iPodia™

- Education has always been important to our society, but has never been on the headline news until recently
- These days, you see news reports and commentaries on education almost daily, most of them mention MOOC in their discussion
- But is MOOC the real solution to the challenges we face today in education?
- Most of us will say “NO”
- My view is that MOOC is a question, not an answer
- So, what is the answer then?
- Well, when a group of engineers working at universities get together to find the answer to this question, it is helpful to draw an analogy between academia and industry
- This what I am going to do today to begin the discussion

University of Southern California

2013 GEDC Panel Discussion

Impact of Globalization and Information Technology on Engineering Education

Mass-Production vs. Mass-Education

When it comes to eLearning, can universities learn from industry in this era of technology and globalization?

Stephen C-Y. Lu
Viterbi School of Engineering
University of Southern California

USC Viterbi
School of Engineering

Two things that have changed the world…

Mass production in industry in the 19th century

Mass education at universities in the 20th century

They both share the same goal and approach…

the goal: serve many and save money

the approach: standardization

University of Southern California

When competitions intensified in the 80s', industry took a price-focused proposition

At the technology front,
they used automation to expand the volume
At the globalization front,
they exploited outsourcing to lower the cost

The price-focused proposition is unsustainable!

Products commoditized, jobs eliminated, skills lost, plants relocated, and businesses closed

USC Viterbi School of Engineering

Should universities follow the same price-focused proposition in eLearning today?

At the technology front,

- should we continue to robotize lectures and digitize courseware to expand the enrollment
  - same as using automation to increase the volume

At the globalization front,

- should we continue to recruit more and more international students to fill the classroom seats
  - same as using outsourcing to decrease the cost

What are the key lessons that universities can learn from industry…..

1. The value-focused proposition is more sustainable
2. One must always innovate from the core business

So, universities should ask themselves…

What are the new, innovative value-propositions of campus education which eLearning can bring to enrich students' learning experiences on-campus?

University of Southern California

A new value proposition of campus education – learn global *context* beyond just content

At the technology front,

we should use eLearning to eliminate the distance of student interaction, rather than just maximize the distance of course delivery

At the globalization front,

we should use eLearning to provide global learning experiences on local campus as "a right for the many," rather than just "a privilege for the few"

USC Viterbi
School of Engineering

University of Southern California

The iPodia Alliance: classrooms-without-borders

iPodia™

University of Southern California

imagine no more,
the future is already here!

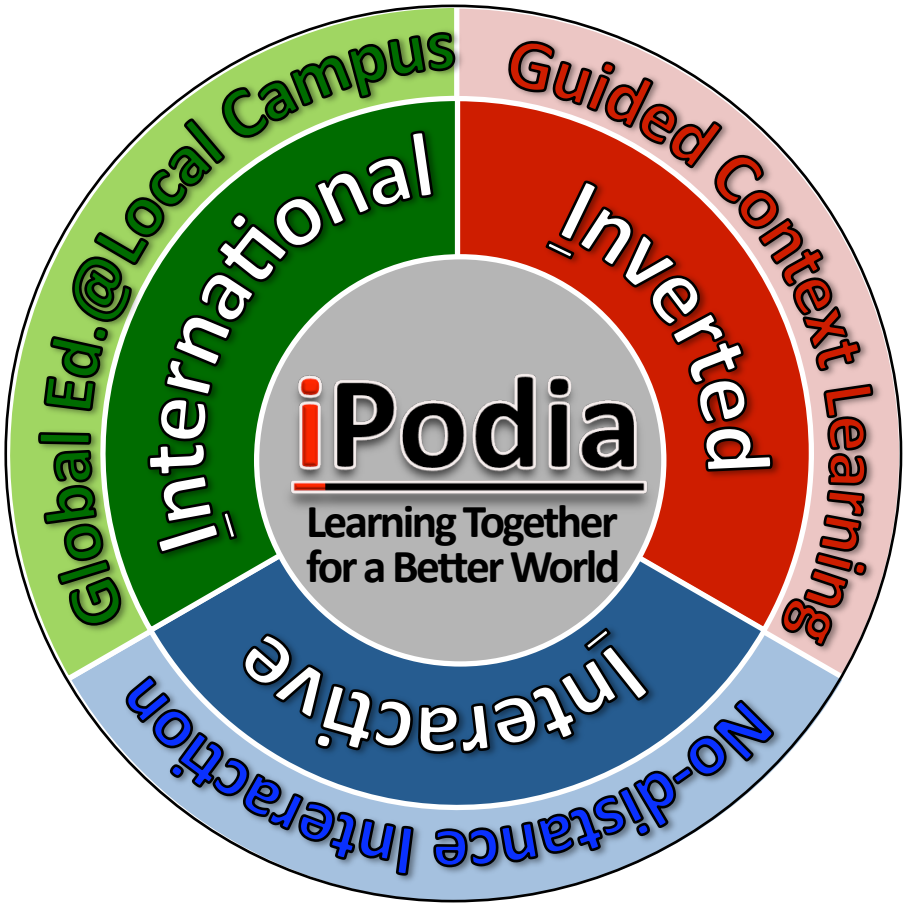
Thank You!

