香港教育大學
The Education University of Hong Kong

Team-based E-Assessment （TEA）
Designer: Dr. YANG Lan

Self- and Peer-Assessment （SPA）
Designer: Dr. YANG Lan

What do TEA and SPA offer?

Lan Yang*

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The Education University of Hong Kong

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Acknowledgement: Based on one Teaching development grant project and one knowledge transfer project awarded to Dr. Lan Yang

What does TEA offer?

OUTLINE

- **TEA** = **T**eam-based **E**-**A**ssessment
- Group Discussion
- Multiple Choice Question
- Teacher Feedback Provision after TEA time

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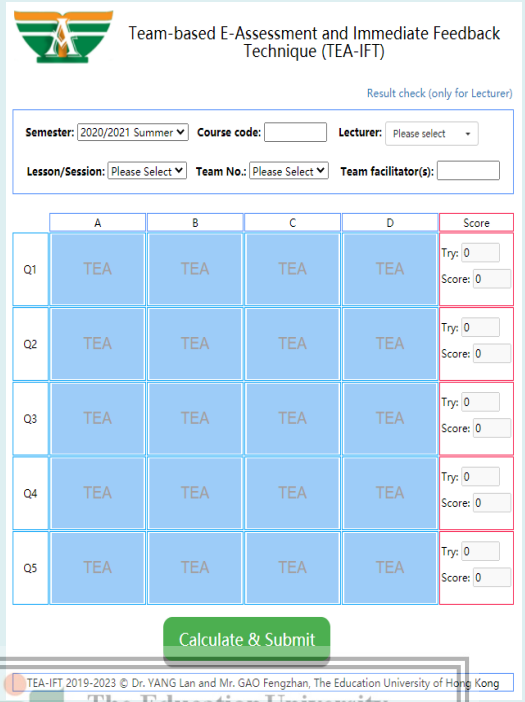
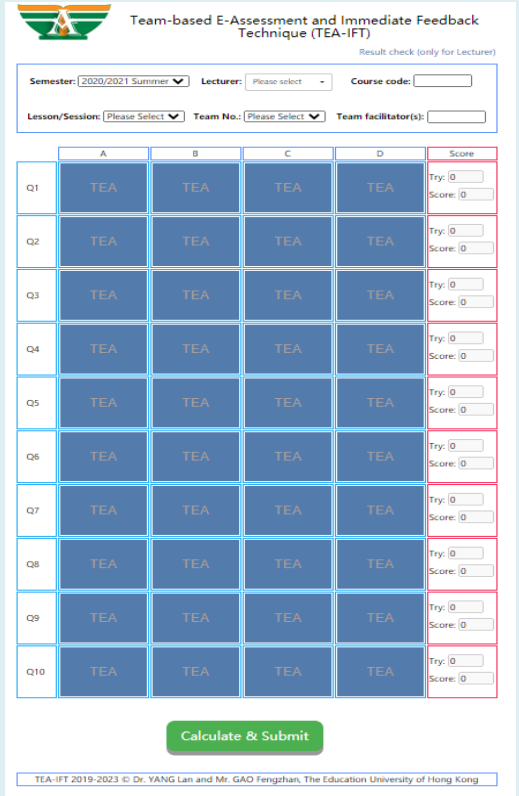
Team-based E-Assessment and Immediate Feedback Technique (TEA-IFT)

Designer: Dr. Yang Lan including the TEA logo



5 MCQ version



10 MCQ version

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Answers are hidden by TEA icons/cells

For wrong answers, students will see try again, encouraging team members to discuss and try TEA again; This may also reduce students' negative emotions (e.g., anxiety)

For correct answers, students will see **corrective feedback** delivered through smiley face to like their work, aiming to induce positive emotions (e.g., enjoyment and pride 自豪)

TEA Time for each group

(assign students to several groups, e.g., 10 groups for a class with 40 students)

When answering multiple-choice questions by team, recommend a team facilitator to help your team to click the answer for each question after team discussion

Team Facilitator?

Team Member 1

Team Member 2

Team Member 3

Team Member 4

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TEA Time for each group

(assign students to several groups, e.g., 10 groups for a class with 40 students)

When answering multiple-choice questions by team, recommend a team facilitator to help your team to click the answer for each question after team discussion

Team Member 4 as facilitator

Team Member 1

Team Member 2

Team Member 3

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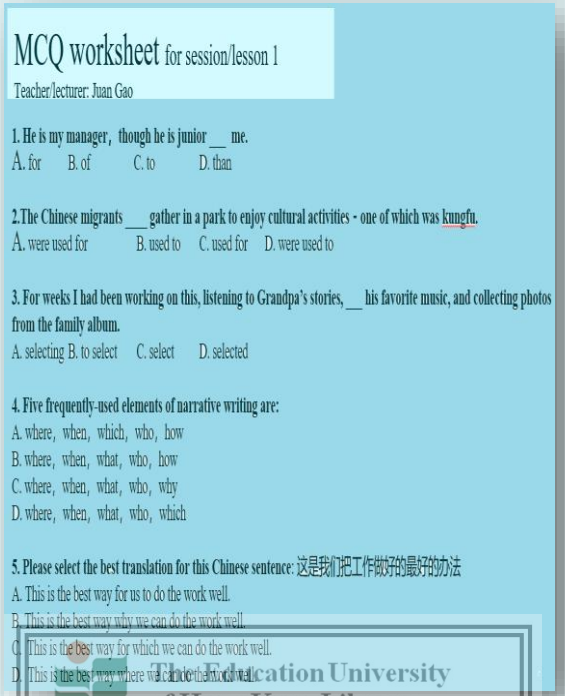
TEA Time for each group

(to discuss, provide peer feedback and select correct answer for each question based on teacher's worksheet)



MCQ worksheet for session/lesson 1

Teacher/lecturer: Juan Gao

1. He is my manager, though he is junior __ me.
A. for B. of C. to D. than

2.The Chinese migrants __ gather in a park to enjoy cultural activities - one of which was kungfu.
A. were used for B. used to C. used for D. were used to

3. For weeks I had been working on this, listening to Grandpa's stories, __ his favorite music, and collecting photos from the family album.
A. selecting B. to select C. select D. selected

4. Five frequently-used elements of narrative writing are:
A. where, when, which, who, how
B. where, when, what, who, how
C. where, when, what, who, why
D. where, when, what, who, which

5. Please select the best translation for this Chinese sentence: 这是我们把工作做好的最好的办法
A. This is the best way for us to do the work well.
B. This is the best way why we can do the work well.
C. This is the best way for which we can do the work well.
D. This is the best way where we can do the work well.

Team facilitator clicks team's answer for each question after team discussion

Team Facilitator

Team Member 1

Team Member 2

Team Member 3

Team discussion

Team discussion

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MCQ worksheet for session/lesson 1

Teacher/lecturer: Juan Gao

1. He is my manager，though he is junior ___ me.

A. for B. of C. to D. than

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A. selecting B. to select C. select D. selected

4. Five frequently-used elements of narrative writing are:

A. where，when，which，who，how

B. where，when，what，who，how

C. where，when，what，who，why

D. where，when，what，who，which

5. Please select the best translation for this Chinese sentence: 这是我们把工作做好的最好的办法

A. This is the best way for us to do the work well.

B. This is the best way why we can do the work well.

C. This is the best way for which we can do the work well.

D. This is the best way where we can do the work well.

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TEA TIME

Group Discussion

⏳ (10-15 minutes in HE)

