18 & 19 JAN 2024

ʌ ADULT
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OUR LEARNING FUTURES

LEARN FAST | LEARN WIDE | LEARN WELL

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IAL INSTITUTE FOR ADULT LEARNING SINGAPORE | **SUSS** AN INSTITUTE OF SINGAPORE UNIVERSITY OF SOCIAL SCIENCES

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SKILLSfuture SG

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Developing an Effective Format for Introducing 3D Computer Animation to Adult Learners

Federico Fiore

Industry 4.0
The Fourth Industrial Revolution

- major drivers of change of today's world

- greater impact on the globe than the first industrial revolution

- 375 million individuals worldwide will have to start new occupations

- automation will threaten 51% of all jobs

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Industry 4.0 in Singapore

Today   2030

**Current
Workforce** →———→ **Changed
Workforce**
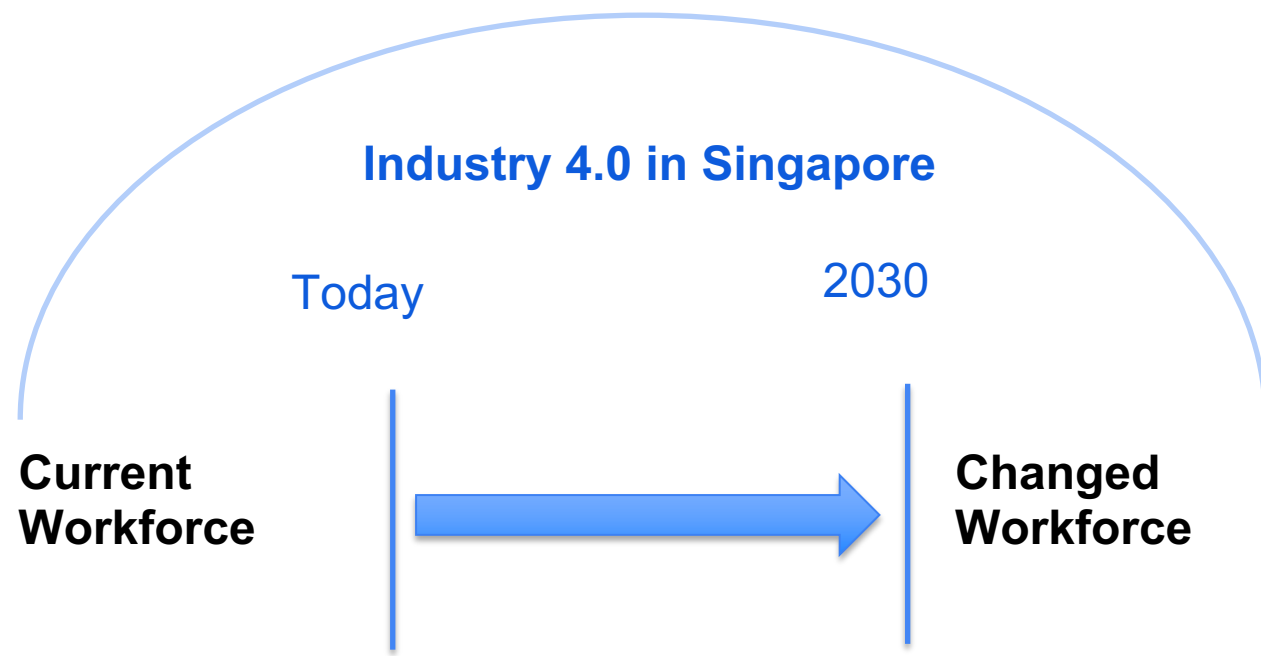
- New Skills:

- Critical

- Growing demand

- Transferable

3D modelling

process of employing specialist software to produce a three-dimensional representation of a real-world item (Chong, 2019)

