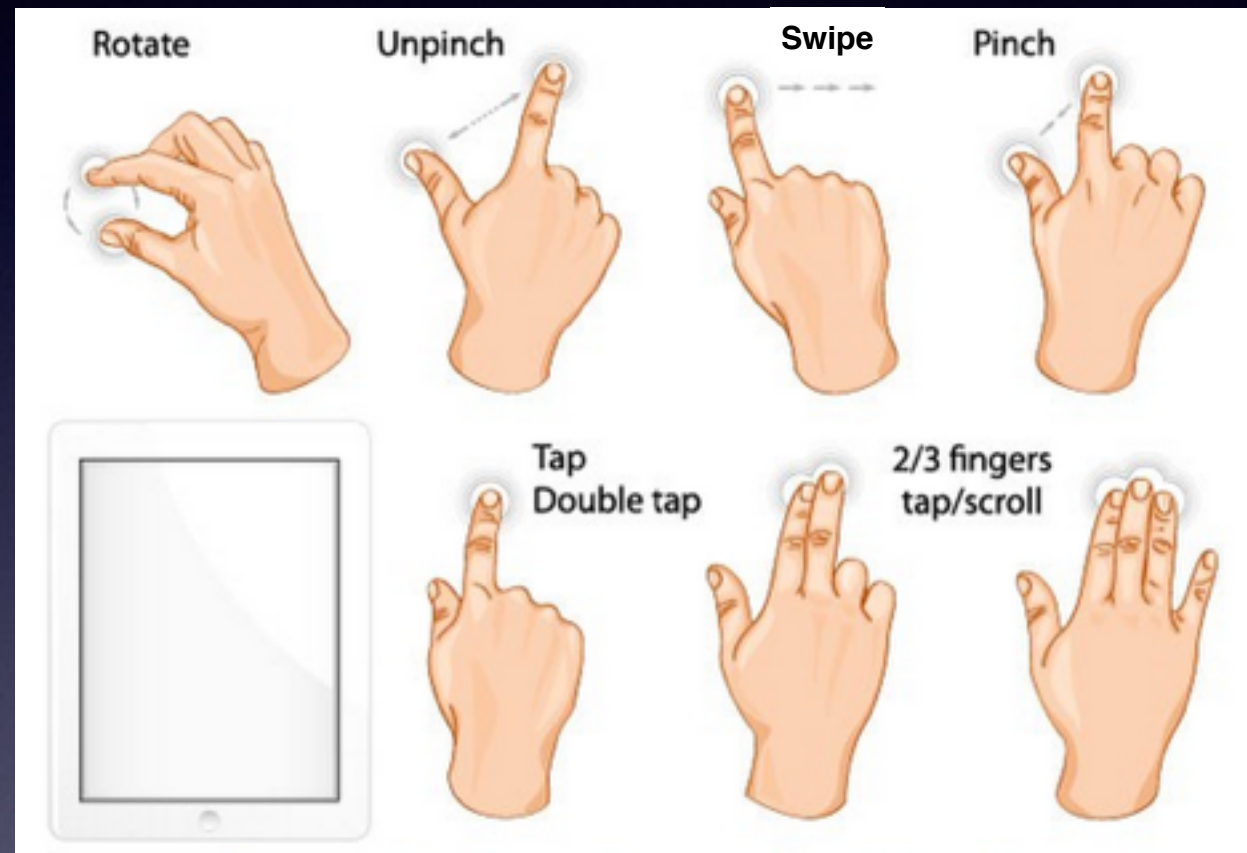
Office for iPad & iPhone



Teachers need new skill set in mobile computing era



Click



Gestures

Where is the bottleneck?



Students

They are digital natives.

Digital Natives

Persons who were born
during or after the
general introduction of
digital technologies

Digital Natives



Through interacting with digital technology from an early age, they have greater comfort level using it.

It is easier to engage students
through technology



Where is the bottleneck?



Parents

Parents generally don't know what e-Learning is all about.

Parents' perception



Gaming device



Learning device



Parents don't know learning apps



Skitch



Educreations



Explain
Everything



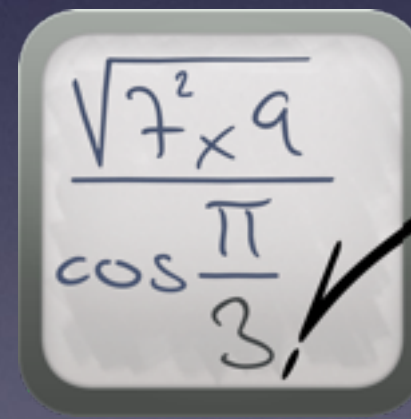
Keynote



Socrative
Student



Qrafter



MyScript
Calculator



CamScanner

Parents' Education



Talk



Workshops



Parents' perception



Gaming device



Learning device



Where is the bottleneck?



Teachers

若要推行及落實電子教學，你個人最大的憂慮是甚麼？

<http://b.socrative.com>



Join room

truelight

Your smartphone please

Mobile Device Management?

Deploy apps
Security settings
Backend admin

For TSS
(Efficiency)

e-Learning lesson
control system?

For Teachers
(Sense of security?)

e-Learning

Cultivation of 21st century
learning skills
Exploration through technology
Student-centric learning

MDM

Restrict access of
resources through
technology

If MDM are to be used in classroom,
it should be used in assessment.

How to motivate teachers to
use technology in classroom?

要在課堂落實電子教學，以下那些人物是關鍵？

- A. 校長
- B. 教務主任
- C. 訓導主任
- D. 科目主任
- E. 資訊科技主任
- F. 科目老師
- G. 技術支援人員

<http://b.socrative.com>



Join room

truelight

Your smartphone please

Working Model



IT Panel
Head



English
Panel Head



Technical
Support



S1 English Teachers

Working Model



IT Panel
Head



English
Panel Head



Technical
Support



S1 English Teachers

Working Model



IT Panel
Head



Technical
Support



English
Panel Head



S1 English Teachers



Working Model



IT Panel
Head



Technical
Support Panel



English
Panel



S



Project administration, coordination
Giving advices, ideas, solutions
Budget management