Can be shortened in SE

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TEA-IFT

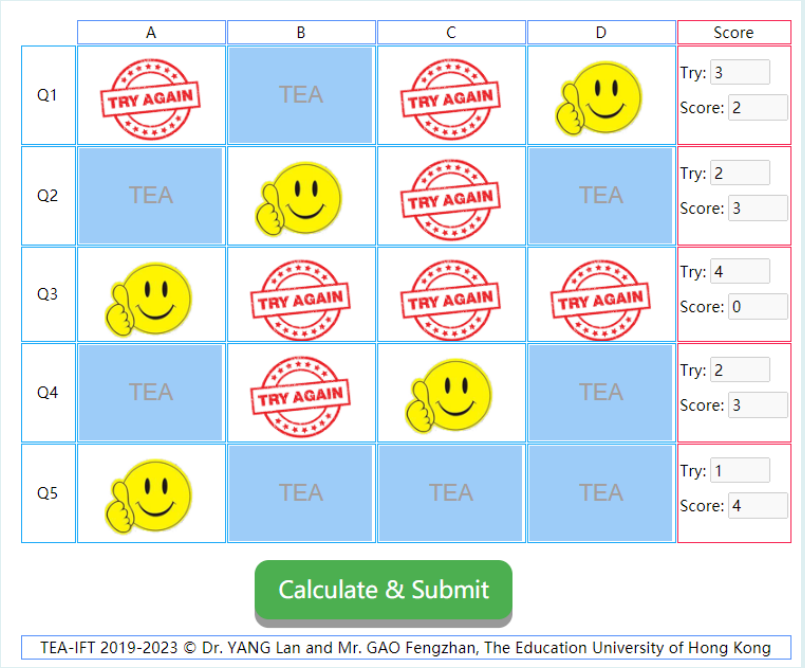
About Team-based E-assessment

Multiple Choice

- 1st round of group discussion →click TEA → see "**Smiley Face**" →achieve 4 scores
- 1st round of group discussion → click TEA →see "Try Again" → 2nd round of group discussion→ click TEA→ "**Smiley Face**" → 3 scores

Your team's final scores will be determined by how many times you've tried; The less times you've tried, the higher scores you'll achieve.

（TEA with 5 MCQ as an example）



Calculating

Q1+ Q2 + Q3 +Q4+Q5 = **2+3+0+3+4 = 12** (12 out of 20)

Total score in percentage： 12/20 x 100% = 60%

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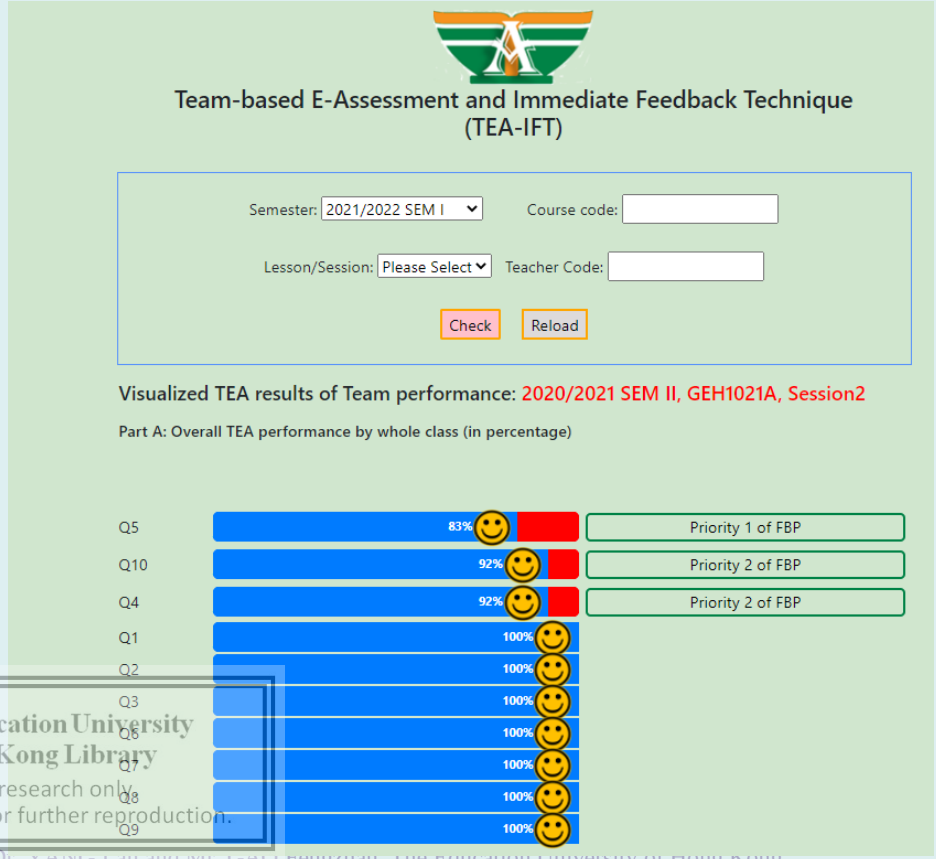
Immediate Feedback by the lecturer

(based on students' TEA performance)



TEAM	TEACHER
TEA Teacher's assessment of learning, meanwhile peer discussion and peer feedback to reach mutual agreement to finish online Team-based E-Assessment.	Mini-lecture as a kind of immediate teacher feedback to correct misconceptions via those "try again signs in TEA results" produced by students
AoL & Assessment for learning (**AfL**): -Peer feedback -Teacher's immediate feedback via TEA-IFT	**AfL:** Teacher immediate feedback

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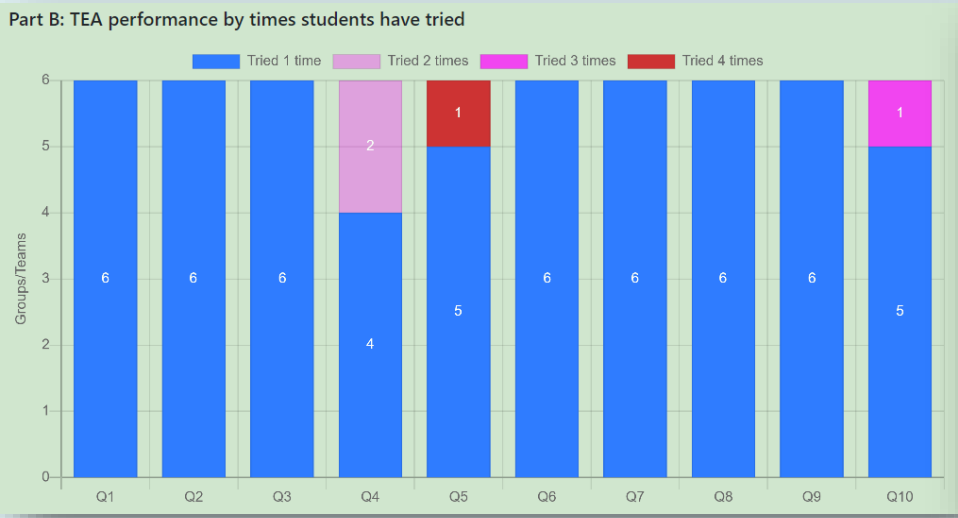