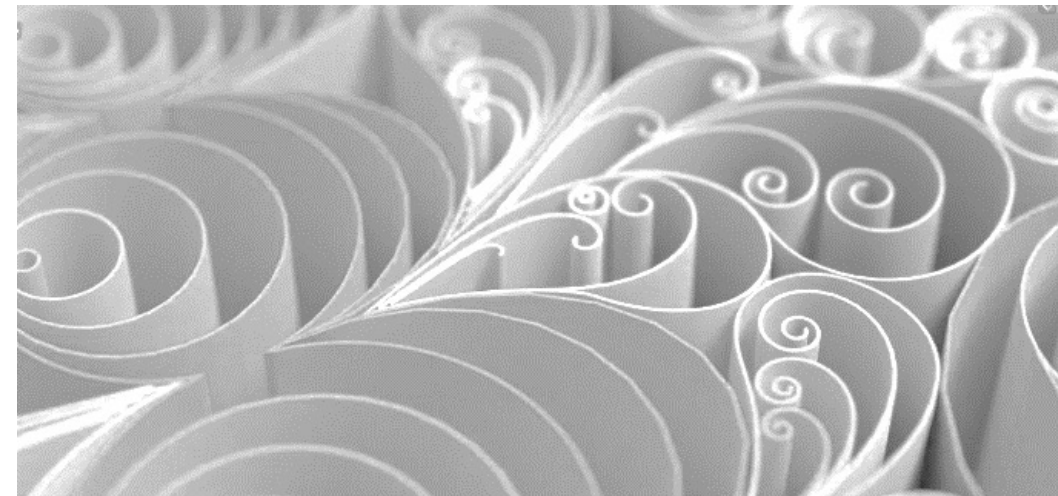**Effective methods for instructing adult learners in 3D modelling.**
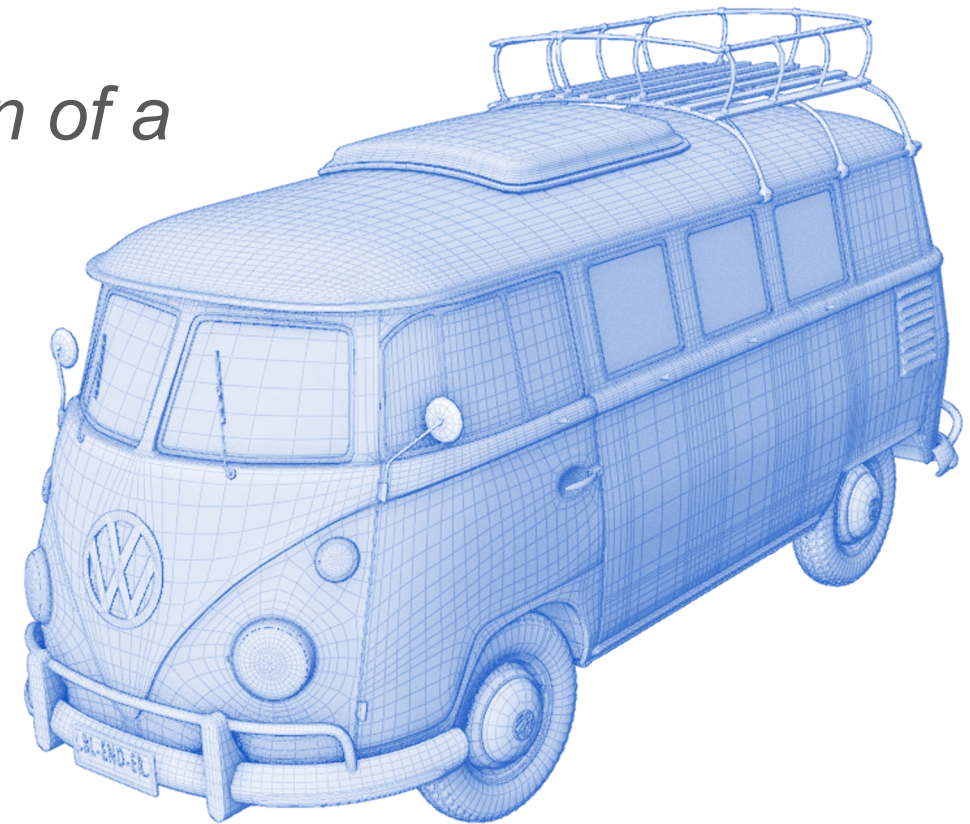
3D modelling: theoretical ideas