Working Model



IT Panel
Head



Technical
Support Panel



English
Panel



S



Crucial technical support
Keep things running smooth
Apps suggestion

Working Model



IT Panel
Head



Technical
Support



English
Panel Head



S



Leading English panel
Brainstorming ideas on pedagogy
Curriculum design



Working Model



IT Panel
Head



Technical
Support



English
Panel Head



S1 English Teachers

Work out iPad lessons
Test drive pedagogy, apps
Give feedback

Working Model



IT Panel
Head



Technical
Support



English
Panel Head



S1 English Teachers



Back end

Front end

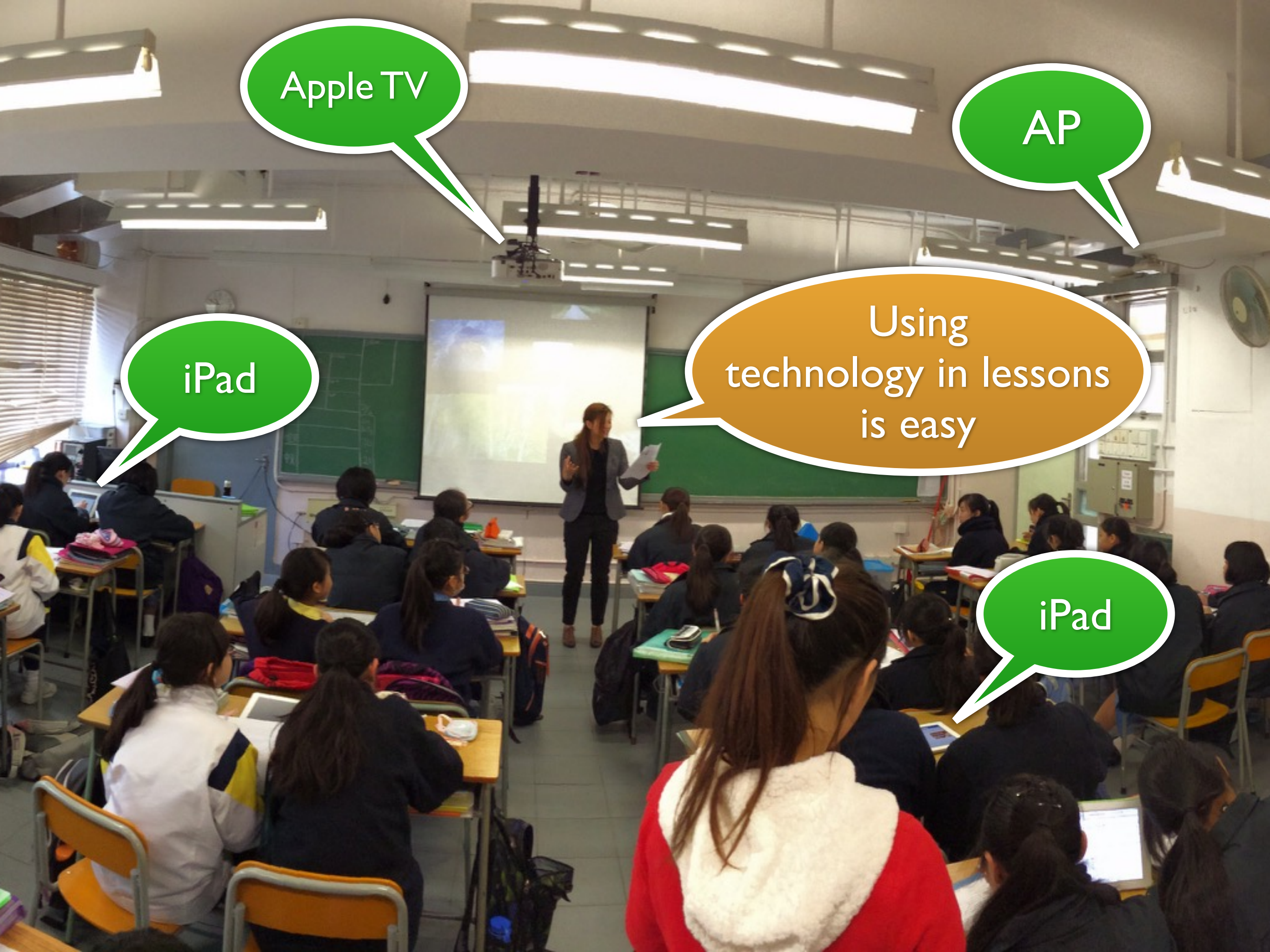
Apple TV

AP

iPad

Using
technology in lessons
is easy

iPad



3 Persons

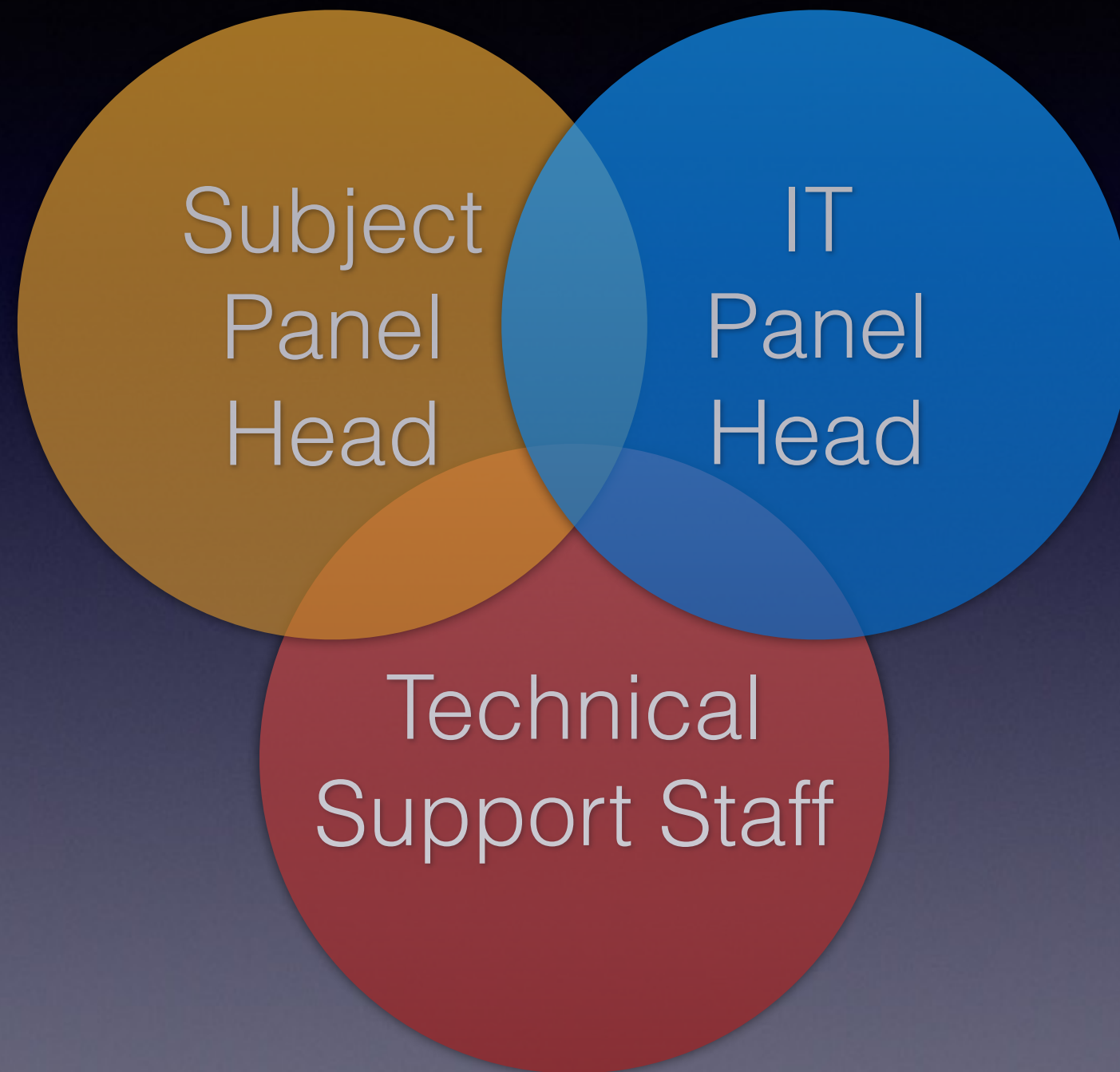


Subject
Panel
Head

IT
Panel
Head

Technical
Support Staff

3 Persons



Content
Pedagogy

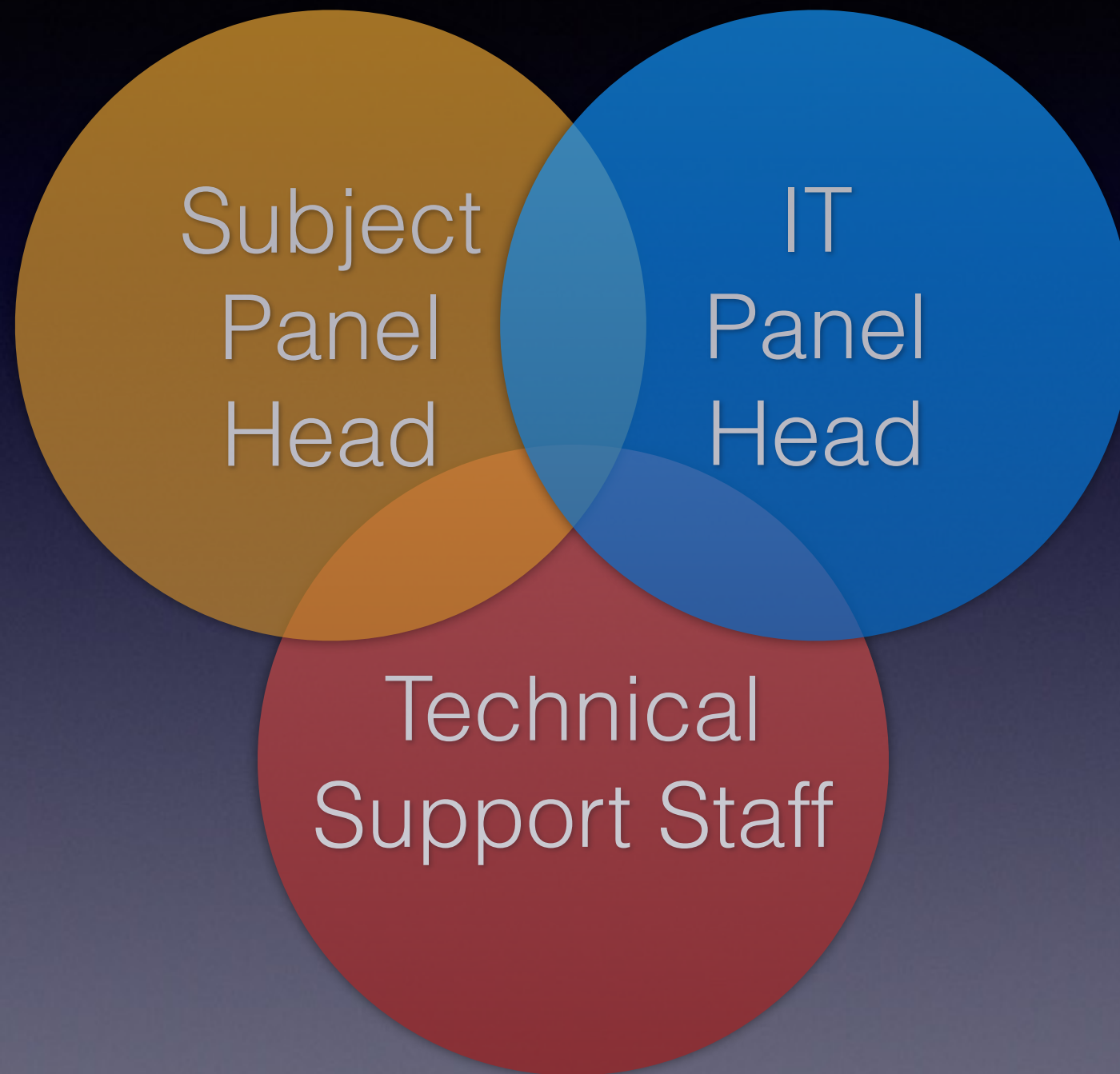
Subject
Panel
Head

IT
Panel
Head

IT application
skills
Pedagogy

Technical
Support Staff

IT support skills
Availability



e-Learning
Pedagogy

Content
Pedagogy

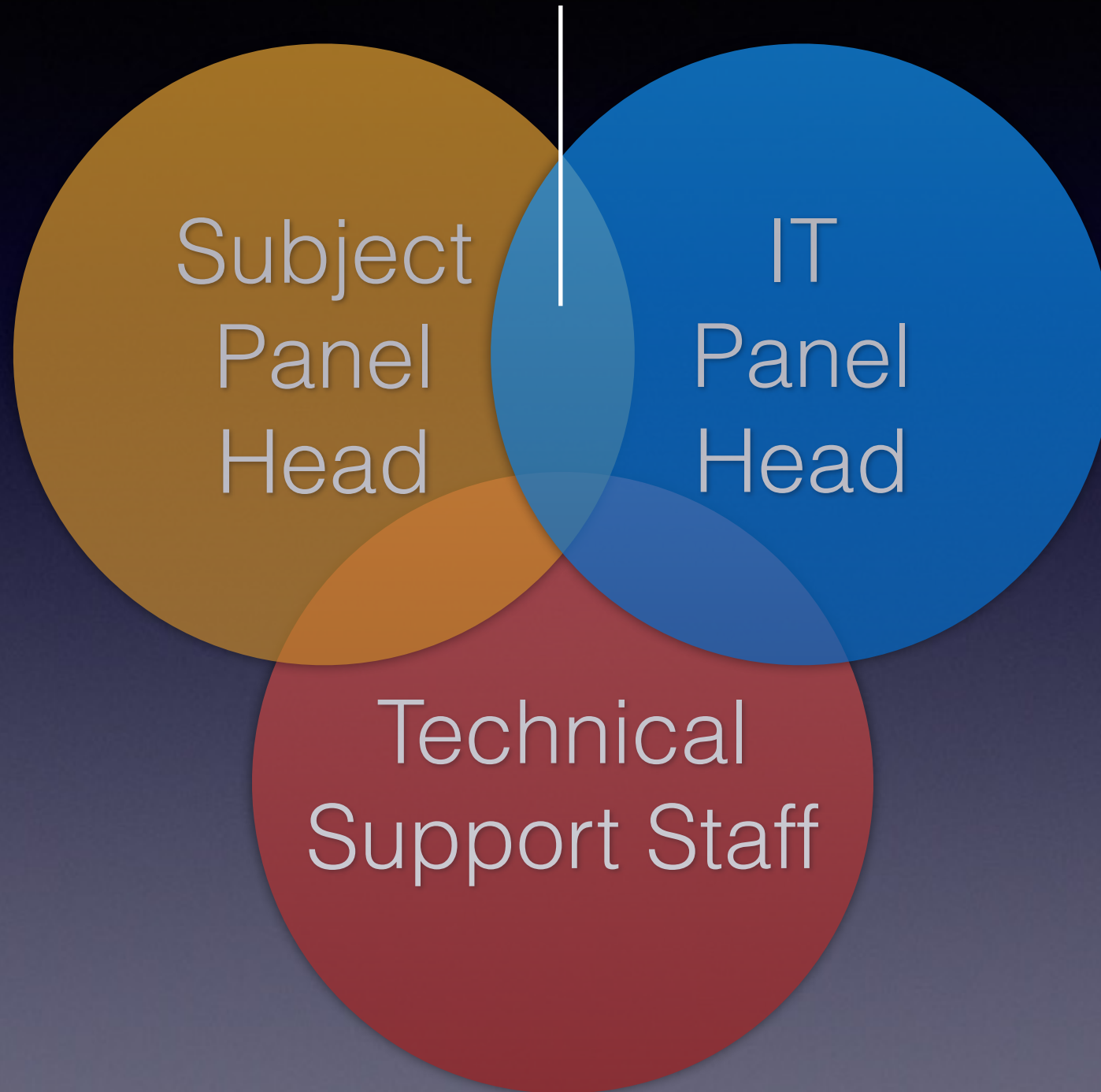
Subject
Panel
Head

IT
Panel
Head

IT application
skills
Pedagogy

Technical
Support Staff

IT support skills
Availability



e-Learning
Pedagogy

Content