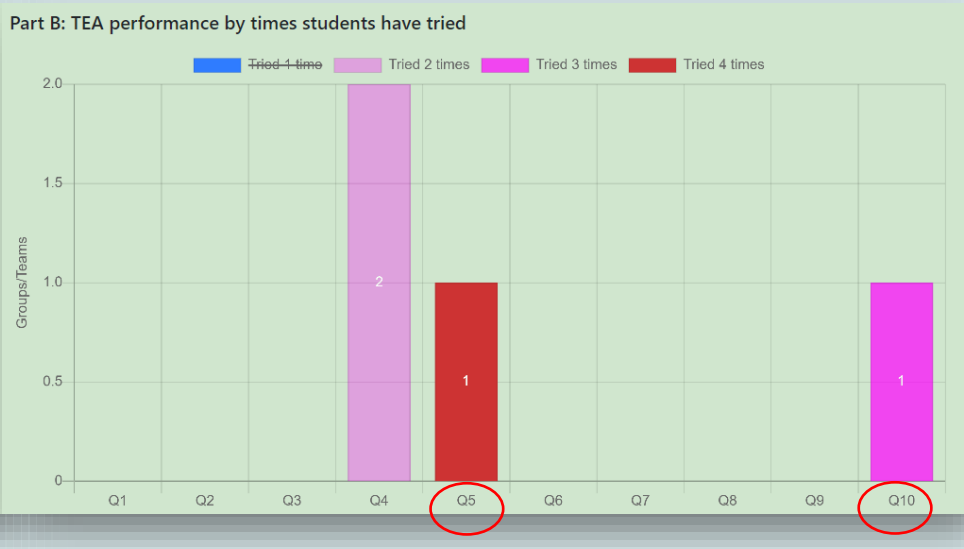

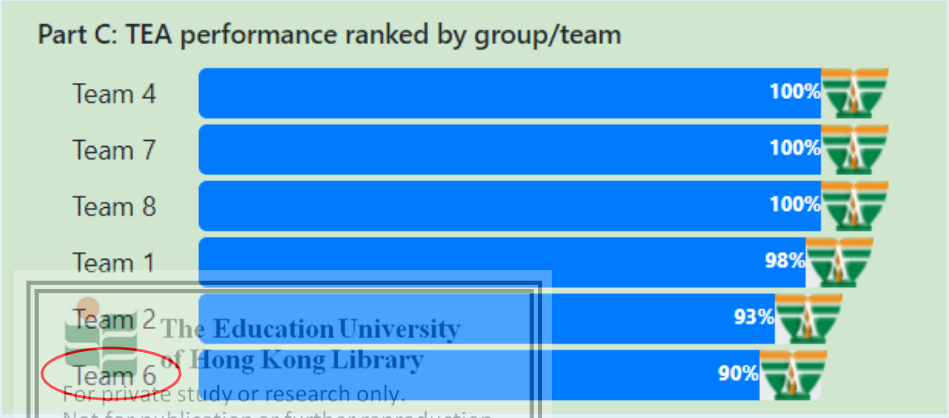

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AfL:
Teacher immediate feedback

Helps teachers to:
--Focus on providing feedback to those questions students tried to answer multiple times (esp. 3 to 4 times)

--Pay more attention to those groups of students who might not perform that well in TEA as compared to other groups (e.g., team 6)

We list some testimonials from students in the below box:

"I feel TEA really helpful in inspiring my thinking and highlighting the learning key points of a particular learning phase. What I found really impressive was that the e-learning tools were designed from a supportive perspective rather than a judgmental perspective. When giving wrong answer for one question, appearance of the word "try again" rather than a cold "red cross" implied an encouraging and inclusive attitude from the lecturer to students. It provides a relatively positive signal for me and make me willing to learn more and explore more about my questions in the coming peer tutoring session followed by the TEA and afterward lecturer tutoring session based on previous learning outcomes. I felt grateful that I was given more chances and space to learn and to progress" (Student from A5B084, Year 3).

"They are encouraging as I will get 'Try again' as second chance to answer questions when I get the wrong answers; and I can get a positive sticker with smile. Under the COVID-19 pandemic and 2-year zoom lessons, these positive and motivating assessments are more likely as 'games' or 'activities' than assessment. So, I did enjoy these tools". (A5B060, Year 3)

"The learning mode has a dramatic change for university students, which we are required to depend heavily on the online learning instead of the face-to-face learning that we are used to in the period of the COV-19 pandemic. The change poses challenges for course design in searching for teaching and learning strategies that are capable for maintaining a high level of learning motivation and interaction of students. TEA and SPA, they help students to consolidate the knowledge in lecture-basis. Students, therefore, have the incentive to consistently review the content from last lecture. With more familiarized with the content, it is easier for students to catch up on each lecture, in turn boosting learning motivation among students. For TEA, it also helps increasing peer interaction, which one of the core component for student-centered learning" (Student from A5B085, Year 5)

Note: We did not correct spelling and grammar mistakes in students' sharing. We just quoted directly from their reflections.

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ON DESIGNING EFFECTIVE MULTIPLE-CHOICE QUESTIONS

- **Could be challenging…**
- Make good use/take advantages of existing banks of questions in instructors' disciplines
- Instructors' observations of common student mistakes and misconceptions in their disciplines can be useful in designing wrong answers when writing multiple-choice questions.
- Each course has its intended learning outcomes, leading to specific learning objectives of each session in higher education, writing MCQ guided by learning objectives and concrete teaching content would also be productive

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- Multiple-choice questions are not limited to testing students' recall of facts. They can actually serve many other meaningful purposes in the class, including assessing students' higher-order thinking skills

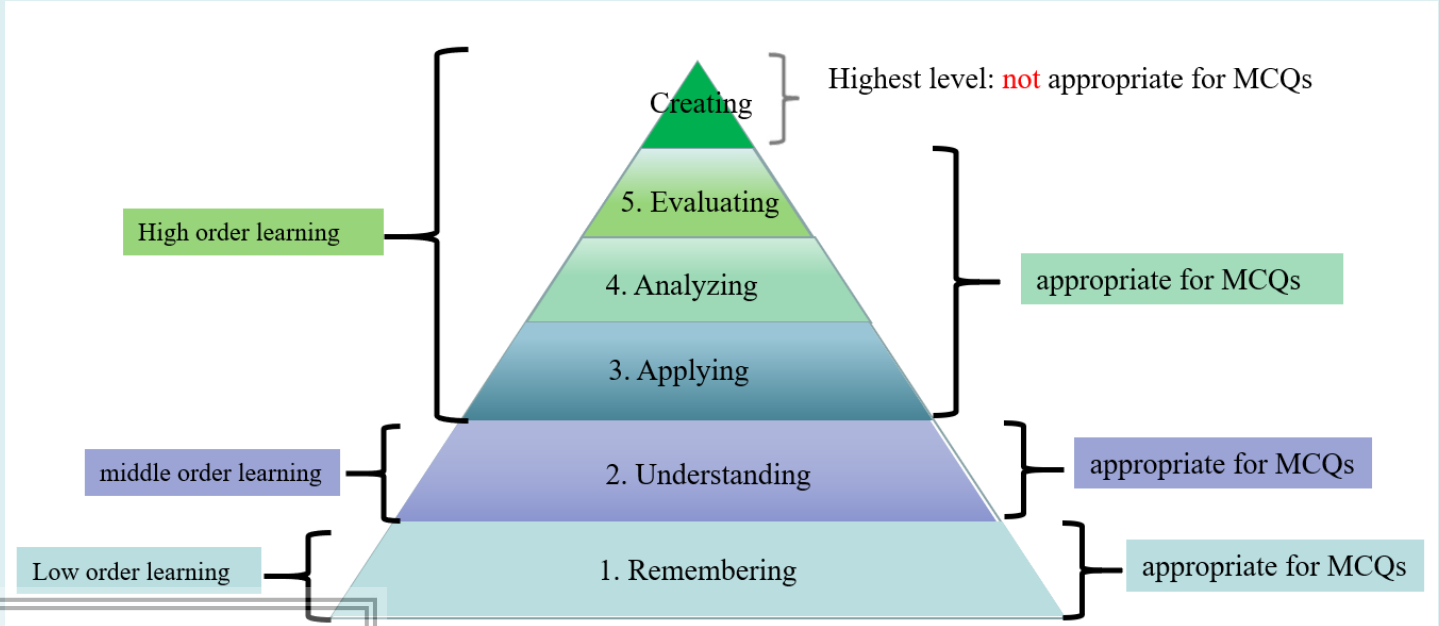

Figure 1. Suitability of MCQs to different levels of cognition of Anderson and Krathworhl's (2001) taxonomy (based on Jovanovska, 2018)

