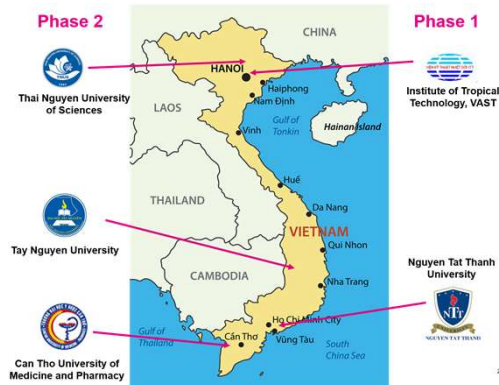


## Aims

- 1) Preparation of open source multi-lingual digital materials to support chemistry teaching in Pharmacy degrees.
- 2) Analysis of incorporation into established teaching programmes and design and in the development of new specific short courses UK and Vietnam.
- 3) Evaluation of the learning gain achieved by students across UK and Vietnamese cohorts.
- 4) Training of academics from across Vietnam in active learning techniques and pedagogical research techniques through workshops and exchanges

## Background

Consortium of six universities (5 Vietnamese, 1 UK)  
 1 Research only university  
 5 Research and teaching universities  
 3 Schools of Pharmacy, 1 School of Medicine, 1 School of Chemistry  
 Spread throughout Vietnam; Urban, rural and disadvantaged



## Materials

10 minute bite-sized revision videos  
 Male and Female voices  
 English text and voice  
 Vietnamese text and voice  
 English text and Vietnamese voice  
 Vietnamese text and English voice

### Phase 1

4 pharmacognosy videos  
 5 natural products chemistry videos

### Phase 2

8 analytical videos  
 5 organic chemistry videos  
 4 pharmacology videos  
 2 pharmaceuticals videos

## Method

- 1) Advertising opportunity to participate in trial to all students on course
- 2) Volunteer students complete a pre-exposure MCQ test
- 3) Random assignment of students to a video set (voice and /or gender varied)
- 4) 2-4 weeks exposure
- 5) Students complete a post-exposure MCQ test and qualitative questionnaire
- 6) Focus group for selected participants

Evaluation focussed on learning gain and student perceptions of the resources

MCQ enabled students to assess their confidence in their answers.

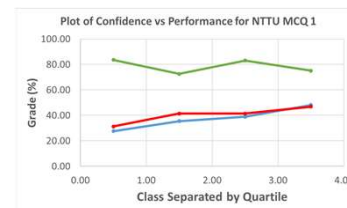
Students additionally predict their attainment

Q	A	B	C	D	Ans
1	✓				✓
2		✓			✓
3			✓		✓
4	✓	✓	✓	✓	✓
5	✓	✓	✓	✓	✓
6					✓
Total Points: 1.6					

## Vietnamese Results (Pre-exposure)

35 students eligible for the course  
 30 students took part in the first MCQs (5 students declined)

	Confidence	Grade	Predicted Grade
3.50	75.13	3.50	48.13
2.50	83.07	2.50	38.86
1.50	72.61	1.50	35.43
0.50	83.65	0.50	27.63
Averages	78.61	37.51	40.17



- Students showed a high level of confidence based on their answer strategy that was not reflected in the marks
- Confidence levels more reflective of ability in better performing students
- Throughout the cohort there is excellent calibration between actual grade and predicted grade
- Lower performing students overestimated far less than would be expected from a classic Dunning-Kruger type study

## Acknowledgements

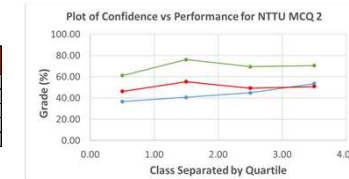
The project is supported under the British Council UK-Vietnam Higher Education Partnership Funds



## Vietnamese Results (Post-exposure)

A further 7 students left the study

	Confidence	Grade	Predicted Grade
3.50	70.47	3.50	53.50
2.50	69.46	2.50	44.83
1.50	76.18	1.50	40.60
0.50	61.05	0.50	36.60
Averages	69.29	43.86	50.44



- Narrowing of gap between attainment of students and confidence for all quartiles
- Lower quartiles more overconfident in their predictions
- Higher quartiles retain good calibration
- Slightly lower confidence strategies used in MCQ answers

## Vietnamese Results (Focus Group)

Pre-determined set of questions  
 8 students took part in a 1 hour focus group  
 Vietnamese translated into English in the transcript  
**Three themes emerged**

### Benefits

- Helped them learn English and scientific language
- Visually appealing with good use of diagrams and illustrations which made the content more interesting and easily digestible
- Good information repository
- Elaborated on classroom teaching and helped with their application and understanding of the subject

### Weaknesses

- Difficulties with language especially technical
- Difficulties with pace of narration – request for subtitles
- Too much information
- Lack of interactivity

### Narrations

- Female voice preferred
- Female voice – softer, clearer and lower
- Large number had no preference for voice
- Vietnamese voice preferred

## Conclusions

- Vietnamese students showed the same behaviour profiles as UK students using the same material.
- Early evidence in change of strategies from test 1 to test 2. More tests needed to properly follow the trends
- Key areas for the development of suitable materials for TNE emerged including:
  - Balance of learning English versus technical understanding
  - Need for interactivity to break up didactic learning in a foreign language