Pedagogy

Subject
Panel
Head

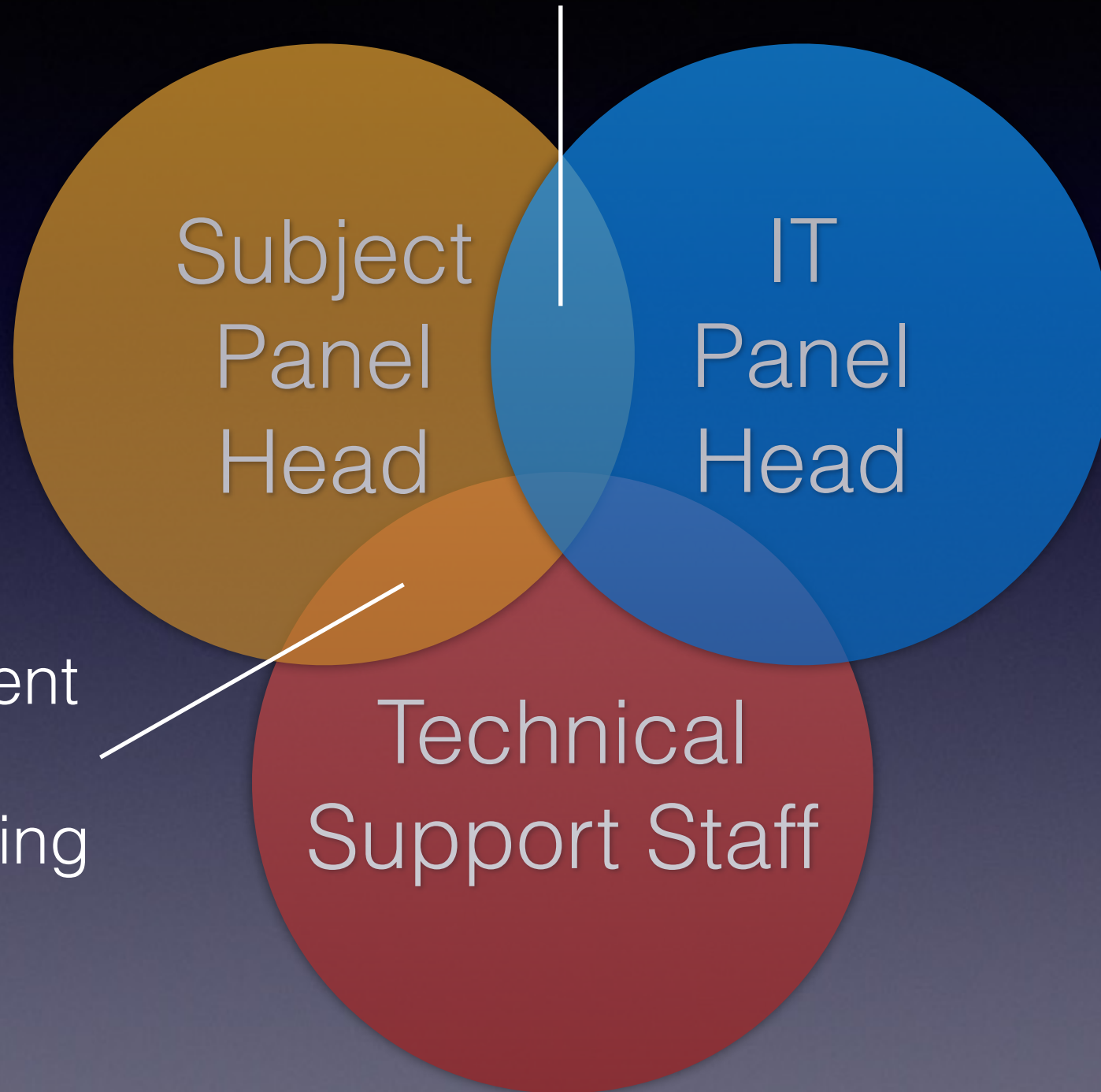
IT
Panel
Head

IT application
skills
Pedagogy

Digitize content
Install apps
Troubleshooting

Technical
Support Staff

IT support skills
Availability



e-Learning
Pedagogy

Content
Pedagogy

Subject
Panel
Head

IT
Panel
Head

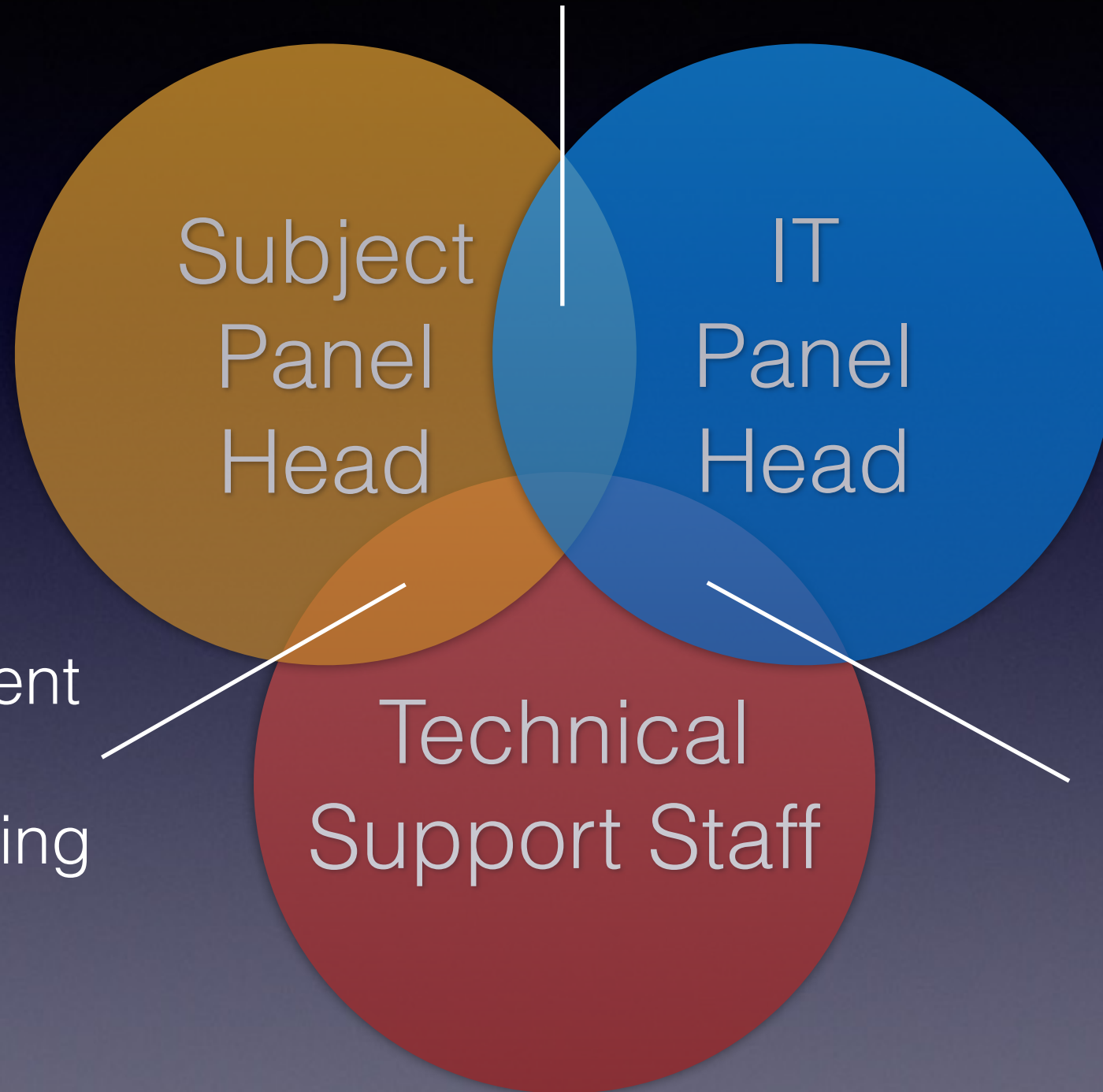
IT application
skills
Pedagogy

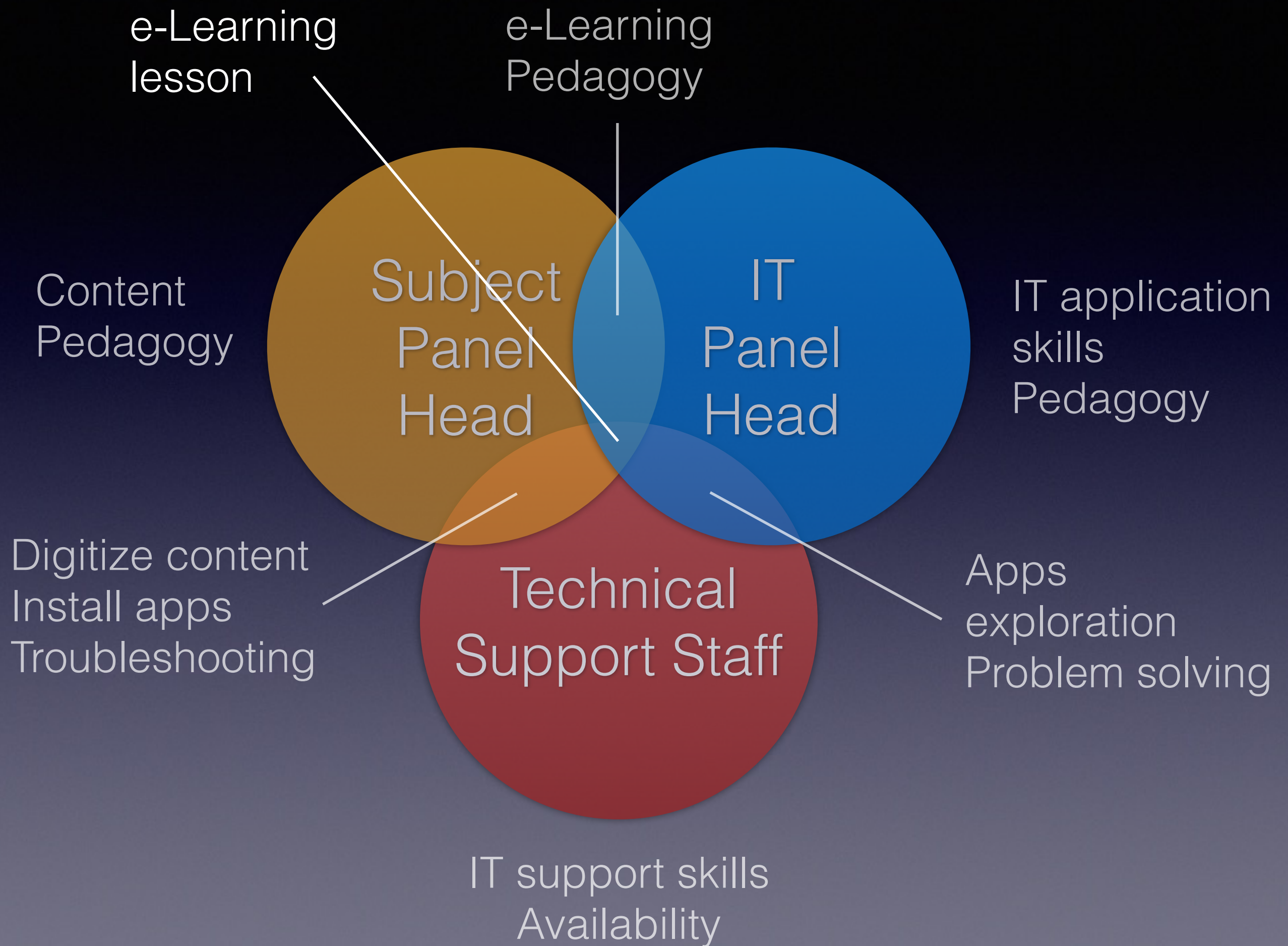
Digitize content
Install apps
Troubleshooting

Technical
Support Staff

Apps
exploration
Problem solving

IT support skills
Availability







TSS

Technical Support Staff

Tremendous workload and
troubleshoot at the beginning

Not familiar with iPad management

e-Learning support is intrinsically busy

Technical Support Staff

Find a person who is familiar with iOS
(if you have choices)

Seek for solutions to
alleviate his/her workload



iPad Mobile Cart

Mobile Device
Management

Charging iPads

Deploy apps

This cart is quite expensive

Buy or not buy?

Possible ways to empower teachers

Convince with reasons

Show e-Learning outcomes of students

School visits

Hands-on workshops

In-place, In-time support

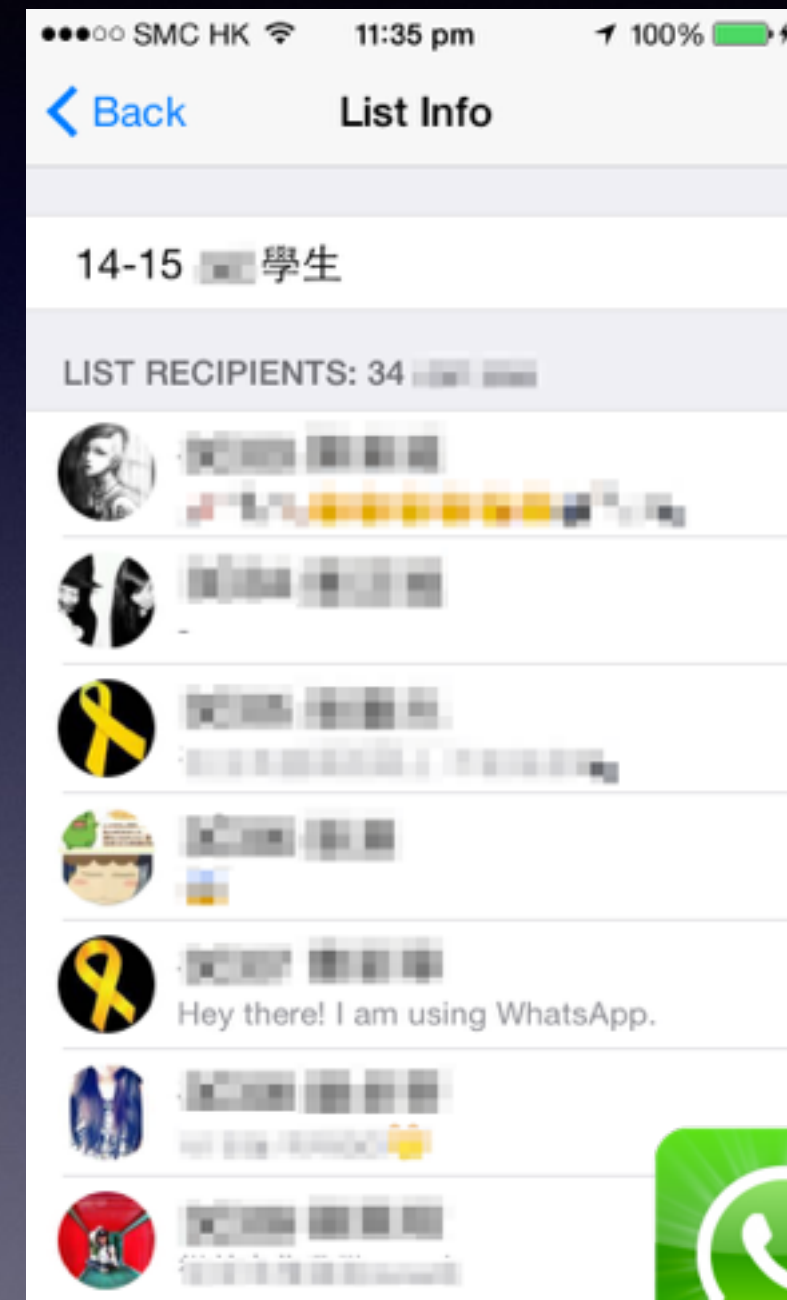
Alleviate e-Learning teacher's other workload

Top-down command?