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RESEARCH DIRECTIONS

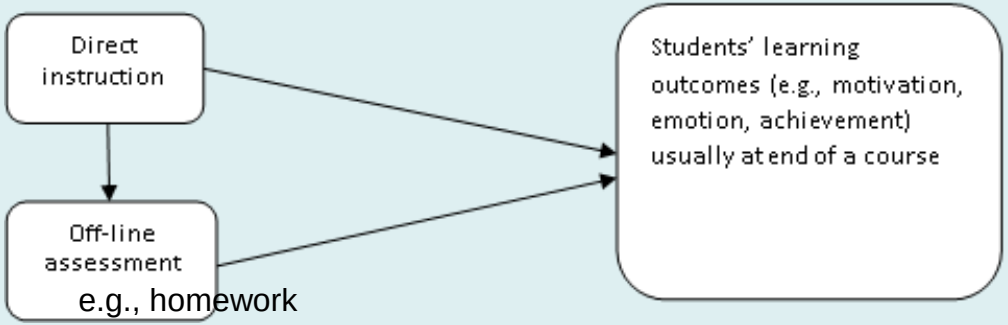

Figure 1: Old Paradigm

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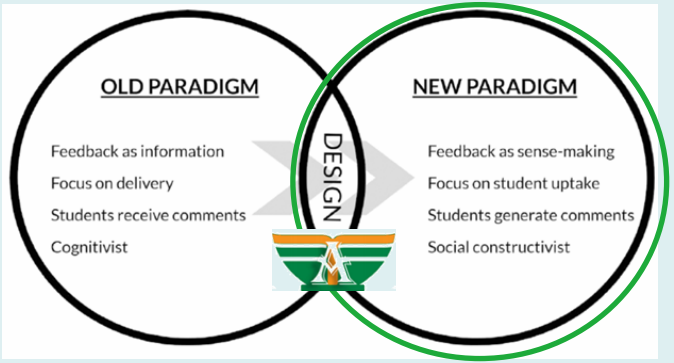
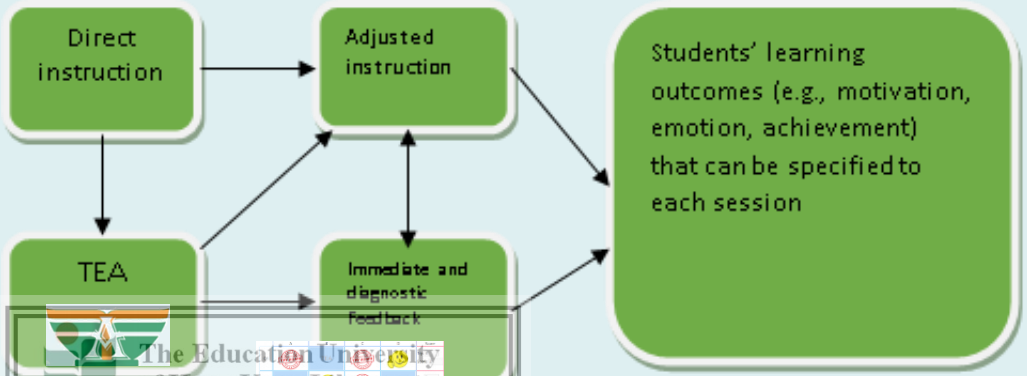


Figure 2: New Paradigm Based on Winstone and Carless (2019, p. 9)

Designed by Dr. YANG Lan



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WHAT DOES SPA OFFER?

- What is SPA?
- Why should we use SPA?
- Where can we find SPA?
- What's next?

SPA?

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WHAT IS SPA?

- An online assessment platform supporting students' self- and peer-assessment practices

QR Code

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WHY SHOULD WE CONSIDER USING SPA?

- SPA supports in-class formative assessment

Formative assessment emphasizes students' learning process and is usually conducted on a daily basis.
Formative assessment covers "all those activities undertaken by teachers, and/or by their students, which provide information to be used as feedback to modify the teaching and learning activities in which they are engaged" (Black and Wiliam, 1998, p. 7).

However "teachers need substantial knowledge to implement formative assessment effectively in classrooms. It is doubtful that the average teacher has that knowledge, so most teachers will need substantial time and support to develop it" (Bennett, 2011, p. 20).

SPA has been designed with the philosophy of LESS-is-MORE.

- LESS = **L**earning **E**ngagement **S**tep by **S**tep
- MORE = **M**otivation, **O**ptimism, **R**eflection, & **E**nhancement (of formative assessment productively)

SPA would be a good starting point/platform of classroom-based formative assessment that is easy for teachers to implement

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WHAT DOES SPA OFFER?

Instruction
Self-and peer-assessment can be used effectively to promote your learning. Please assess your and your team members' performance in this completed session.

Basic Information

Semester: 2020/2021 SEM II **Lecturer:** Please select **Course Code:**

Lesson/Session: Please select **Team Number:** Please select **Your Student ID:**

Self-assessment

Part A

Self-assessment in terms of your Preparation, Contribution, Gatekeeping, Flexibility, Emotions and overall achievement in this session

Preparation

Contribution
Gatekeeping
Flexibility

Enjoyment
Hope
Pride
Boredom -

	Never	Sometimes	Often	Always
S_Q1. Were you prepared when you came to class?	○	○	○	○
S_Q2. Did you contribute to the team discussion and teamwork?	○	○	○	○
S_Q3. Did you help others contribute?	○	○	○	○
S_Q4. Did you listen when disagreements occurred?	○	○	○	○
S_Q5. Did you feel **enjoyable** by working with your team?	○	○	○	○
S_Q6. Did you feel **hopeful** by working with your team?	○	○	○	○
S_Q7. Did you feel **proud** by working with your team?	○	○	○	○
S_Q8. Did you feel **bored** by working with your team?	○	○	○	○

Achievement

	Poor	Average	Good	Excellent
S_Q9. Assess your mastery of key concepts and points delivered in this session .	○	○	○	○

Self-assessment for further improvement:

S_Q10. Based on my academic performance in this session, the single most important thing I would like to improve in the coming session:

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Hope you enjoy S-P-A aiming to enhance learning and improve your achievements. Please click the below button to download S-P-A feed forward (i.e., where to next?) comments from self and peers for helping you further achievement.

Download S-P-A comments

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WHAT DOES SPA OFFER?

Peer-assessment

Preparation

Contribution
Gatekeeping
Flexibility

Enjoyment
Hope
Pride
Boredom -

Achievement

Part B

Peer-assessment in terms of your team members' Preparation, Contribution, Gatekeeping, Flexibility, Emotions and overall achievement in this session .

	Never	Sometimes	Often	Always
P_Q1. Were they prepared when they came to class?	○	○	○	○
P_Q2. Did they contribute to the team discussion and teamwork?	○	○	○	○
P_Q3. Did they help others contribute?	○	○	○	○
P_Q4. Did they listen when disagreements occurred?	○	○	○	○
P_Q5. Did they feel **enjoyable** by working with the team?	○	○	○	○
P_Q6. Did they feel **hopeful** by working with the team?	○	○	○	○
P_Q7. Did they feel **proud** by working with the team?	○	○	○	○
P_Q8. Did they feel **bored** by working with the team?	○	○	○	○

	Poor	Average	Good	Excellent
P_Q9. Assess your team members' mastery of key concepts and points delivered in this session.	○	○	○	○

Part C
Peer-assessment for further improvement of teamwork:

Please write down your comments on your team's performance for further improvement if any:

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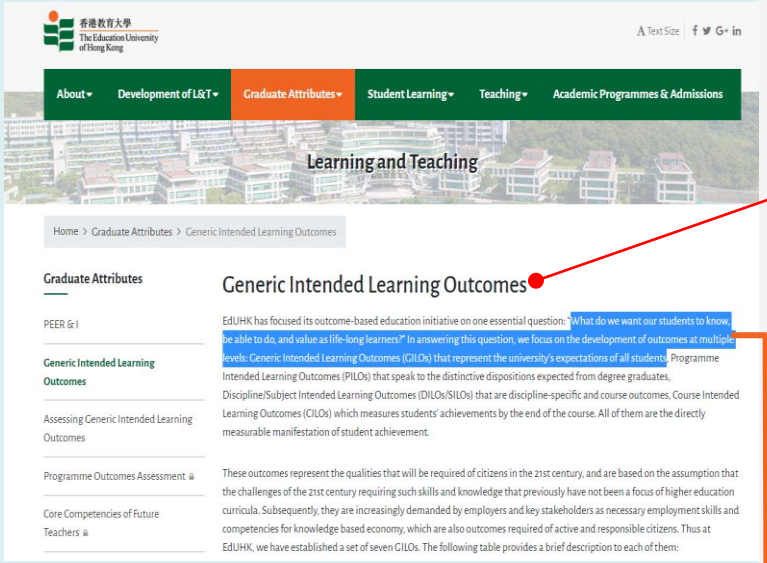
WHAT DOES SPA OFFER?