Polygonal modelling: collection of linked polygons to produce a surface that symbolizes the item being represented in 3D
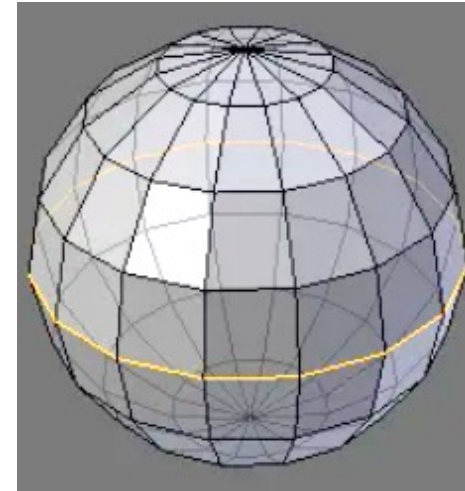
Procedural modelling: use of algorithms to produce intricate geometrical patterns and forms

Texture mapping, shading, and lighting: give detail and realism to a 3D model

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The learners:

- Adults

- Diverse background

- Different age groups
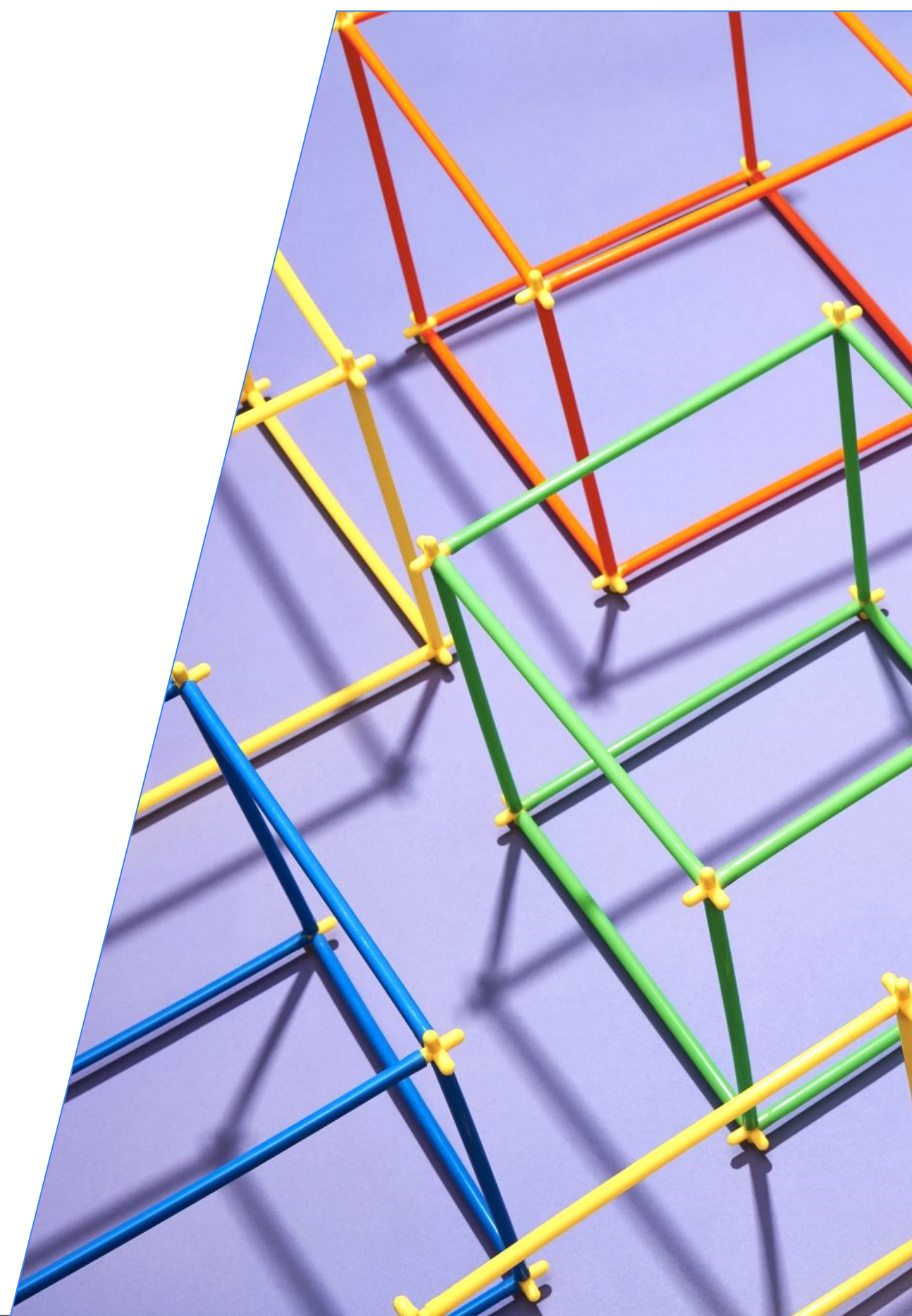
- Varying computer skills