Technology means efficiency



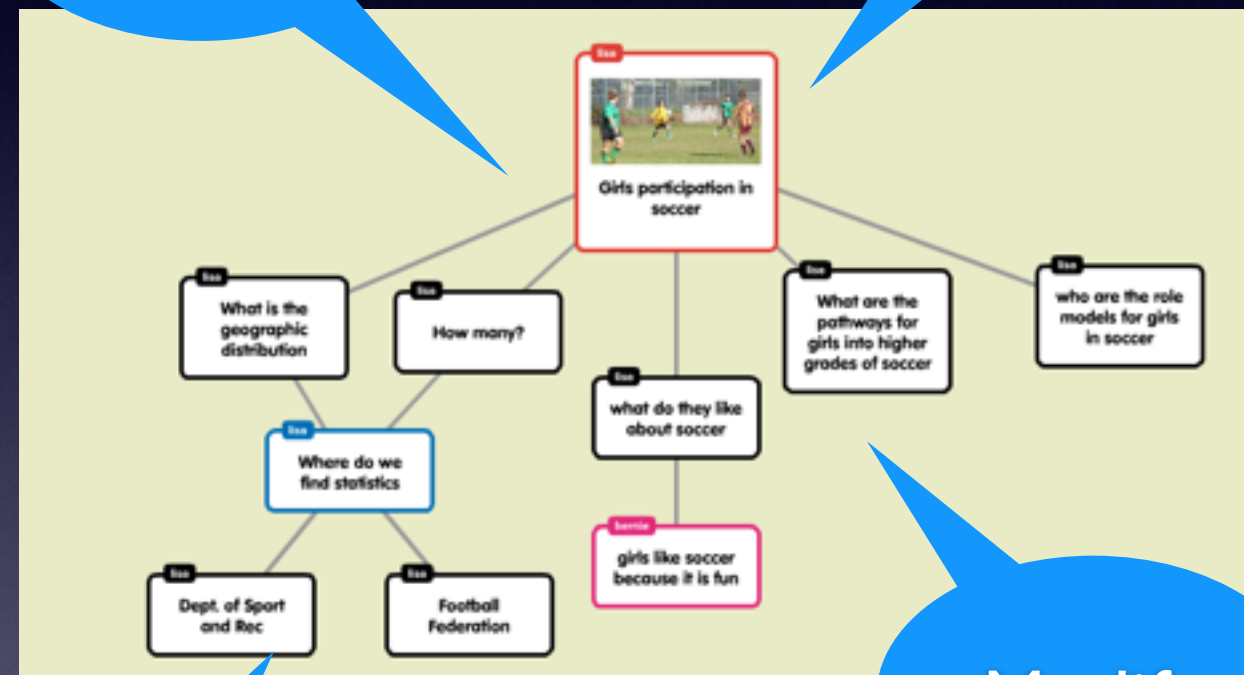
VS



Advantages of Digitization



Paper and pencil



Multimedia

Digital

Share

Duplicate

Modify

NSS: Record micro-lesson video
to extend learning time



Create Presentation



Presentation 4 2

4 Nov, 2014 7:53 pm



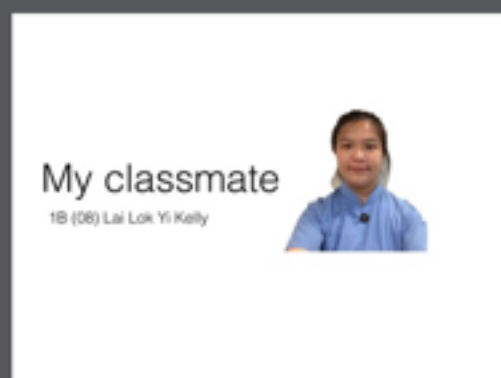
Evelyn Yuen grace

4 Nov, 2014 7:51 pm



1C June Lee

4 Nov, 2014 7:48 pm



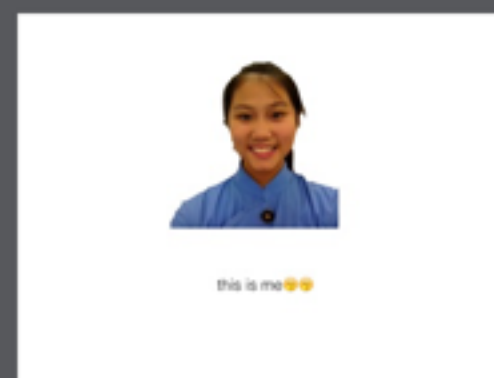
簡報 4

4 Nov, 2014 7:46 pm



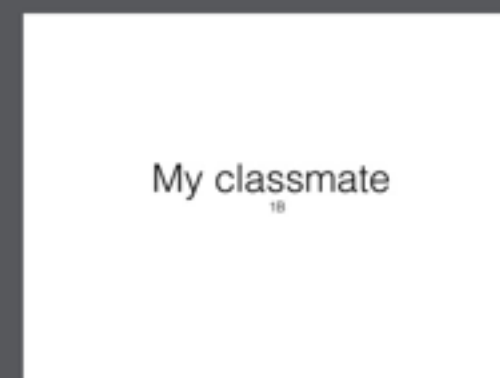
Presentation 6

4 Nov, 2014 7:45 pm



Presentation 5

4 Nov, 2014 7:44 pm



Presentation 4

4 Nov, 2014 7:43 pm



Presentation 2 2

4 Nov, 2014 7:42 pm



1B28 Daisy

4 Nov, 2014 7:35 pm



1030 Flip or not flip

3 Nov, 2014 10:59 am



1103 田綺玲

3 Nov, 2014 9:21 am



Factorize





Visiting and learning
from schools doing
e-Learning



as well as

furthermore

for this reason

SOON

on the other hand

Ideas
Voice
Organization
Traits of Writing
Word Choice

Classroom Visit









Visit to Nanyang Girls' High (Singapore)



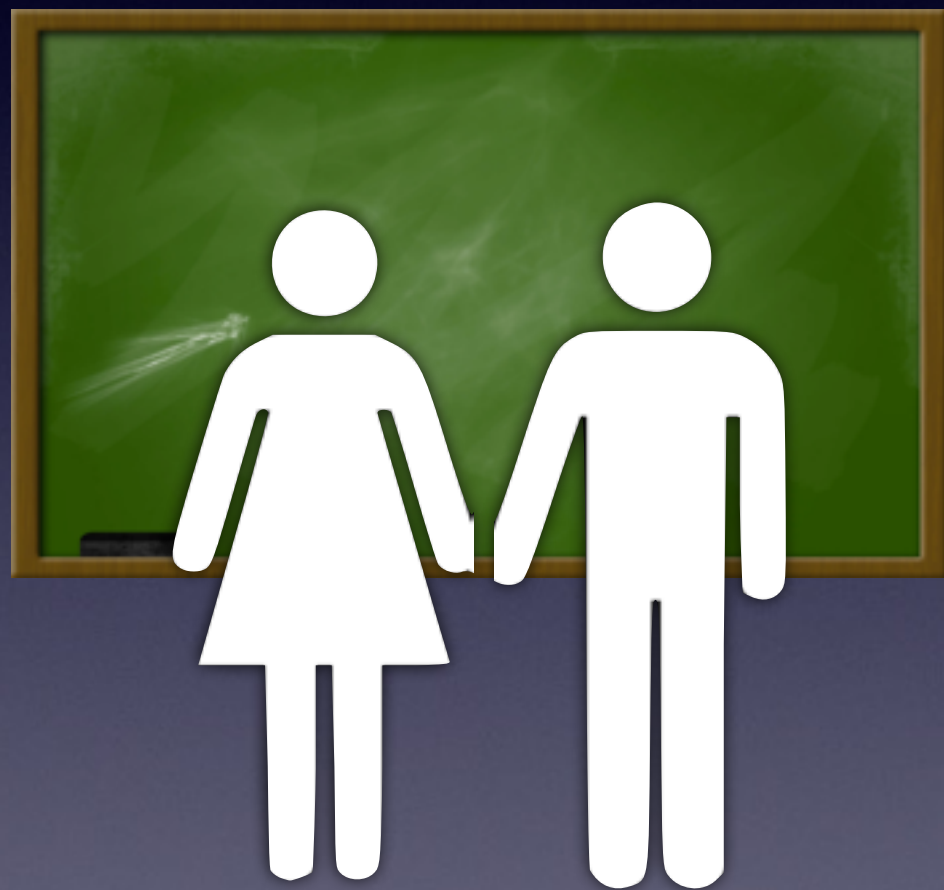
Organize workshops for teachers







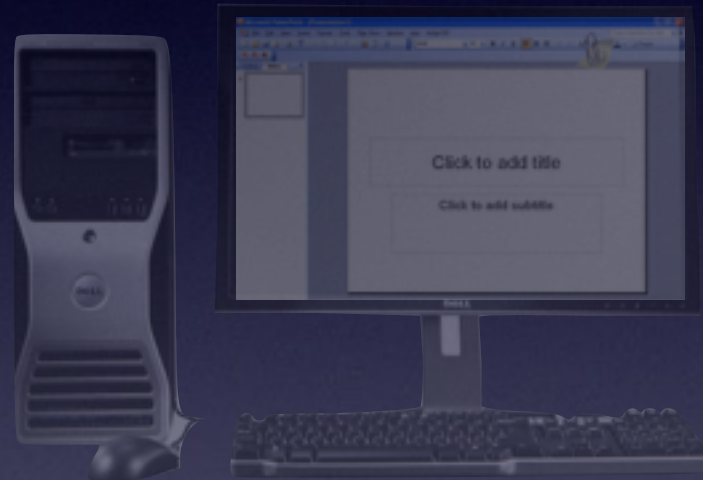
In changing teacher's behaviour
workshop is more efficient than seminar



21st Century Teachers



Learn



Unlearn



Relearn

English
Panel Head

English
teacher

TSS

Principal

In-place
In-time support





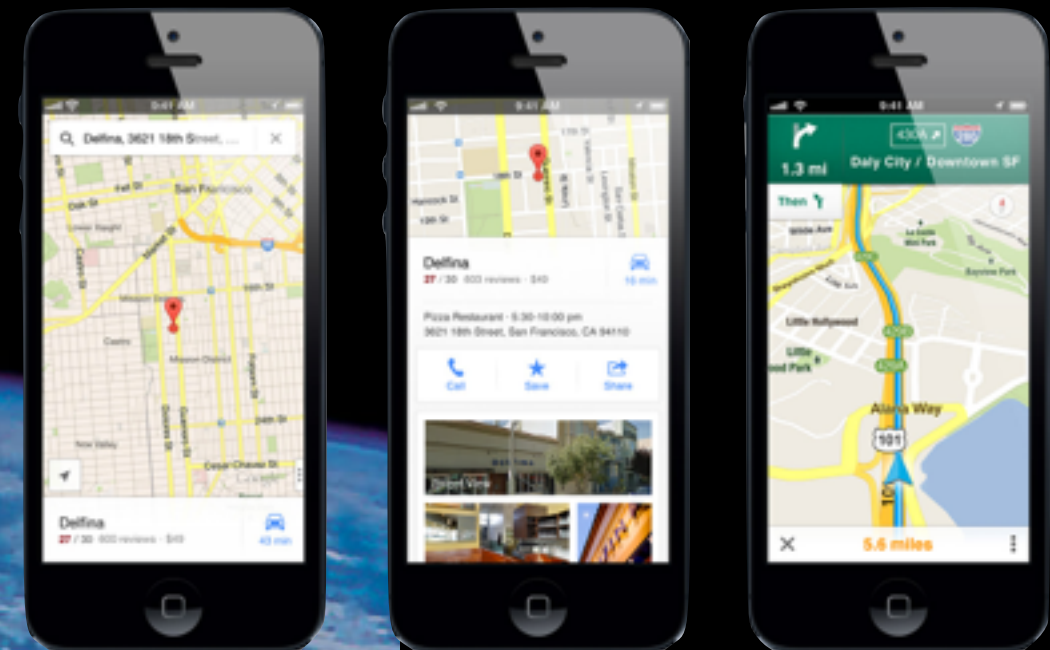
DON'T LET GO

GRAVITY

E-LEARNING WITHOUT SUPPORT

GPS satellite

Google map



Is there GPS for e-Learning?

SAMR

TPACK

SAMR

Transformation

Redefinition

Tech allows for creation of new tasks, previously inconceivable

Modification

Tech allows for significant task redesign

Enhancement

Augmentation

Tech acts as a direct tool substitute, with functional improvement

Substitution

Tech acts as a direct tool substitute, with no functional change

Google Doc vs Word Processor

Transformation

Redefinition

Students connect with a class across the world and write on same historical topic using same Google Doc

Modification

Students using Google Doc to edit the same document and collaborate using chat & comment

Enhancement

Augmentation

Using spell check, thesaurus, find and replace, insert pictures

Substitution

Using word processor to replace paper and pencil

ePub vs Word Processor

Transformation

Redefinition

Students publish their own ebooks and comment each other, further enhance it based on feedback

Modification

Organize and author content as interactive, multimedia electronic book

Enhancement

Augmentation

Using spell check, thesaurus, find and replace, insert pictures

Substitution

Using word processor to replace paper and pencil

When integrating technology in
classroom

We can ask ourselves

Which level of SAMR model does it
belong to?