"What do we want our students to know, be able to do, and value as life-long learners?" In answering this question, we focus on the development of outcomes at multiple levels: Generic Intended Learning Outcomes (GILOs) that represent the university's expectations of all students"

Part D
Know the impact of this session on your Generic Intended Learning Outcomes (GILOs)

	Level 4 Outstanding	Level 3 Mastering	Level 2 Developing	Level 1 Beginning	Level 0 Under-consideration
Problem Solving Skills	○	○	○	○	○
Critical Thinking Skills	○	○	○	○	○
Creative Thinking Skills	○	○	○	○	○
Oral Communication Skills	○	○	○	○	○
Written Communication Skills	○	○	○	○	○
Social Interaction Skills	○	○	○	○	○
Ethical Decision Making	○	○	○	○	○
Global Perspectives	○	○	○	○	○

* Please set your password for checking your visualied results later on:

Submit

Self- and Peer-Assessment (S-P-A) Platform

Student ID: (* e.g. s12345678)
Result Check Password: (* Input the password you set when you submitted your S-P-A form)
Check Reload

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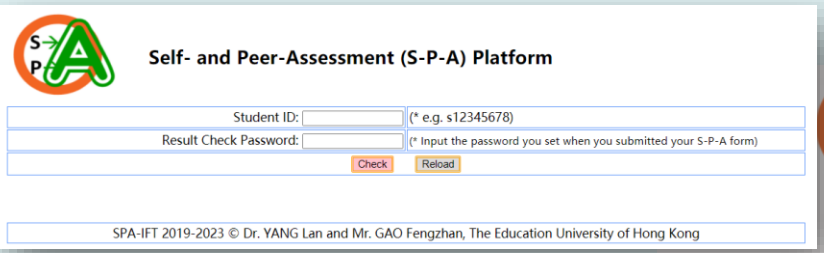
SPA visualized report to one of TEAM 1 students



SPA provides visualized assessment report to each team of students

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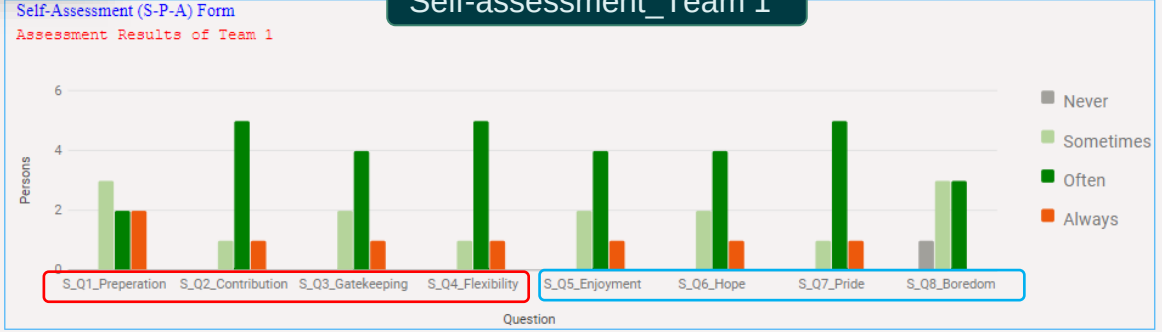
Self- and Peer-Assessment (S-P-A) Platform

Visualized results for student(ID): S1 ; Semester:2020/2021 SEM II ; Course code:GEH1021A ; Session:Session 1

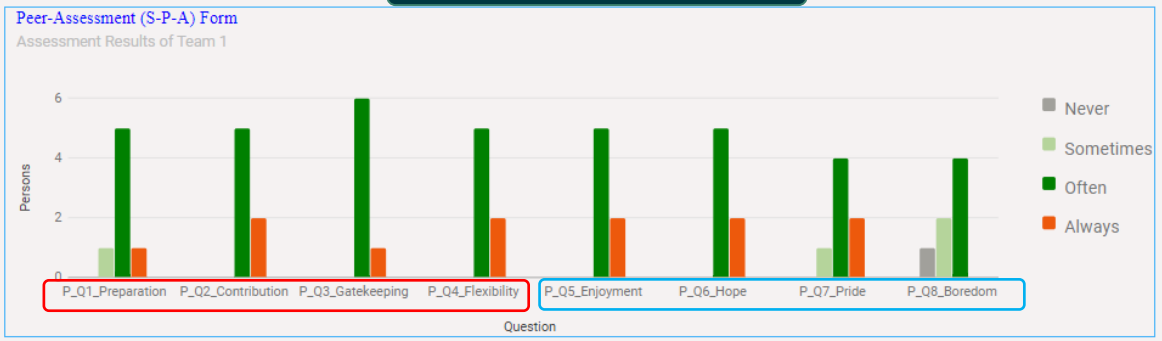
Part A Self-assessment -- Team 1.

Self-assessment_Team 1



Part B Peer-assessment -- Team 1

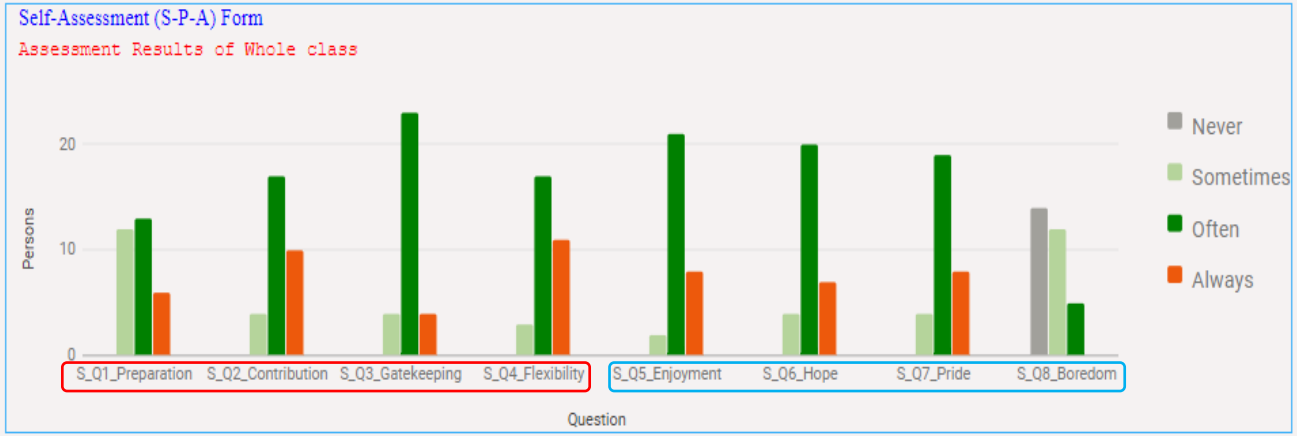
Peer-assessment_Team 1



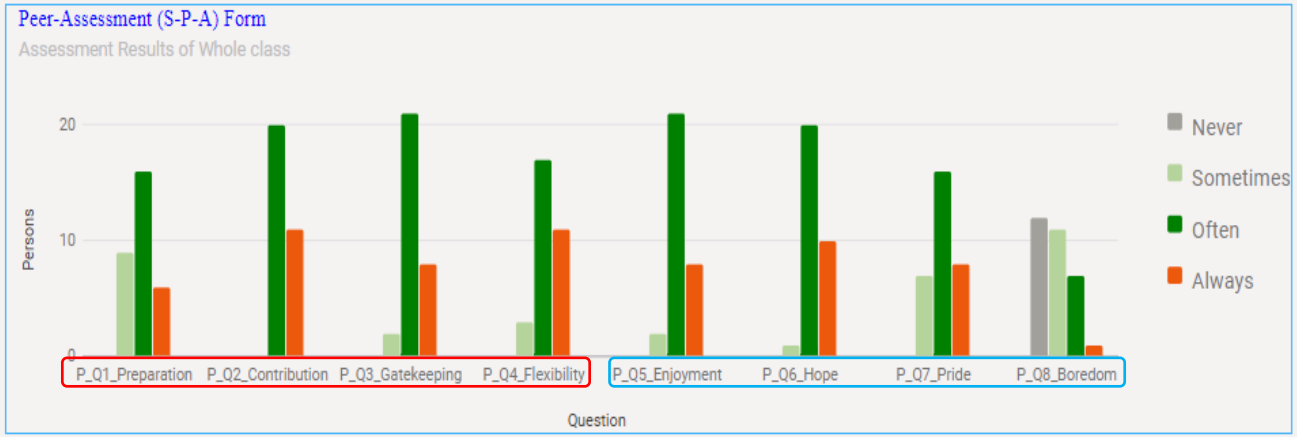
SPA provides visualized assessment report to each team of students (Cont'd)

SPA visualized report to one of TEAM 1 students

Part A Self-assessment -- Whole class.