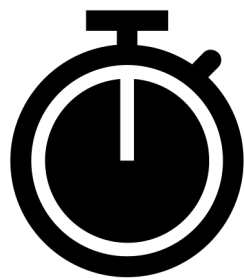ADULT
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The Format

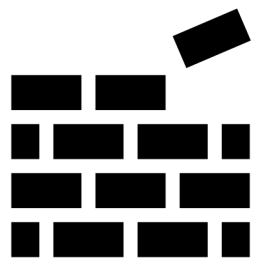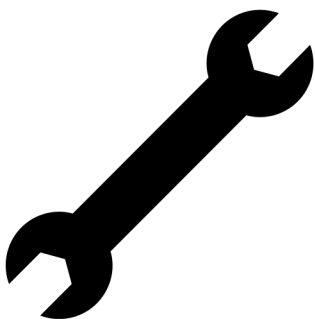- Physical setting

- Small size class
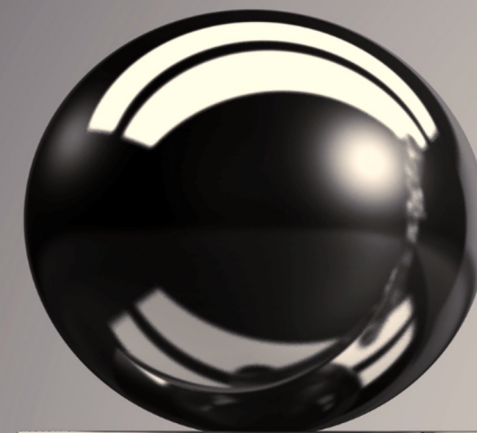
- Short duration

The Format: Andragogy

- Microlearning
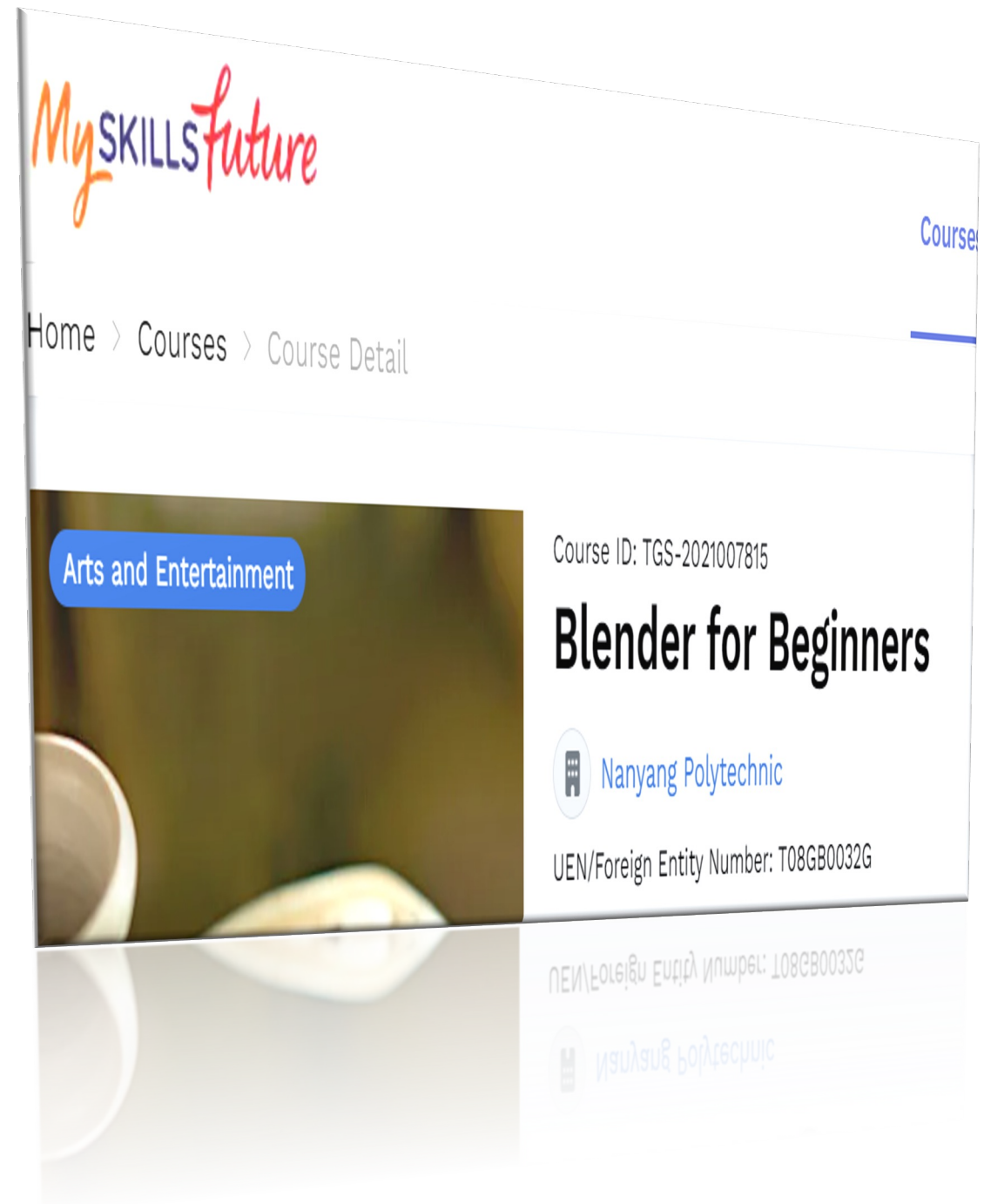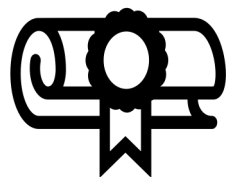
- Project-based