Substitution



Augmentation



Modification



Redefinition



Substitution



Augmentation

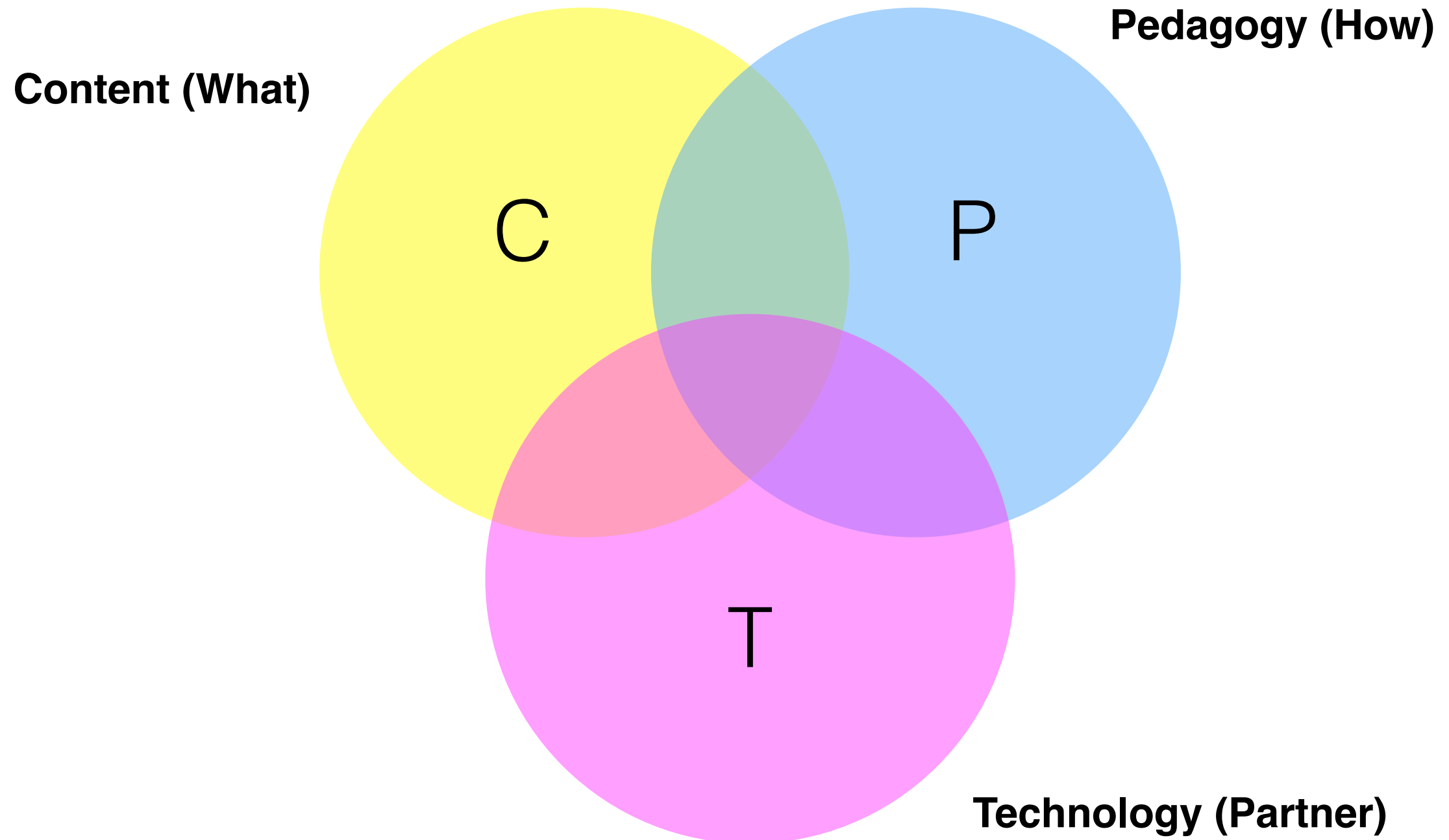


Modification



Redefinition

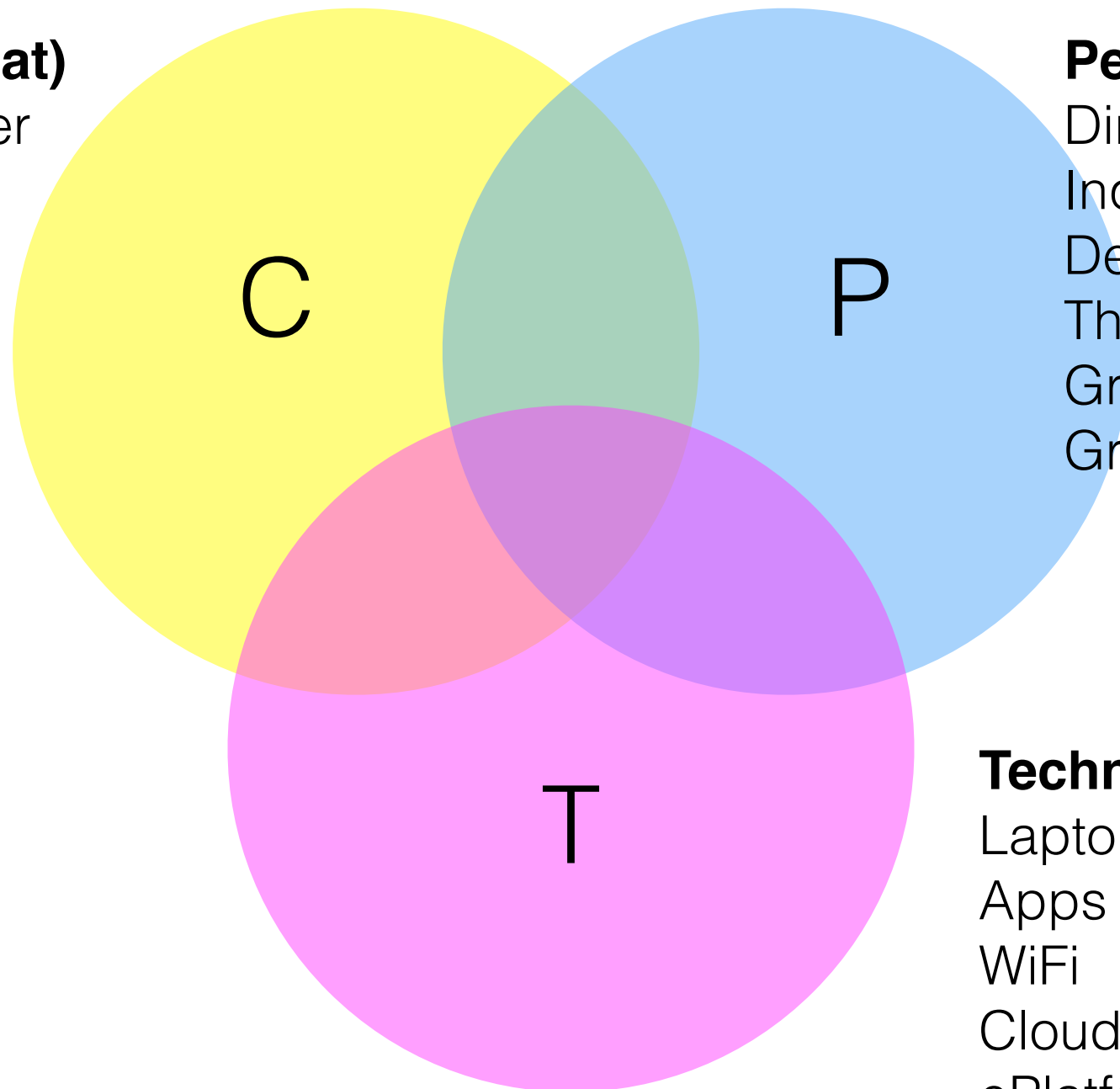
TPACK Framework



TPACK Framework

Content (What)

Subject matter
4 Core
Electives



Pedagogy (How)

Direct instruction
Inquiry
Debate
Think pair share
Group discussion
Graphic organizer

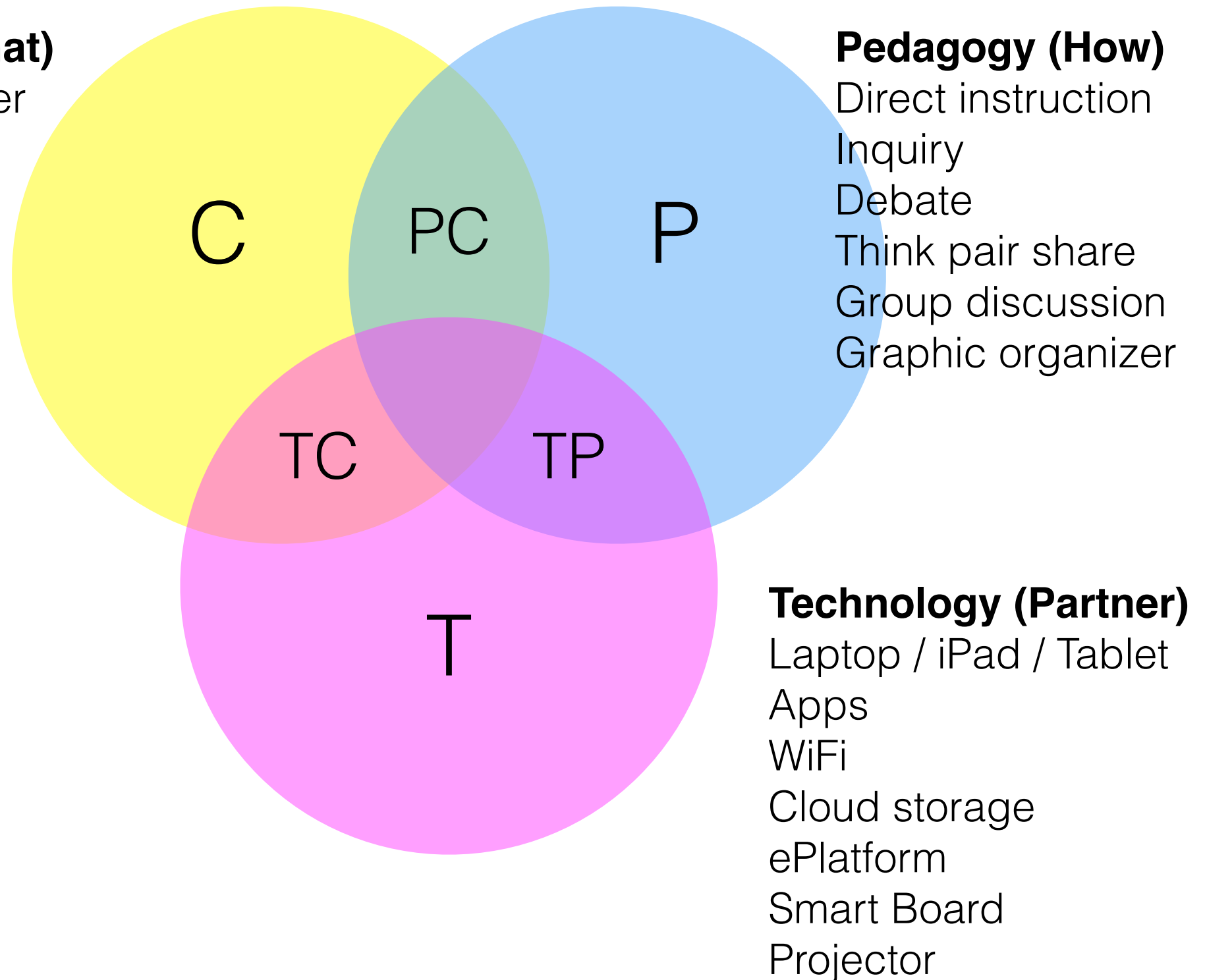
Technology (Partner)

Laptop / iPad / Tablet
Apps
WiFi
Cloud storage
ePlatform
Smart Board
Projector

TPACK Framework

Content (What)

Subject matter
4 Core
Electives



TPACK Framework

Content (What)

Subject matter
4 Core
Electives

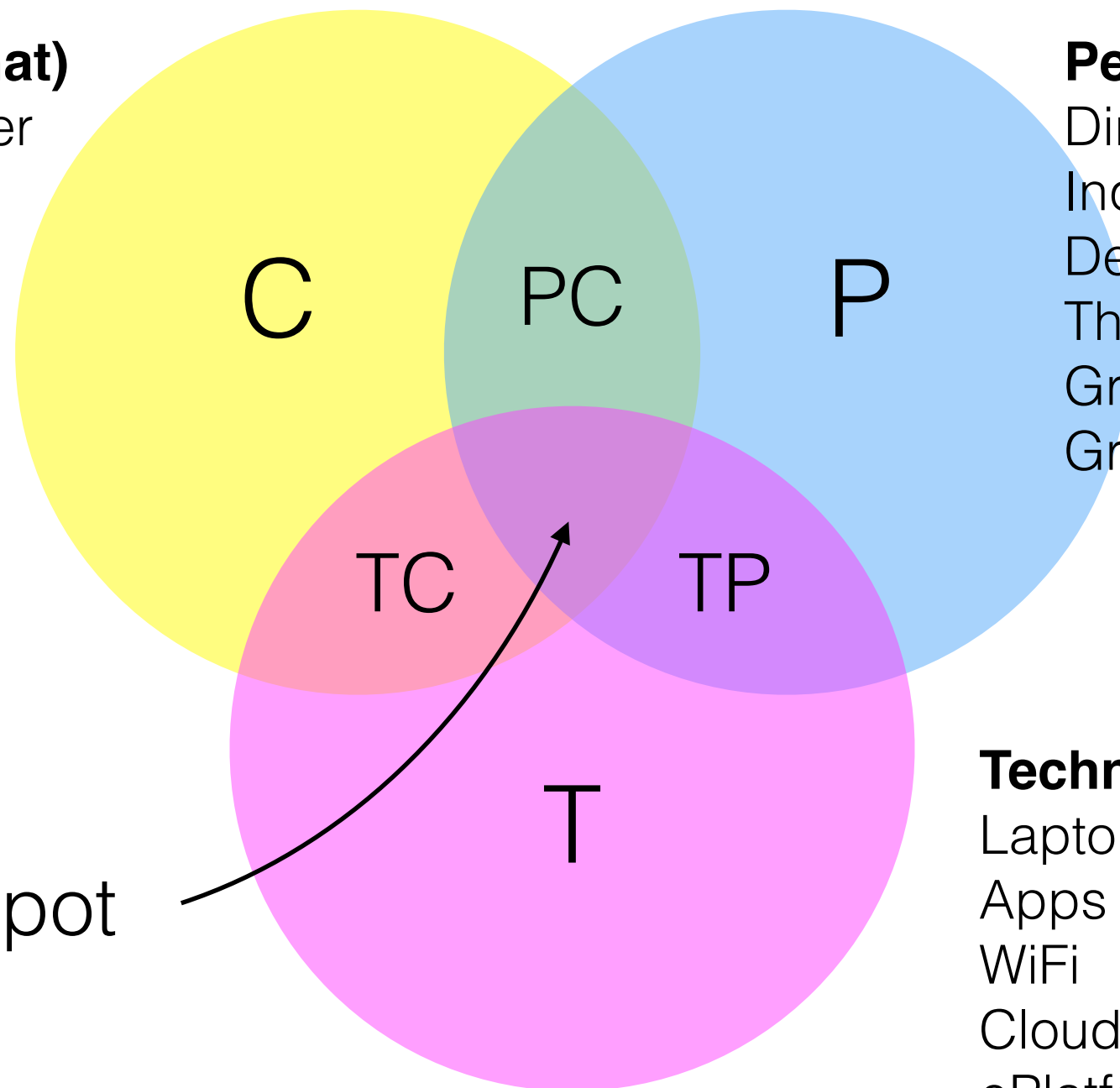
Pedagogy (How)