Part B Peer-assessment -- Whole class.



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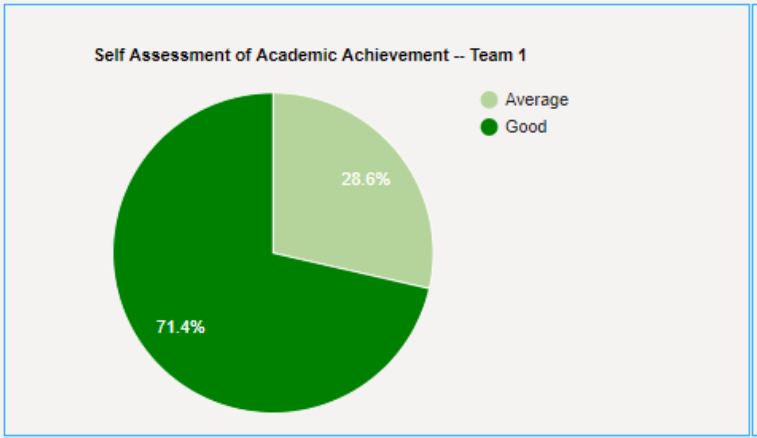
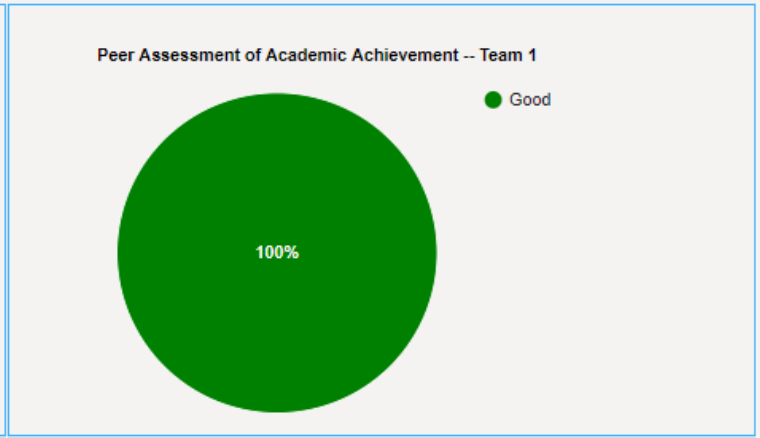
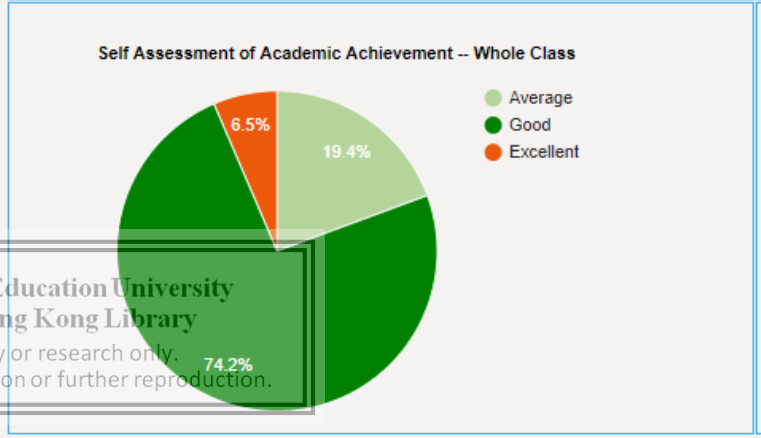
SPA provides visualized assessment report to each team of students (Cont'd)

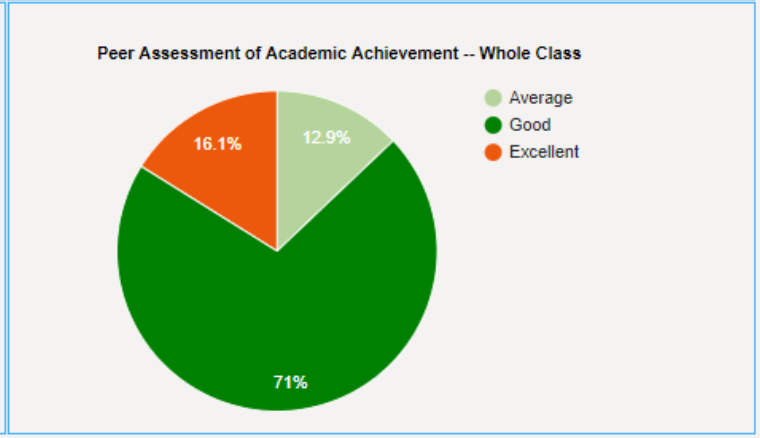
SPA visualized report to one of TEAM 1 students

Q9: Overall **academic achievement** assessed by self and team members









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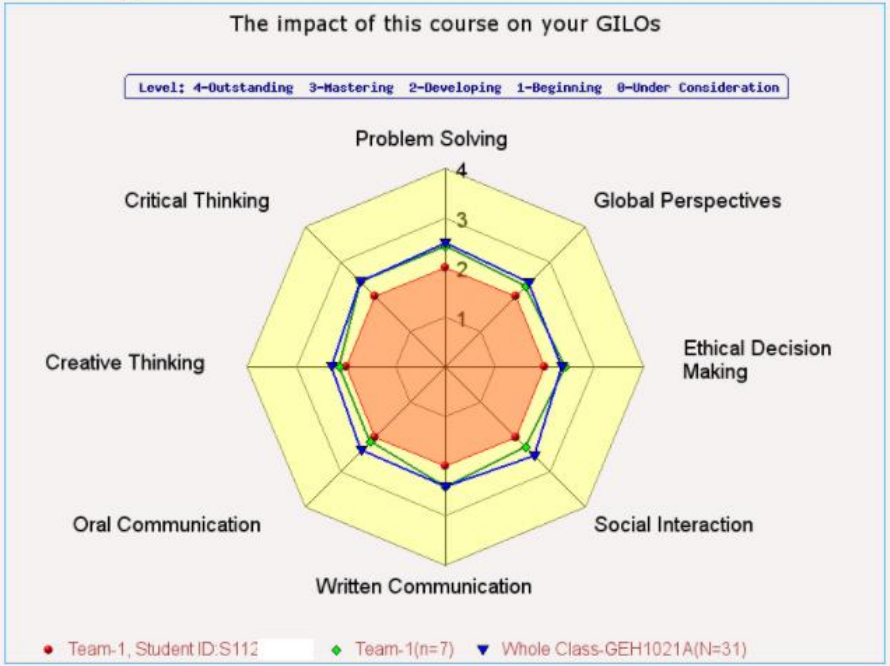
SPA provides visualized assessment report to each student

SPA visualized report to one of TEAM 1 students

Part D Know the impact of this course on your GILOs



Hope you enjoy S-P-A aiming to enhance learning and improve your achievements. Please click the below button to download S-P-A feed forward (i.e., **where to next?**) comments from self and peers for helping you further achievement.

