

CASE STUDY #3

The Organisation

SUSS is a university with a rich heritage in inspiring lifelong education and transforming society through applied social sciences. It develops students and alumni to be work-ready and work-adaptive, aspiring to reach their full potential, through our 3H's education philosophy – 'Head' for professional competency with applied knowledge, 'Heart' for social awareness to meet the needs of the society, and 'Habit' for passion towards lifelong learning.

It offers more than 90 undergraduate and graduate programmes, available in full- and part-time study modes, which are flexible, modular and inter-disciplinary, catering to both fresh school leavers and adult learners. SUSS also offers a broad range of continuing education and training modular courses for the professional skills upgrading of Singapore's workforce.

Adapted from <https://www.suss.edu.sg/about-suss/who-we-are>



Learning Objective

- Understand the Black Swan concept.
- Apply the understanding of the Black Swan concept.

Topic
Black Swan

Duration
30 minutes

Target Audience
Dean, Vice-Dean,
Heads, Lead and
Specialists

Number of learners
17

The Existing Approach

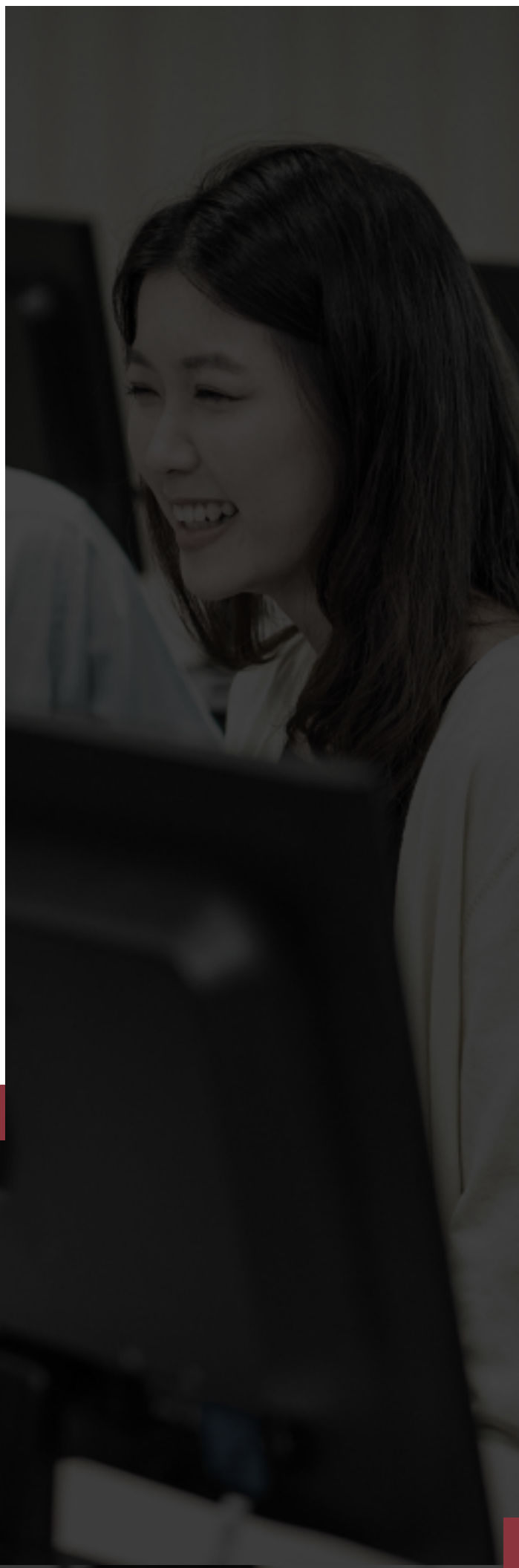
SUSS does not offer any lesson on 'Black Swan', and hence there is no existing approach.



The Digital Andragogy Approach

To appraise the feasibility of the digital andragogy approach in a university context, we decided to conduct a lesson grounded in this approach. We chose 'Black Swan' because we assumed not all are acquainted with the concept, and while some people may have heard of it, the general understanding is that it is an uncommon event; however, it goes beyond that. In this class of 17 learners, except for one, the rest were not familiar with the concept.