Direct instruction
Inquiry
Debate
Think pair share
Group discussion
Graphic organizer

Technology (Partner)

Laptop / iPad / Tablet
Apps
WiFi
Cloud storage
ePlatform
Smart Board
Projector

sweet spot



TPACK Framework

Content (What)

Subject matter
4 Core
Electives

Context : Meet student's needs

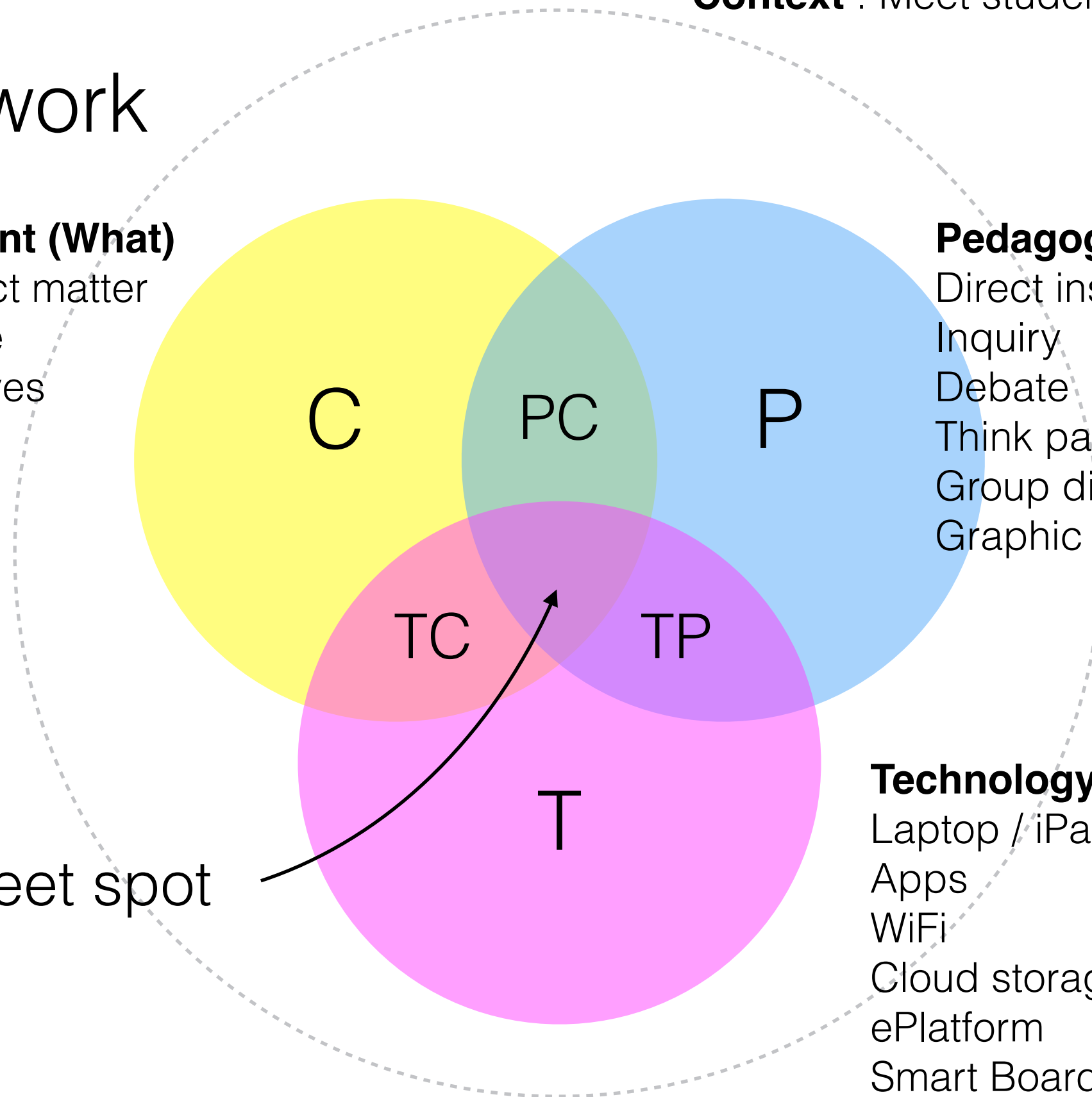
Pedagogy (How)

Direct instruction
Inquiry
Debate
Think pair share
Group discussion
Graphic organizer

Technology (Partner)

Laptop / iPad / Tablet
Apps
WiFi
Cloud storage
ePlatform
Smart Board
Projector

sweet spot



TPACK (Maths)

Content (What)

Maths

Pythagoras theorem

(Mathematician)

$$a^2 + b^2 = c^2$$

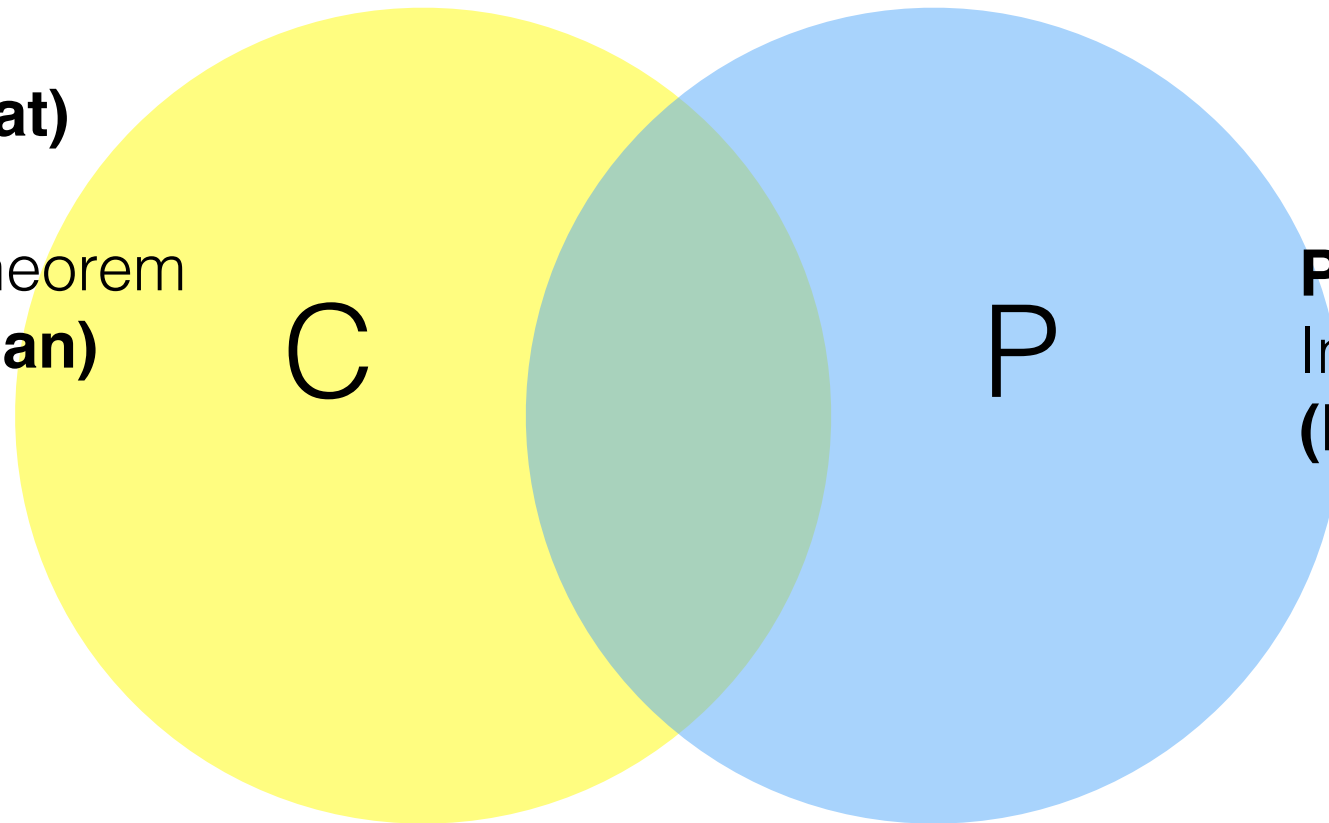
C

P

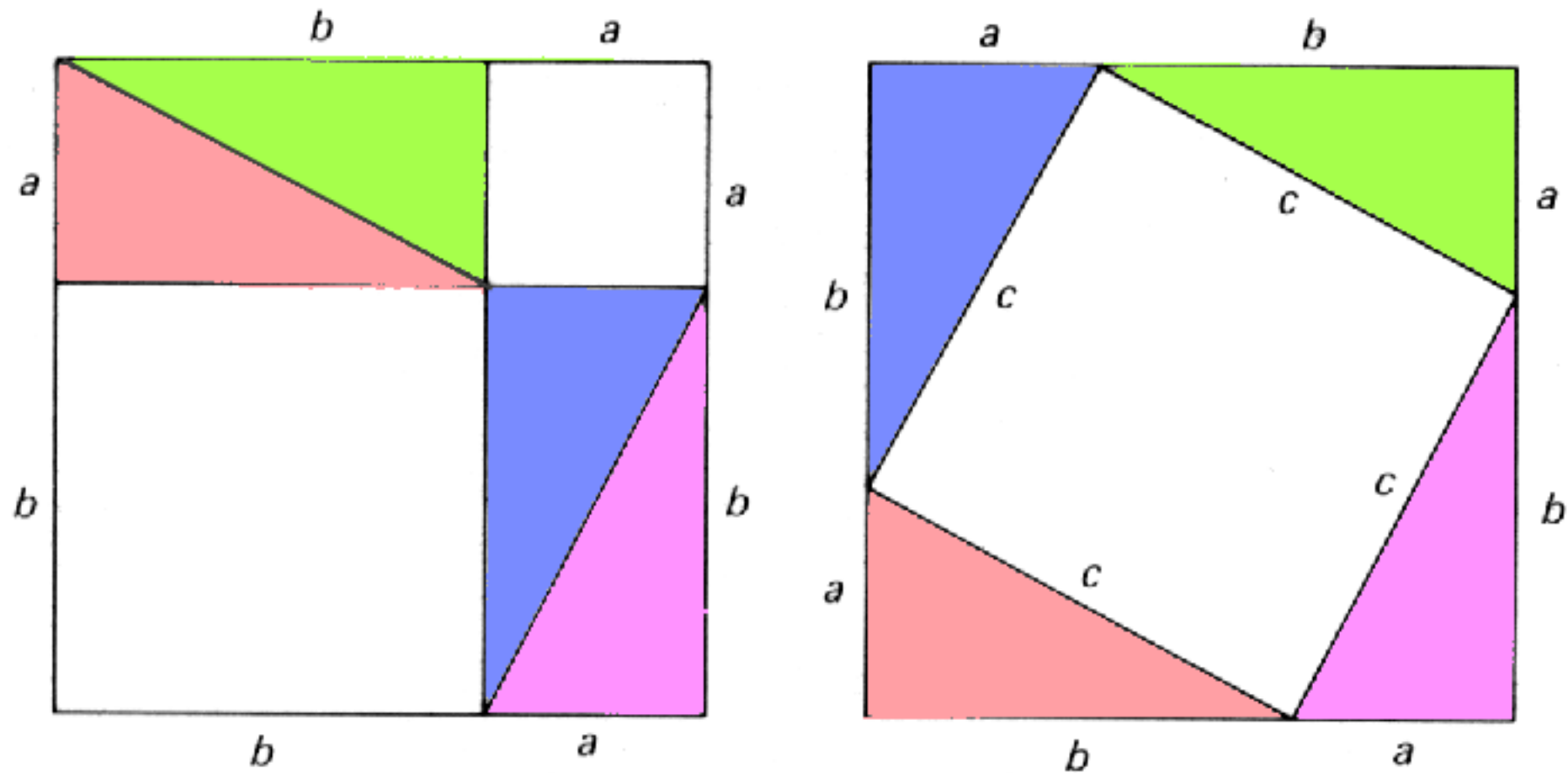
Pedagogy (How)

Inquiry

(Pedagogical expert)



Proof by paper cutting



No details needed for non-maths teacher

TPACK

Maths

Content (What)

Maths

Pythagoras theorem

(Mathematician)

$$a^2 + b^2 = c^2$$

C

Paper cutting & pasting
(Maths teacher do)