Download S-P-A comments

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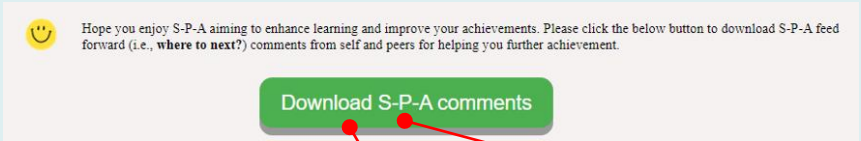

Peer feedbck for helping team members' further improvement

- My team mates always participate in discussion actively.
- I think that my groupmates somehow have done a good job as most of them are well prepared to do the group discussion and most of them are willing to participate in the discussion and share their different opinions.
- They always do well and they are willing to share their views in order to help us discuss about the group work.
- Null
- very good

Peer feedbck for helping team members' further improvement

- Null
- Null
- More involvement in the discussion
- Null
- Speak more

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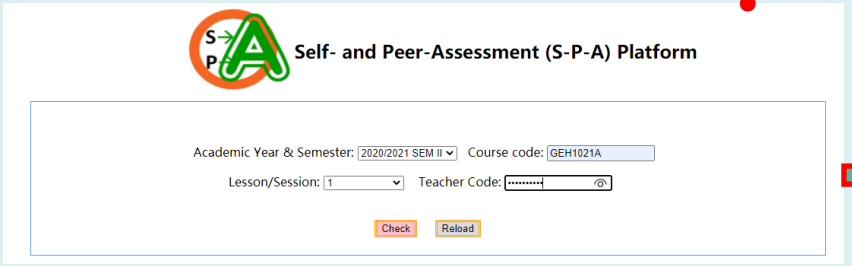

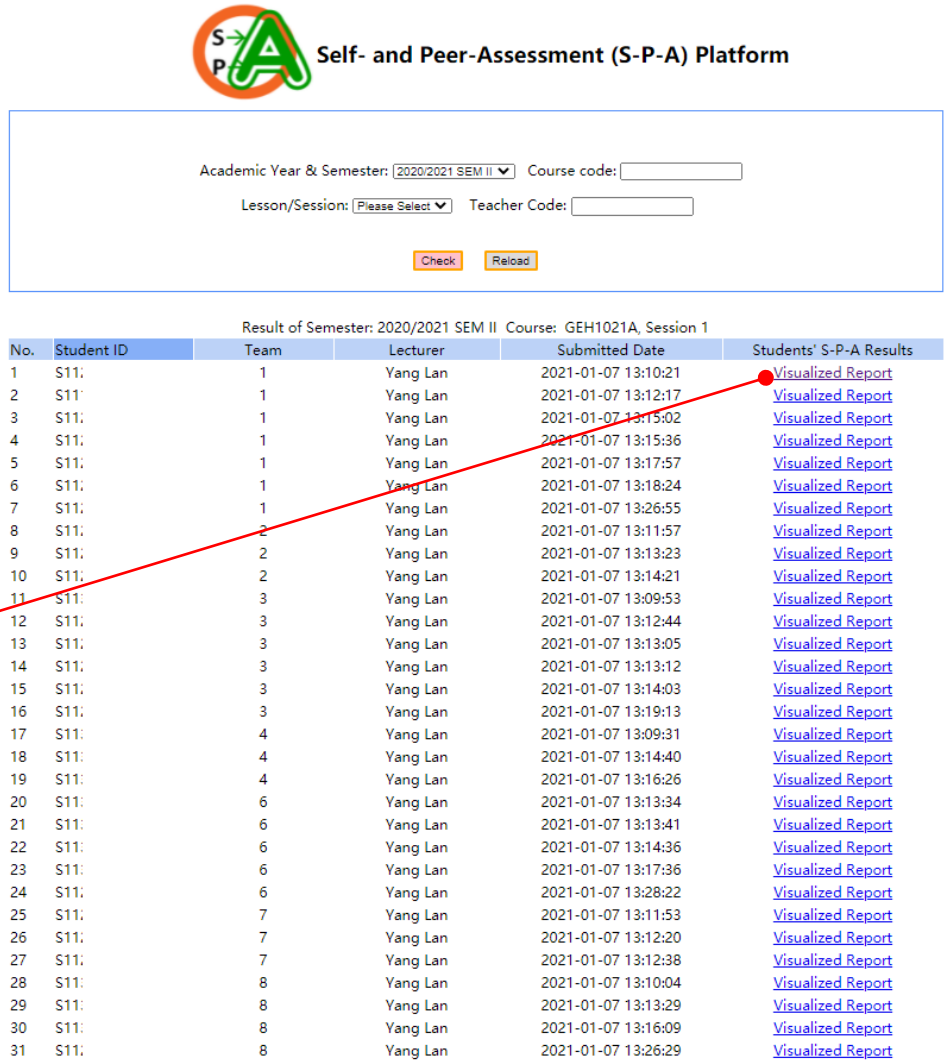

--SPA provides each student with a visualized self- and peer- assessments report to inform team-based learning outcomes session by session

--SPA provides the lecturer with all students' visualized self- and peer- assessments reports to inform teaching impact and teaching adjustments session by session

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SPA provides the course lecturer visualized assessment report to whole class

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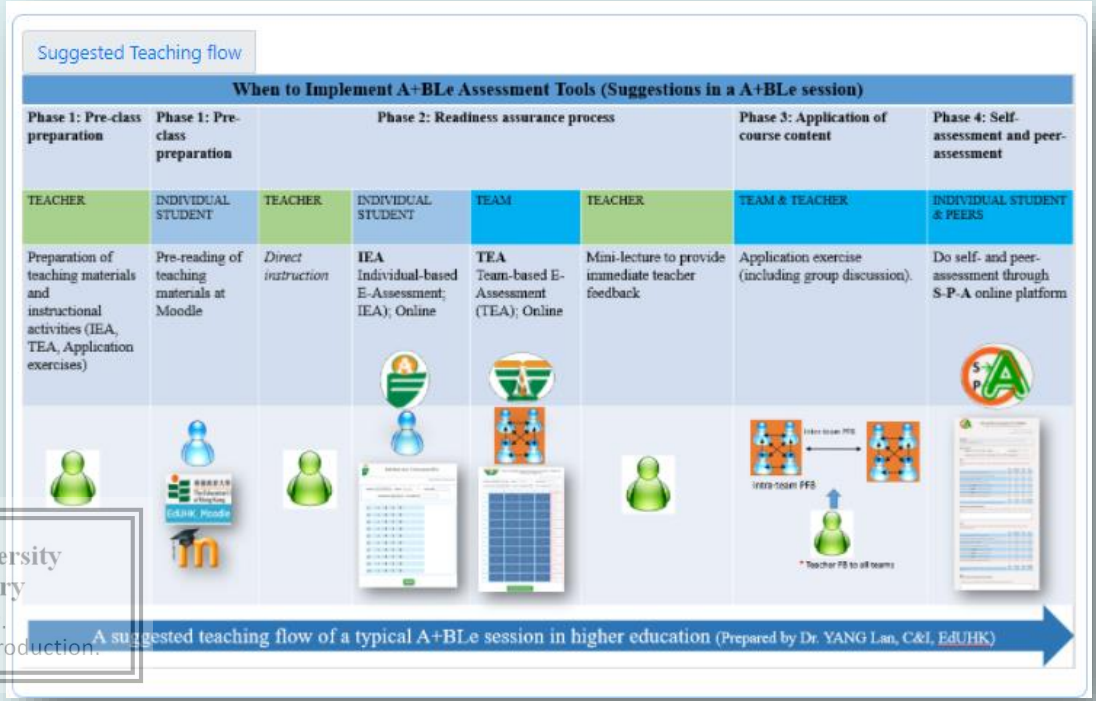
WHY SHOULD WE CONSIDER USING SPA?

- SPA supports in-class formative assessment
- What students have achieved in the current session and what to improve in the coming session (assessment for learning)



About 5 minutes would be needed for SPA

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Practicing five key strategies of formative assessment (through TEA & SPA) :

1. Clarifying and sharing learning intentions and criteria for success (e.g., clarifying course intended learning outcomes and learning objectives of each session in higher education);
2. Enhancing effective classroom discussions (e.g., group discussion through TEA) and other learning tasks that elicit evidence of student understanding (SPA can be used to assess student understanding);
3. Providing feedback that moves learners forward (TEA, SPA, teacher immediate feedback based on TEA; teacher follow-up feedback based on SPA feedback comments);
4. Encouraging students as instructional resources for one another (e.g., peer discussion and peer feedback through TEA & SPA); and
5. Activating students as the owners of their own learning (for both TEA and SPA, students are the Centre of learning, while teachers are supporters/helpers).