- Storytelling

Skillsfuture

A national drive to help Singapore's residents reach their full potential, regardless of their socioeconomic status
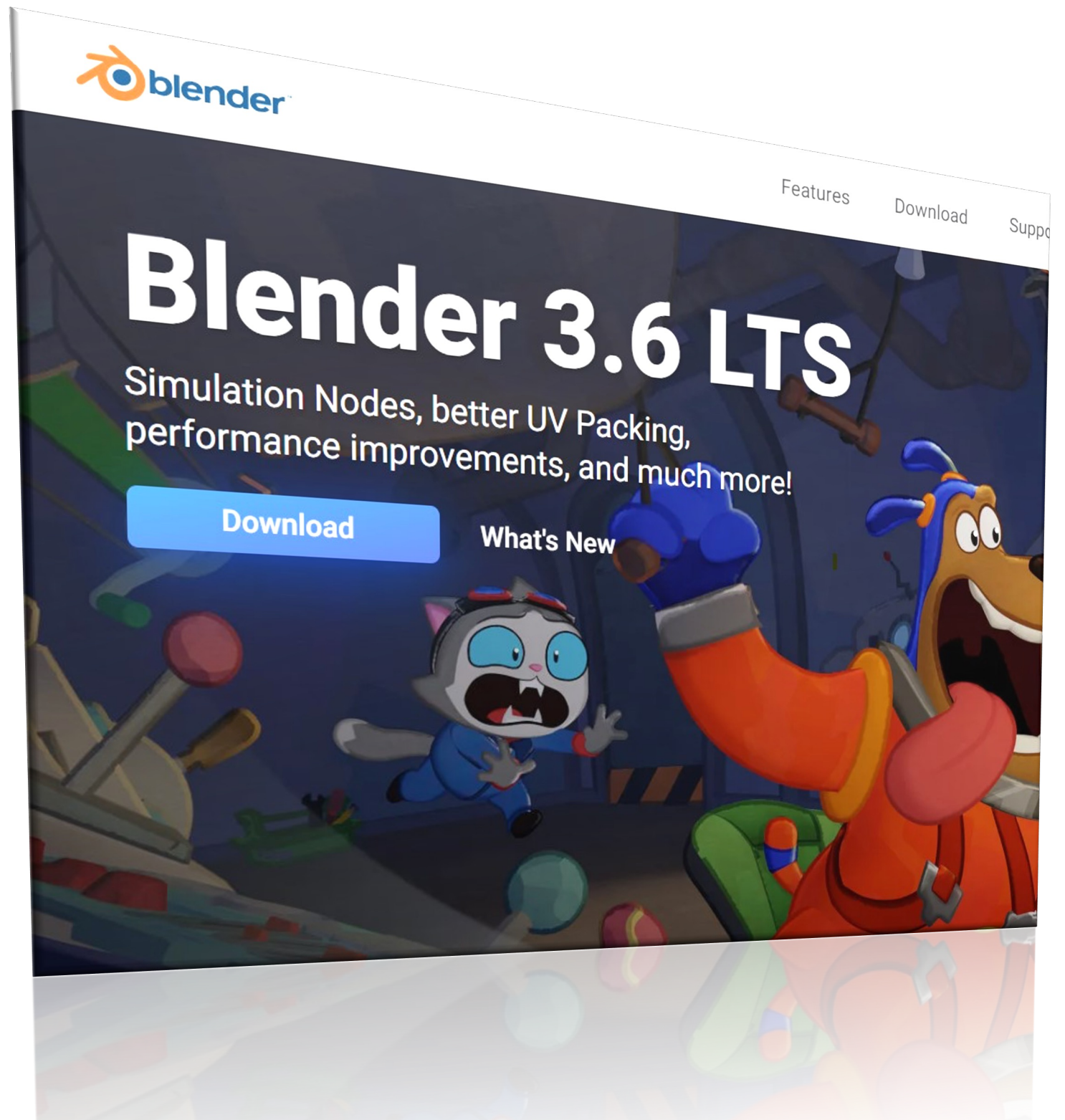
- comprehensive