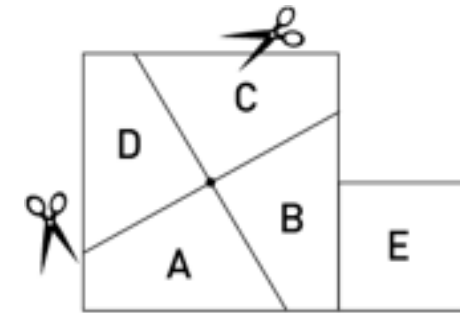
PC

P

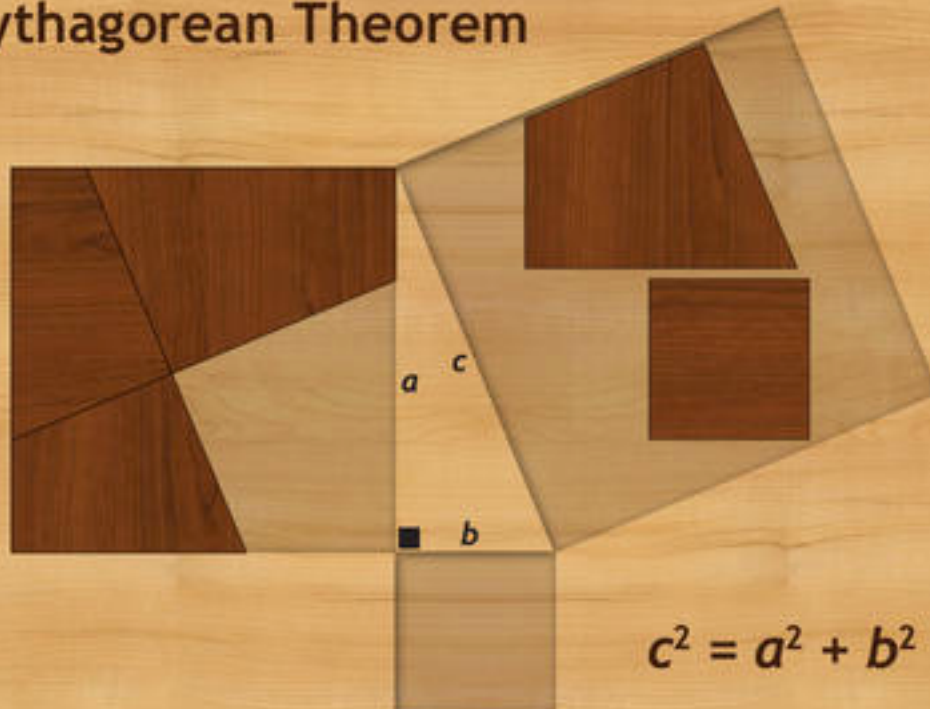
Pedagogy (How)


Inquiry

(Pedagogical expert)



Pythagorean Theorem



 Mathematical Etudes


Pythagorean Theorem

Pythagoras

Place all the five pieces
into the right square

- single tap to rotate the piece
- double tap to place it back

Continue

 Mathematical Etudes



TPACK

Maths

Content (What)

Maths

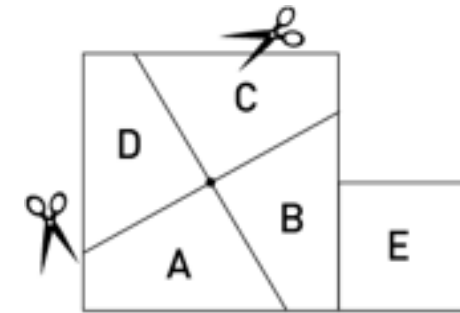
Pythagoras theorem

(Mathematician)

$$a^2 + b^2 = c^2$$

C

Paper cutting & pasting
(Maths teacher do)



PC

P

Pedagogy (How)

Inquiry

(Pedagogical expert)

TPC

T

Technology (Partner)

iPad

Apps

Projector



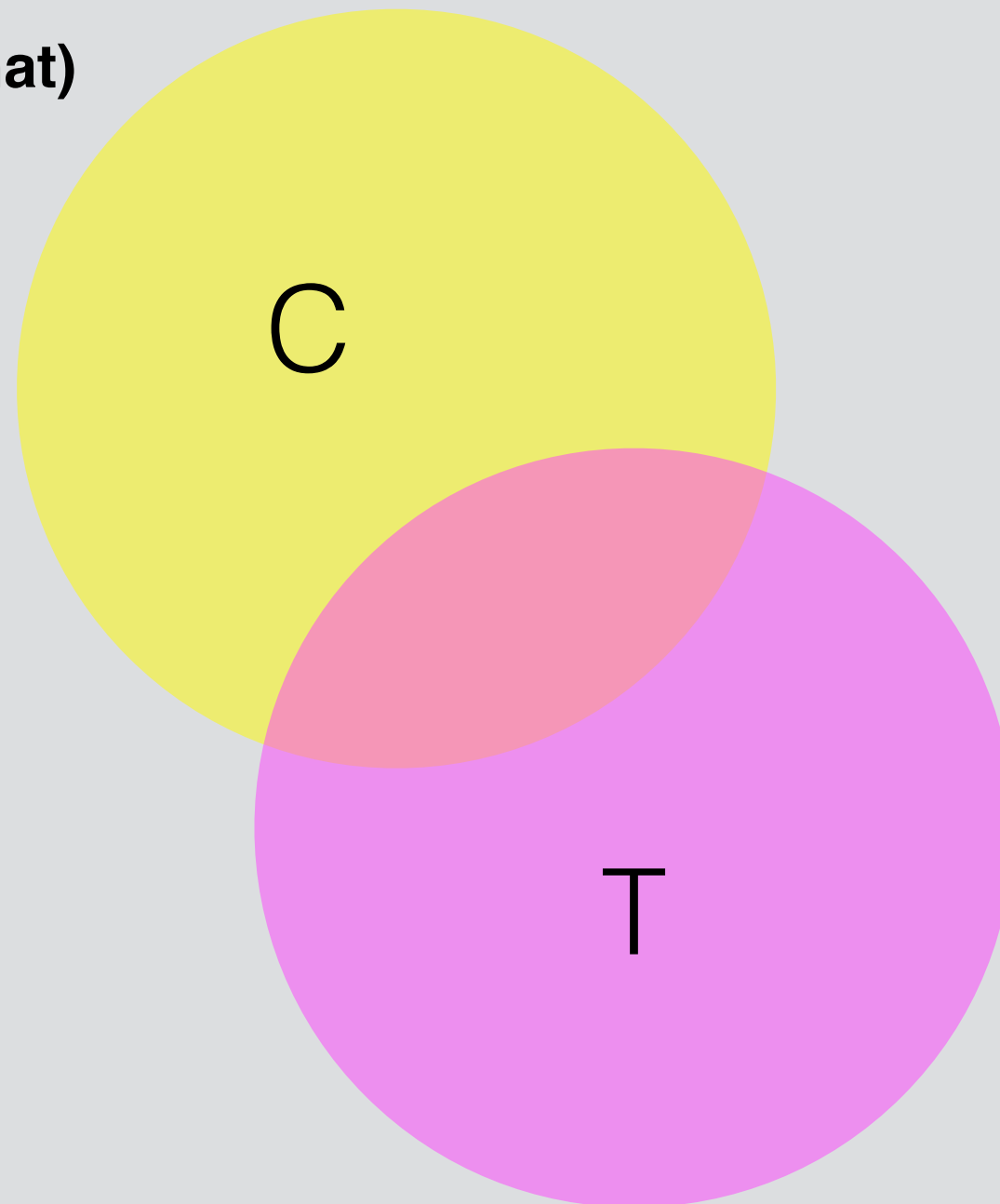
TPACK

English

Content (What)

English
Poems

(Poet)



Technology (Partner)

ePub

(Computer scientist)

TPACK

English

Content (What)

English
Poems

(Poet)

C

TC

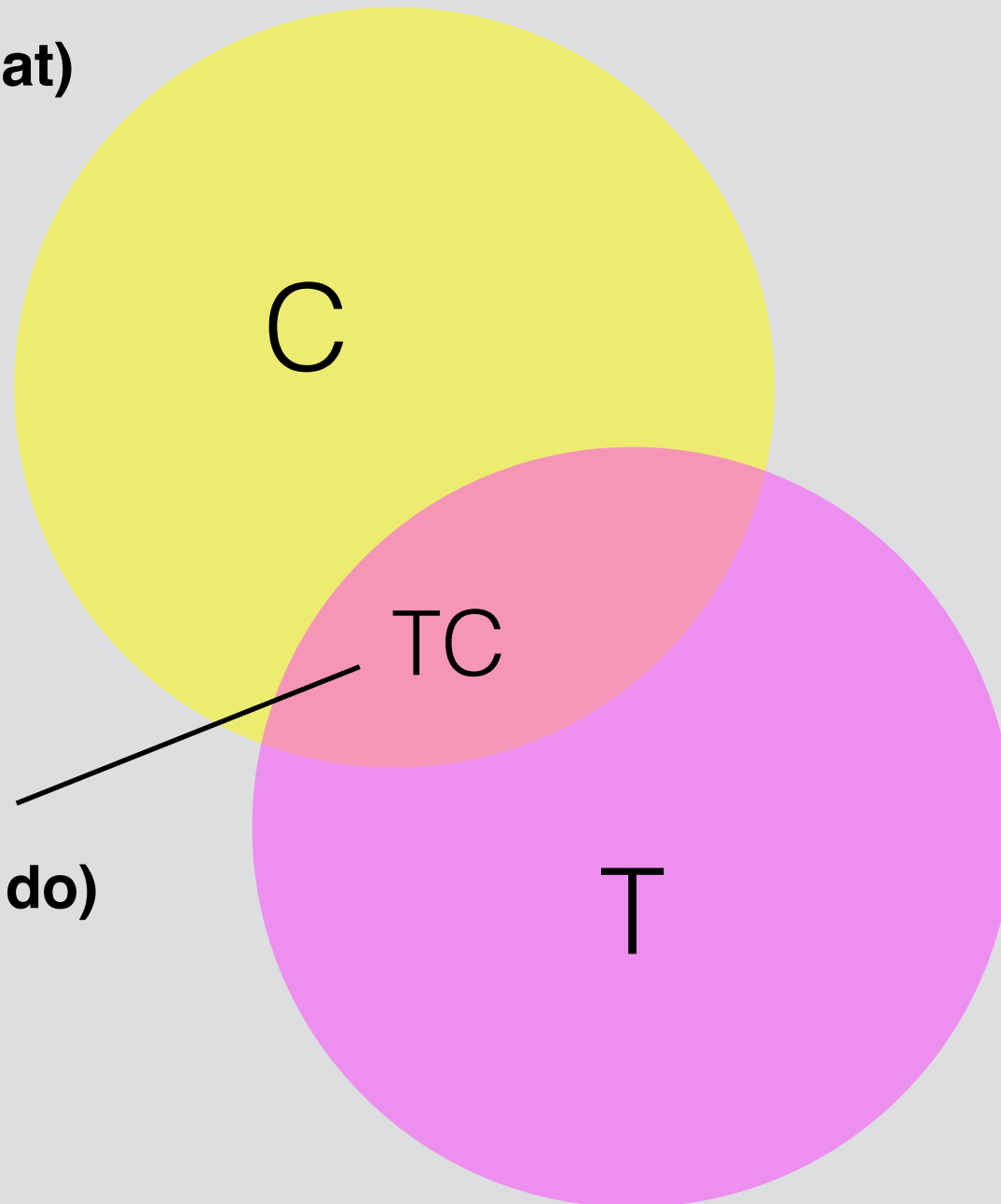
T

Digitize books
(English teacher do)

Technology (Partner)

ePub

(Computer scientist)



TPACK

English

Content (What)

English
Poems

(Poet)

C

Pedagogy (How)

How to use the digitised
book in lesson?

P

Digitize books
(English teacher do)

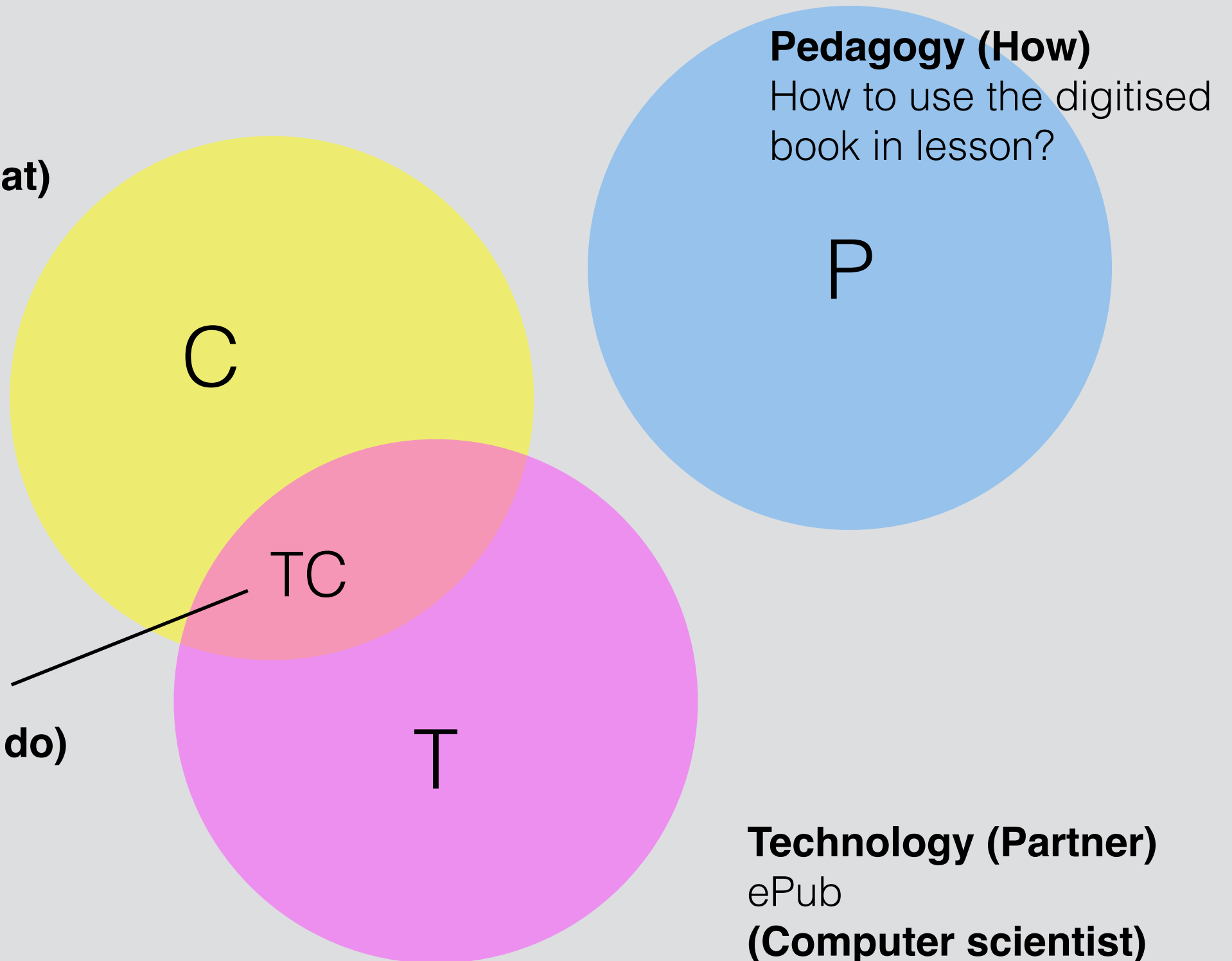
TC

T

Technology (Partner)

ePub

(Computer scientist)