USC Viterbi
School of Engineering

Borderless interactive learning

The "**i**" in **iPodia** stands for:

- **Inverted learning**
  - Because context is best acquired via guided engagement by learners
- **Interactive learning**
  - Because what you learn depends on with whom you learn
- **International learning**
  - Because diversity can increase everyone's learning opportunity



Inverted: enables peer-learning

Content Lecture

- Slides, lecture videos, & MOOC courseware are posted online
- Students study lecture contents at home, & complete quiz, feedback, and online discussions

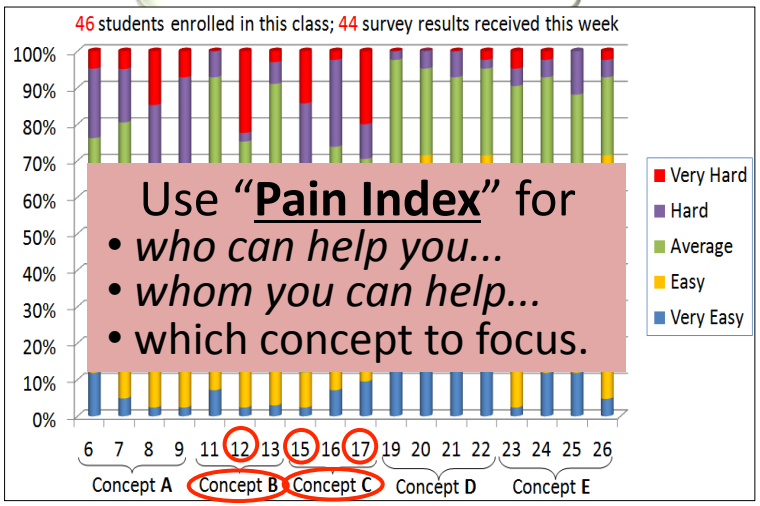
48 hours before the class starts

Quiz | Pain Index | Online Discussion *Before Interaction*

Student Feedback

- Homework feedbacks expressed as "**Pain Index**" are used to pair students' peer-to-peer learning and guide teacher's preparation of in-class interactions

24 hours before the class starts

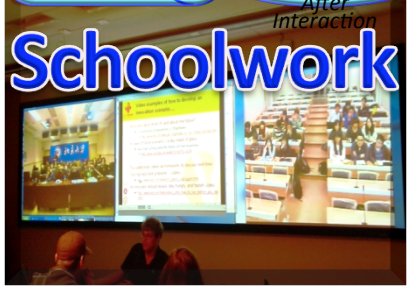


Use "**Pain Index**" for
- *who can help you...*
- *whom you can help...*
- which concept to focus.

Context Interaction

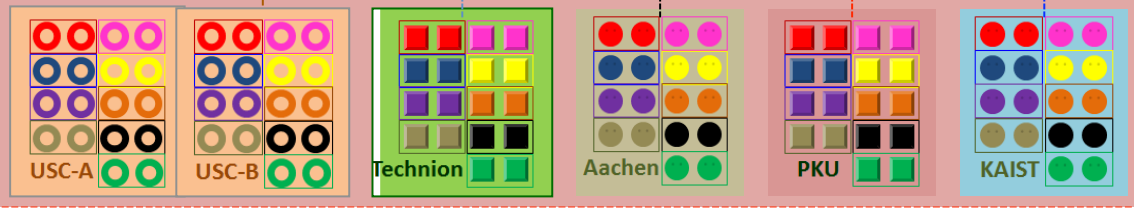
- Students are led by teacher to interact with global peers in iPodia classroom on their campuses
- Students again join online discussions and cross-campus team projects after in-class interaction