(Black & Wiliam, 2009; Wiliam & Thompson 2007; Yang et al., 2021)

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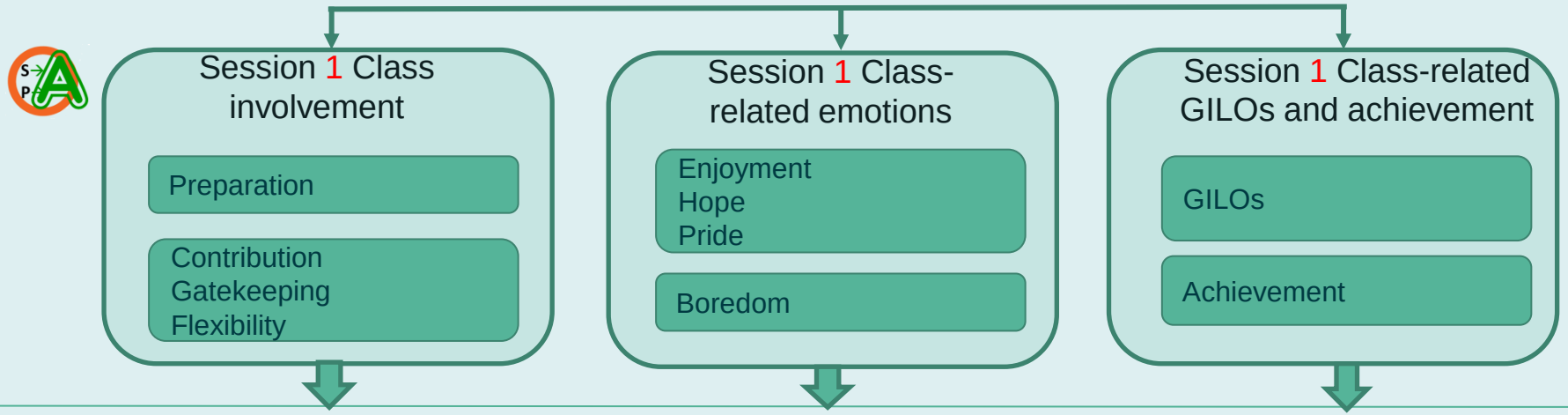
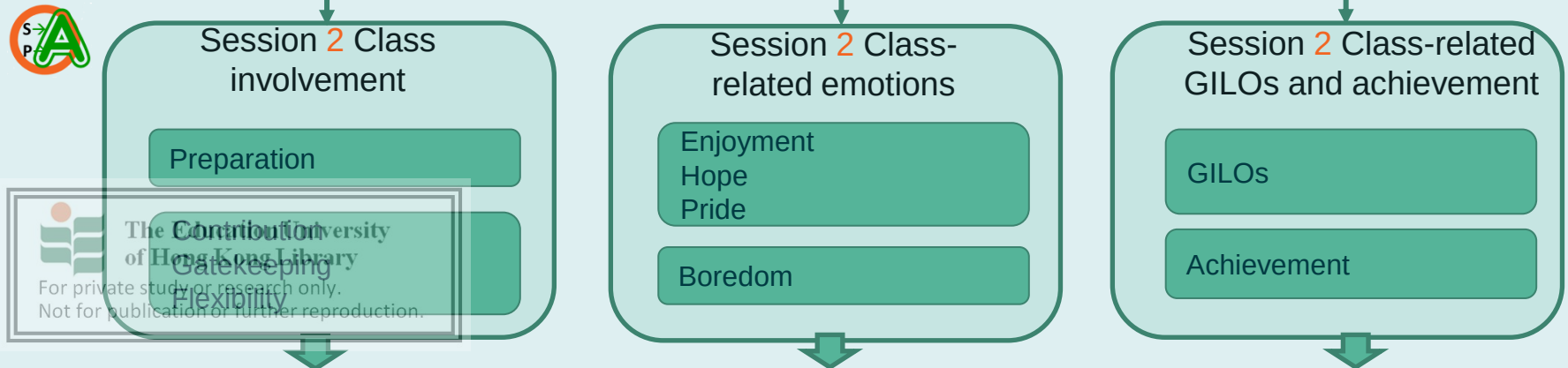
RESEARCH DIRECTIONS

Designed by Dr. YANG Lan





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WHAT'S NEXT FOR SPA ?

(MOVING TO A NEXT LEVEL IN TERMS OF DESIGNING)

Instruction:

- Based on your lecturer's guidance, click one or more assessment domains to practice SPA. Immediate and visualized results for domains 1, 2 and 4 will be provided once you finish assessing.
- On-the-fly feedback in domain 3 will be ready for your view once students finish providing self- and peer-feedback to the assigned team-based discussion activity designed by your lecturer.

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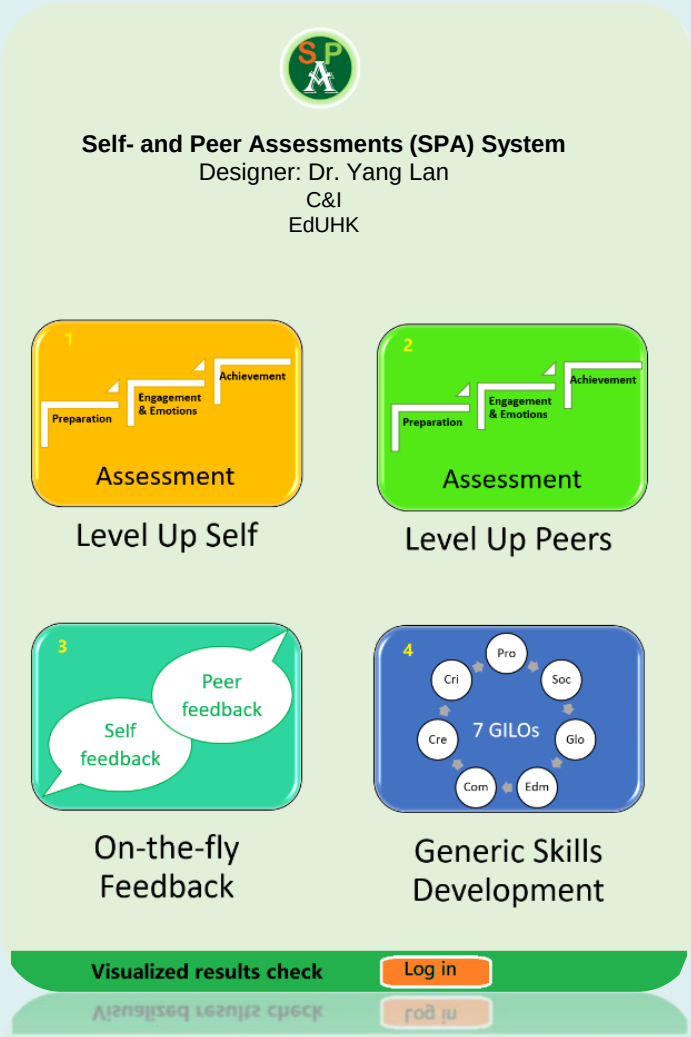
LESS is MORE!



yanglan@eduhk.hk

Group/Team 4. Submitted time 2021-01-14 11:21:49 performance total score: 40 out of 40 (100.00%)
correct

	A	B	C	D	Score
Q1	TEA	TEA	TEA	👍	Try: 1 Score: 4
Q2	TEA	👍	TEA	TEA	Try: 1 Score: 4
Q3	👍	TEA	TEA	TEA	Try: 1 Score: 4
Q4	TEA	TEA	👍	TEA	Try: 1 Score: 4
Q5	👍	TEA	TEA	TEA	Try: 1 Score: 4
Q6	TEA	TEA	TEA	👍	Try: 1 Score: 4
Q7	TEA	👍	TEA	TEA	Try: 1 Score: 4
Q8	TEA	TEA	TEA	👍	Try: 1 Score: 4
Q9	👍	TEA	TEA	TEA	Try: 1 Score: 4
Q10	TEA	👍	TEA	TEA	Try: 1 Score: 4

LESS is MORE!

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