The learning objectives are that at the end of the lesson, learners can understand the Black Swan concept and apply their understanding of the concept. The planning phase was underpinned by the assumption that learners generally lack knowledge of the concept. For that reason, a question considered was whether related knowledge can be leveraged to establish connections that enhance their retention of the new knowledge. Instead of beginning with the three characteristics of 'Black Swan', the lesson started with learners accessing Edpuzzle to watch two videos: one on 9-11 attack and the other on the rise of the internet. The preference was to get learners to watch rather than read on 9-11 attack and the rise of the internet. It was because people tend to retain visual content better. Edpuzzle was chosen because it allows the embedding of questions (multiple-choice and short answer questions) within different segments of the video. The examples of 9-11 attack and the rise of the internet were chosen because learners can relate to both examples and henceforth, can be leveraged to facilitate learners' learning of the new concept.

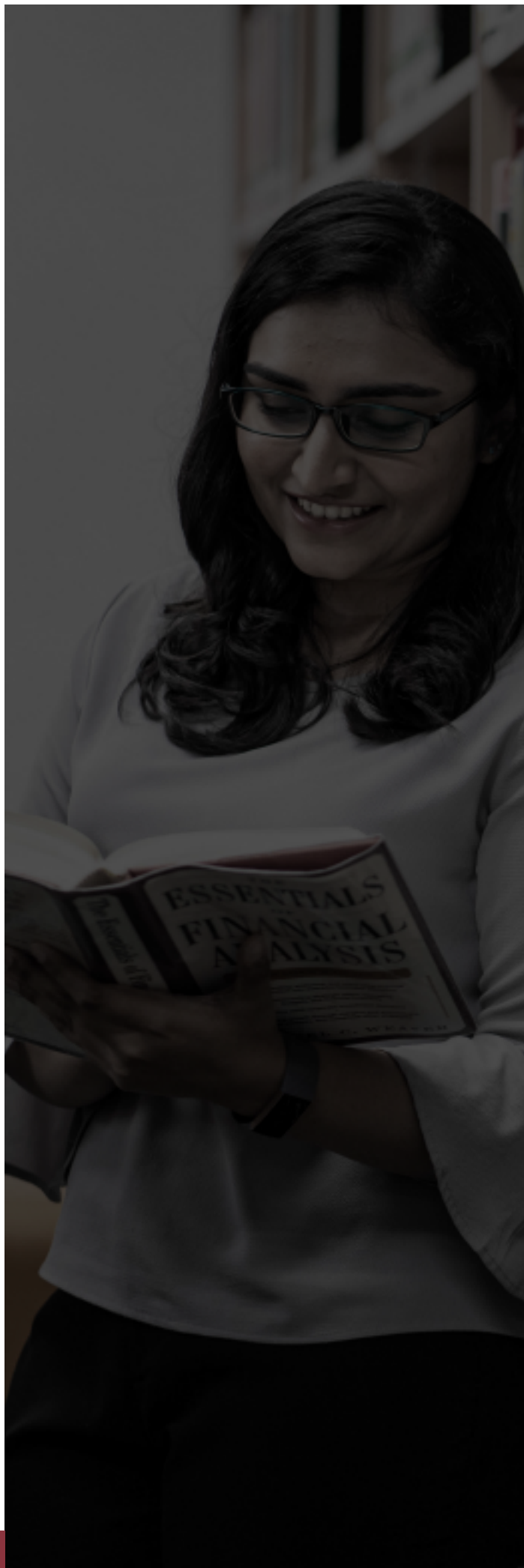




Learners were asked to watch the video on 9-11 attack first and answer the question “How would you describe the 9-11 attack?”. It was a multiple-choice question and learners were given two options: unexpected, extreme impact, can only be rationalised in hindsight; expected, limited impact, can be predicted in advance. Learners were then asked to explain their choice of responses before moving on to watch the video on the rise of the internet and answer the following questions. The first question was “How would you describe the rise of the internet?” and learners were given two options: expected, limited impact, can be predicted in advance; unexpected, extreme impact, can only be rationalised in hindsight. Learners were then asked to explain the choice they selected. The second question was “What are the similarities between the rise of the internet and 9-11 attack?” and it was a short-answer question.