Team Project | Online Discussion *After Interaction*

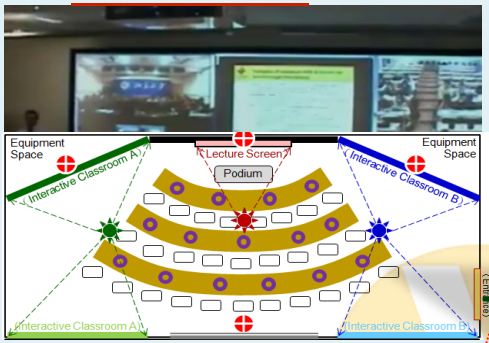


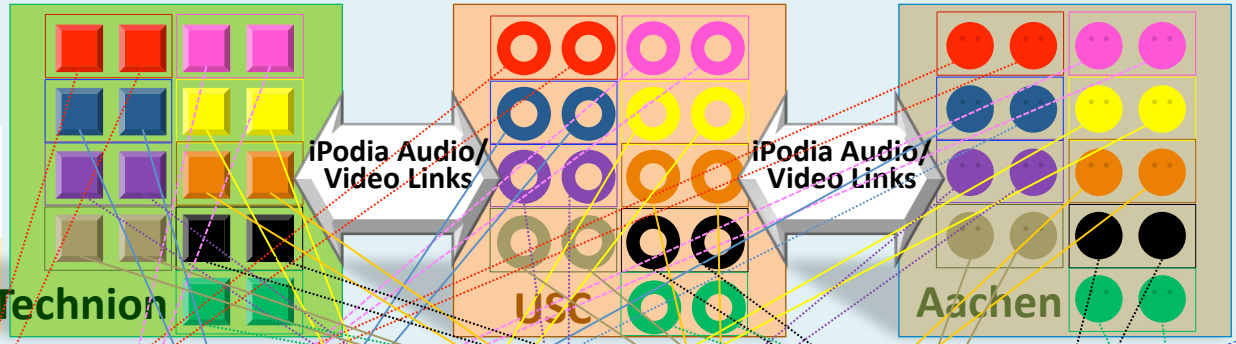
iPodia™ Interactive: empowers participation

108 students *interact asynchronously via Blackboard System*



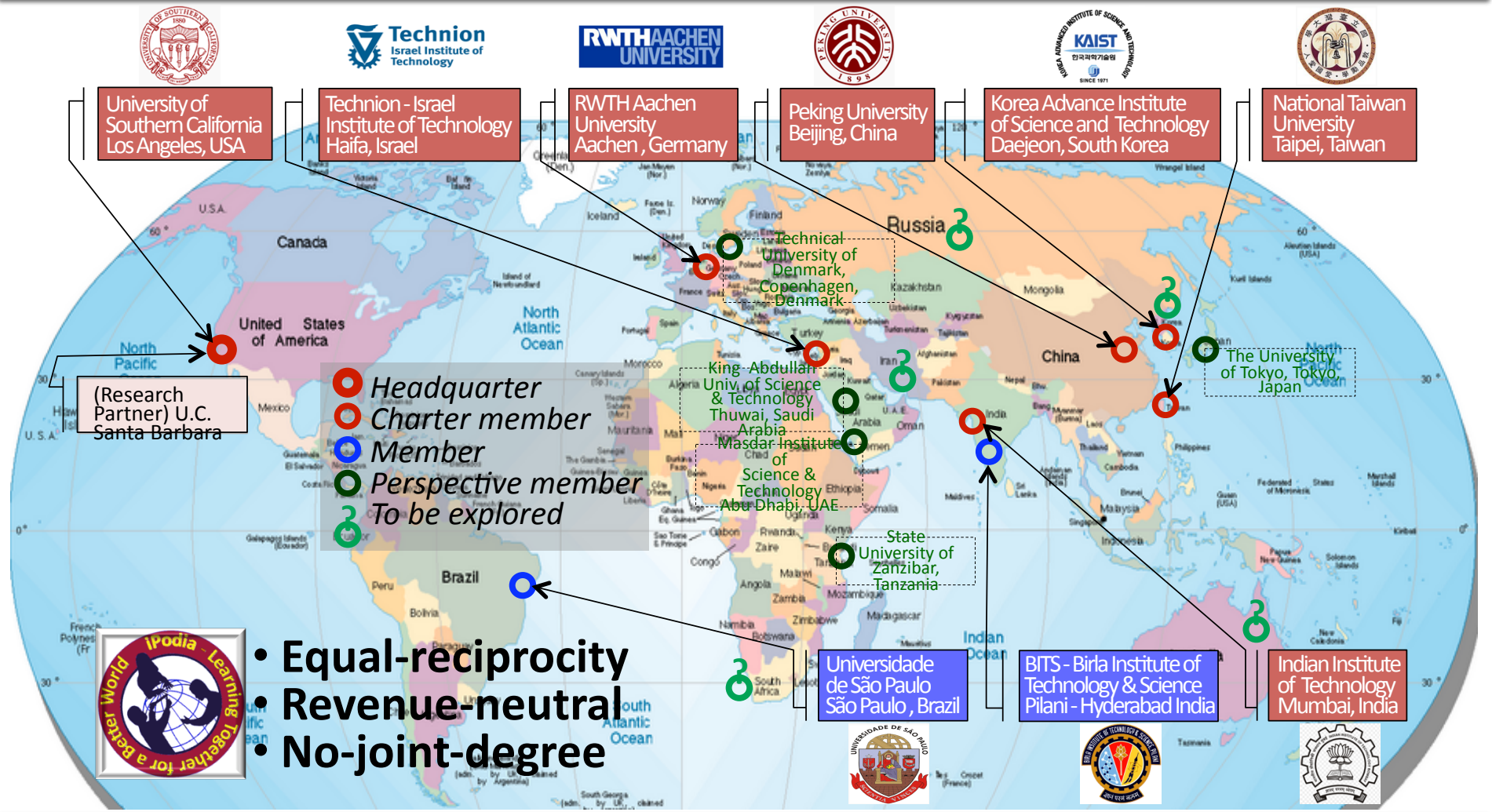
54 students interact synchronously via iPodia classroom @ 3 campuses in 2 sessions