TPACK

English

Content (What)

English
Poems

(Poet)

C

Pedagogy (How)

After reading students
create their own poems
and share
(Think-Pair-Share)

P

TPC

TC

Digitize books
(English teacher do)

T

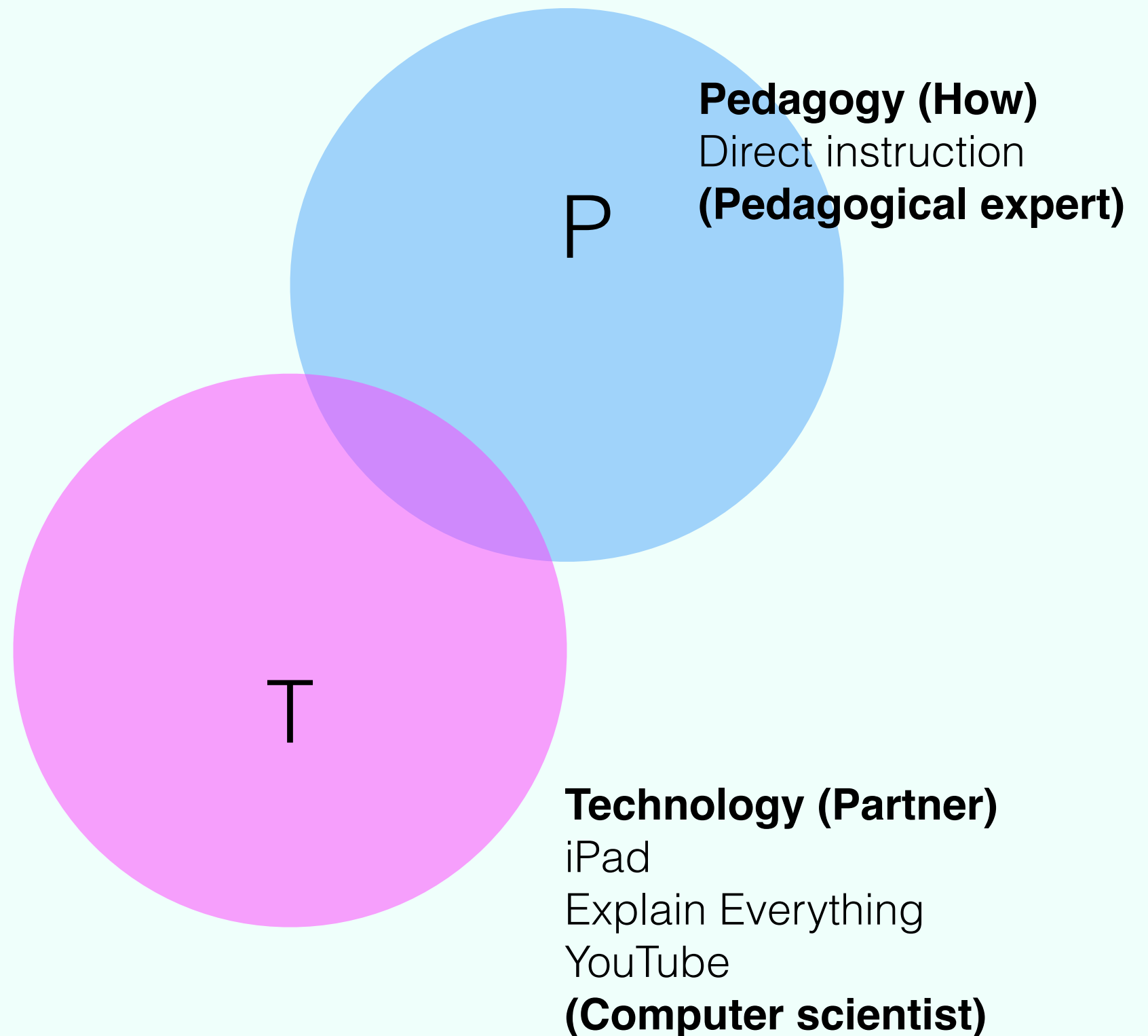
Technology (Partner)

ePub

(Computer scientist)

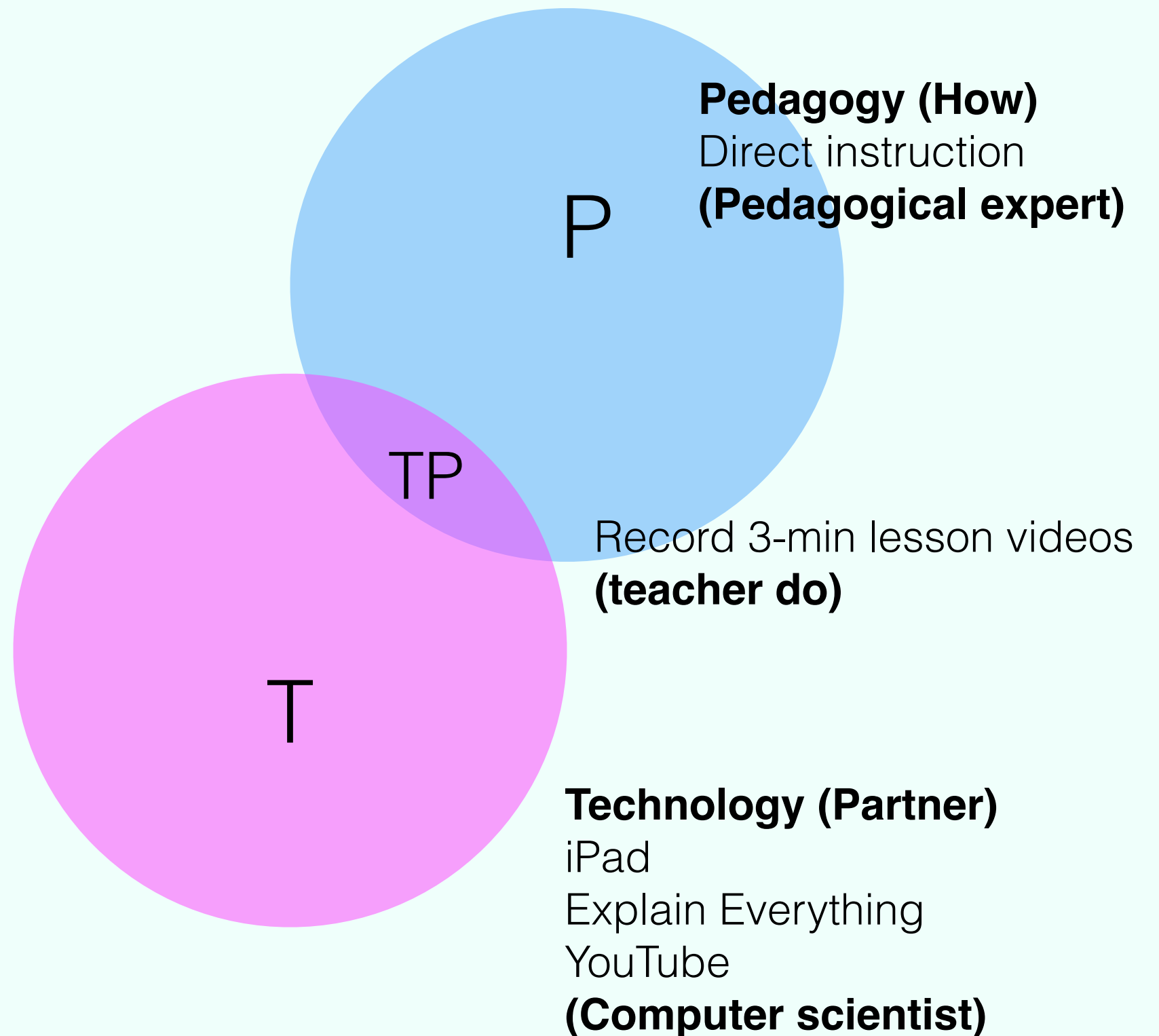
TPACK

Chinese



TPACK

Chinese



TPACK

Chinese

Content (What)

中文科
修辭技巧

C

Pedagogy (How)

Direct instruction

(Pedagogical expert)

P

TCP

TP

Record 3-min lesson videos
and share with students
(teacher do)

T

Technology (Partner)

iPad

Explain Everything

YouTube

(Computer scientist)

TPACK

Chinese

Content (What)

中文科
修辭技巧

C

Pedagogy (How)

Direct instruction
Pre-learning at home
Interactive lesson in class

(Pedagogical expert)

P

TCP

TP

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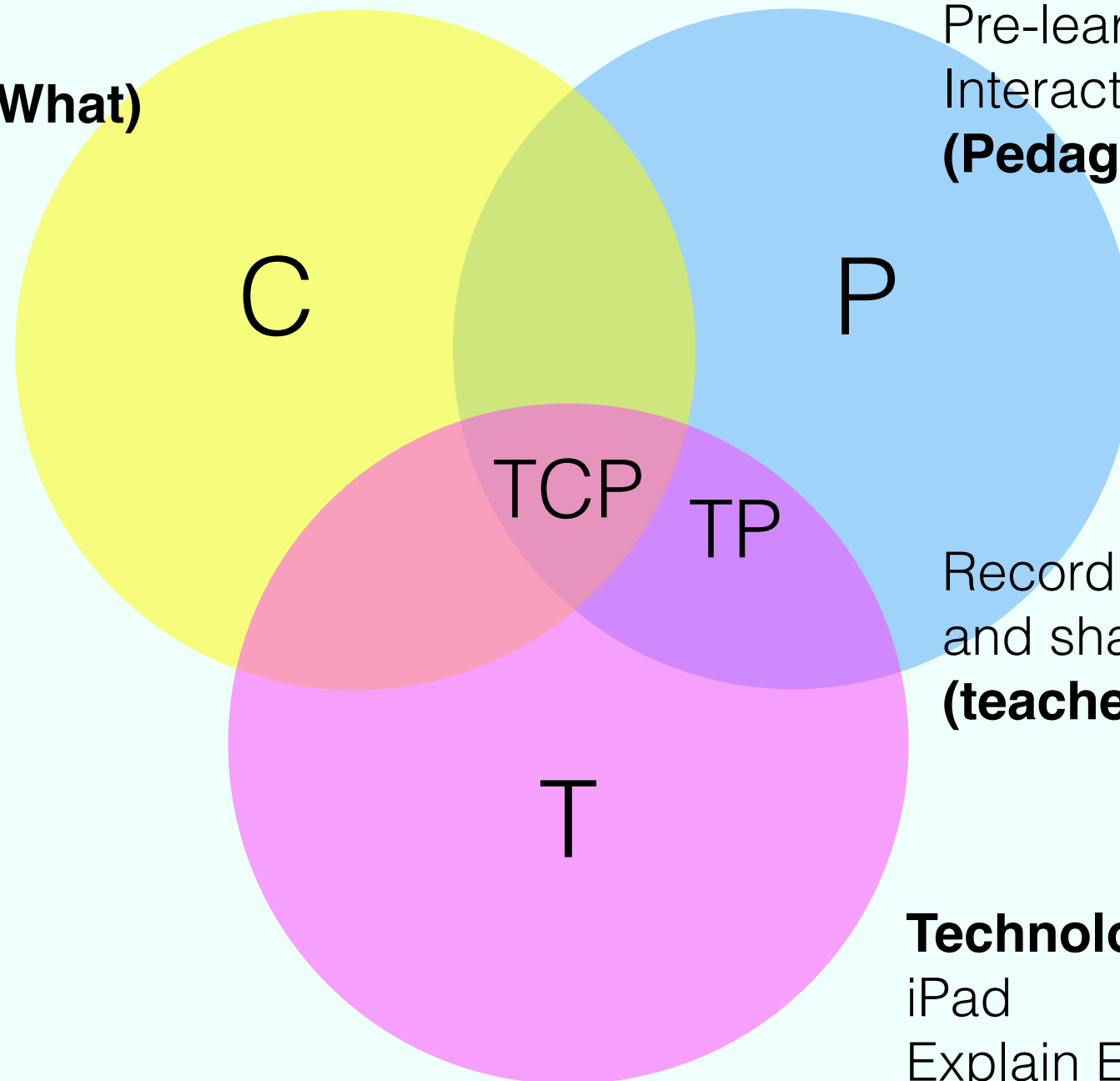
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When integrating technology in
classroom

We can critically ask ourselves

Which part of TPACK model
does it belong to?