Instead of stating these were Black Swan events because they shared the same characteristics, learners were shown a visual of all white swans and asked to respond to the following question “If every single swan you have seen in your life is white, can you make the statement that all swans are white?” in Mentimeter. They were then asked to explain their choice of answers before being shown a visual of a black swan and told that people in the Old World were convinced that ALL swans were white until they discovered Australia. Learners were thereafter shown a visual of a black swan amongst many white swans and asked to draw parallels between the visual and the 9-11 attack and the rise of the internet videos to encourage them to make connections. How the questions were sequenced was guided by the consideration to progressively build comprehension of the required knowledge.





Subsequently, the characteristics of the Black Swan were recapped and to reinforce learning, learners were asked to give examples of Black Swan events to demonstrate their understanding of the concept and ability to apply what they had learned. All of them were able to do so. Some gave the example of Covid-19 pandemic which coincidentally was the next question asked, and which served as a prelude to the teaching of the next concept of Black Swan, and that is, the same event can both be and not be a Black Swan to two observers with a difference in knowledge. Learners were asked to respond to the question "Is Covid-19 pandemic a Black Swan event?" in Mentimeter which was chosen because it could be used for free as we were only using it to make two slides (the free version allows up to only three slides). For this question, the options were 'yes', 'no' and 'depends' and learners were asked to elaborate on their choice before they were told that Bill Gates warned that the world is not prepared for an epidemic, pandemic, or outbreak in his TED Talk in 2015. To him, the Covid-19 pandemic may not be a Black Swan because he had some knowledge of it. This was followed by a recapitulation of the learning that Black Swans are relative to knowledge and to foster reflection, learners were asked to articulate their understanding of the concepts by providing examples of events that can both be and not be a Black Swan to two observers with a difference in knowledge. This also encouraged them to contextualise what they had learned.

Learning Objective	Instructional Strategies	Guiding Questions (During Planning)	Additional Questions (During Lesson)	Digital Tools
<ul style="list-style-type: none"> ▪ Understand the Black Swan concept. ▪ Apply the understanding of the Black Swan concept. 	<ul style="list-style-type: none"> ■ Activate Schema ■ Scaffold ■ Connect Learning ■ Foster Reflection ■ Encourage Active Participation ■ Reinforce Learning ■ Evaluate Progress ■ Others 	<ul style="list-style-type: none"> ▪ In cases where learners lack prior knowledge, can related knowledge be leveraged to establish connections that enhance their retention of new information? ▪ How should the questions be sequenced to progressively build comprehension of the required knowledge? ▪ Is the application of knowledge straightforward, or does it require learners to assess and identify appropriate knowledge to apply? ▪ If the latter, is it better to initiate the lesson with questions that prompt learners to articulate their understanding of the concepts, rather than mere factual recall? ▪ How can we get learners to contextualise what they have learned? Is it beneficial to get learners to share? ▪ How can we engage learners actively? 	<ul style="list-style-type: none"> ▪ Why do you say so? ▪ Can you elaborate? ▪ What do you have to say in response to your friend's comment? ▪ What parallels can you see between and among them? 	<ul style="list-style-type: none"> ▪ Edpuzzle ▪ Mentimeter

Lesson Plan

Time	Activity (Current Approach)	Time	Activity (Digital Andragogy Approach)
30 mins	There is no lesson on Black Swan.	15 mins	<ul style="list-style-type: none"> Get learners to watch the videos '9-11 attack' and 'The rise of the internet' on Edpuzzle. Ask learners the following questions: "How would you describe the 9-11 attack?"; "How would you describe the rise of the internet?"; "What are the similarities between the rise of the internet and 9-11?" Get learners to elaborate on their answers. Show visual of the white swans and ask learners the following question: "If every single swan you have seen in your life is white, can you make the statement that all swans are white?" in Mentimeter. Get learners to elaborate on their answers. Show a visual of a black swan amongst many white swans and asked learners to draw parallels between the visual and the 9-11 attack and the rise of the internet videos. Recap the characteristics of the Black Swan. Ask learners to give examples of Black Swan events.
		10 mins	<ul style="list-style-type: none"> Get learners to respond to the question "Is Covid-19 pandemic a Black Swan event?" in Mentimeter. Ask learners to elaborate on their answers. Get learners to give further examples of Black Swan events.
		5 mins	<ul style="list-style-type: none"> Ask the learners to evaluate the lesson.