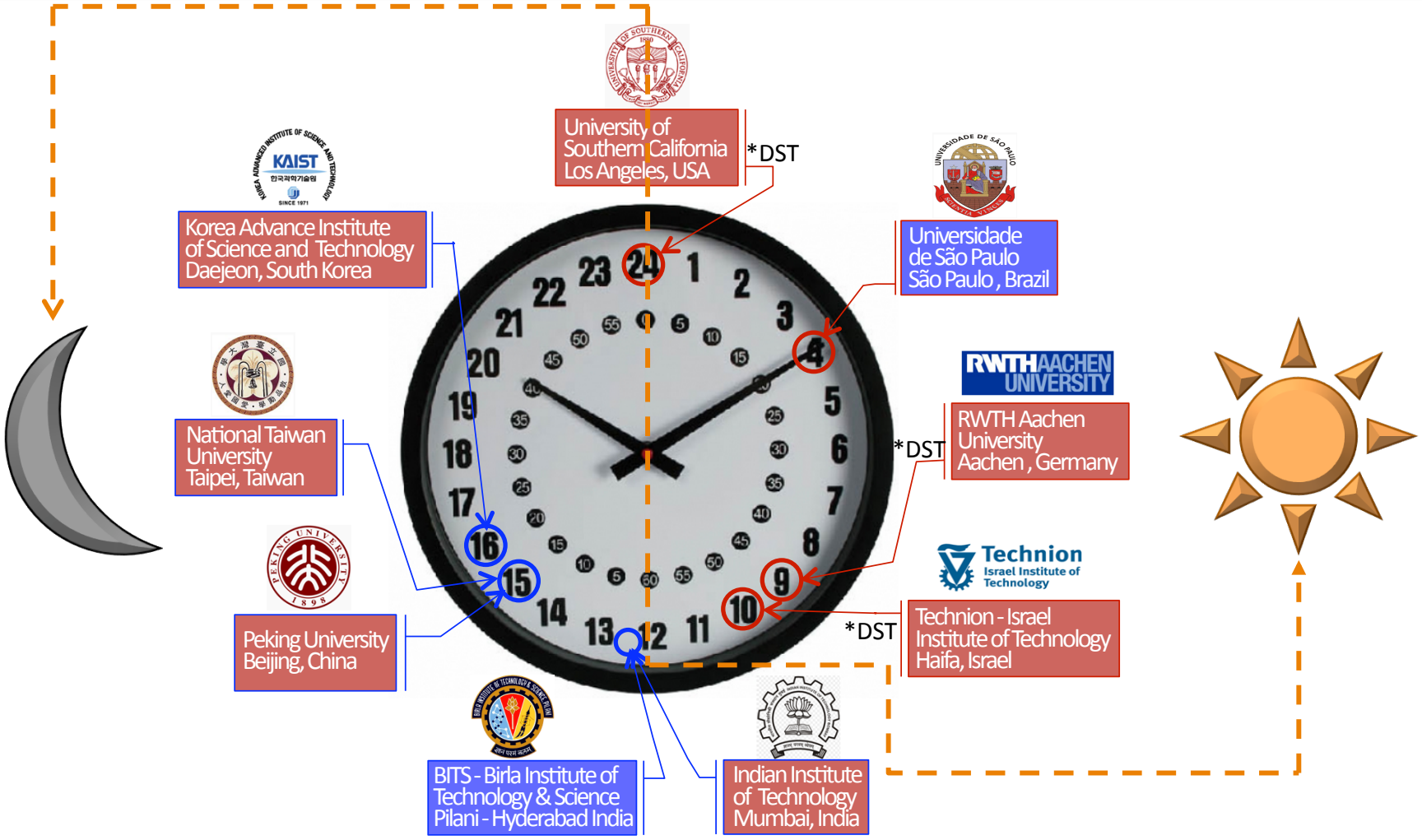
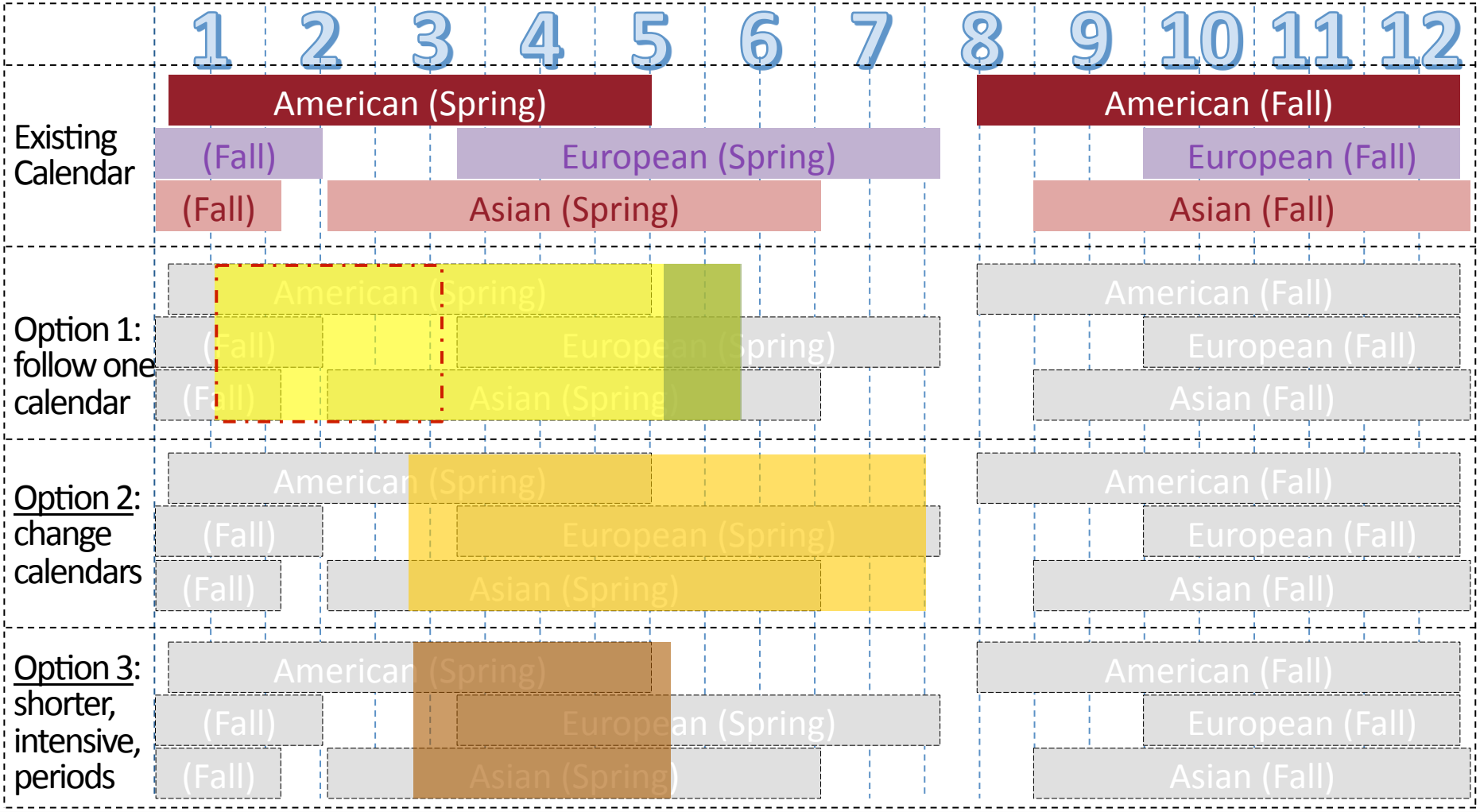


All students simultaneously interacts with 54 classmates and ***6 cohorts***

iPodia™ **International**: embraces diversity



Learning around the clock



Learning across the season