- high-quality system

- adapt to society's ever-changing needs

Certificate of Completion

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Blender

- Popular

- Accessibility (open-source)

- Comprehensive

Blender

Three 7 hours long courses

- Blender for Beginners

- Digital Sculpting with Blender

- Grease Pencil in Blender

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Blender for Beginners class, first course schedule breakdown

Lesson notes

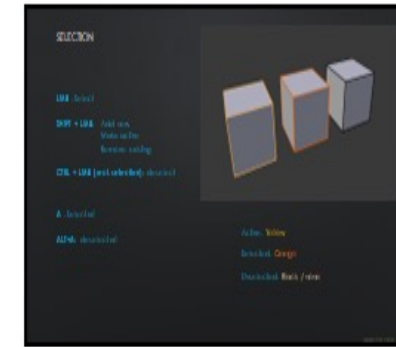## Day 1

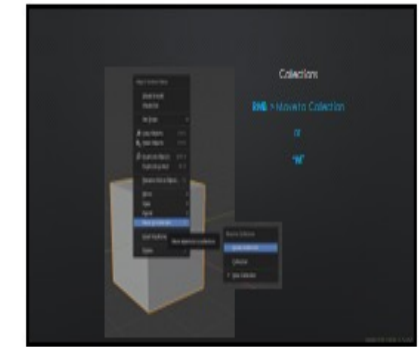| 19:00-20:45hrs	• Introduction • User Interface • Navigation • Object Level interaction • Modelling
20:45-21:00hrs	Break Time
21:00-22:30hrs	• UVs • Texturing • Shading

Day 2

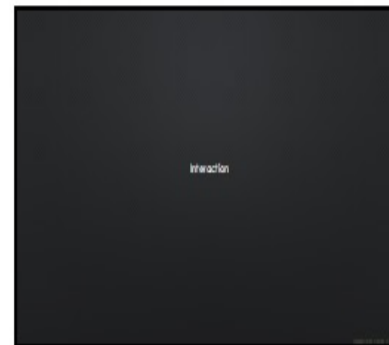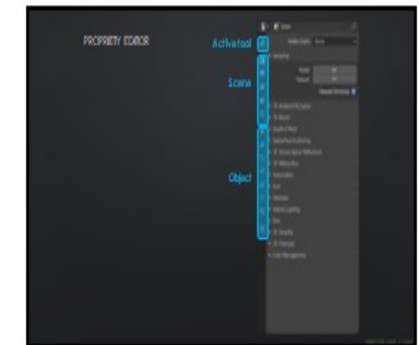| 19:00-20:45hrs	• Lighting • Eevee Rendering • Cycles Rendering (part1)
20:45-21:00hrs	Break Time
21:00-22:30hrs	• Cycles Rendering (part2) • Compositing • Grease Pencil

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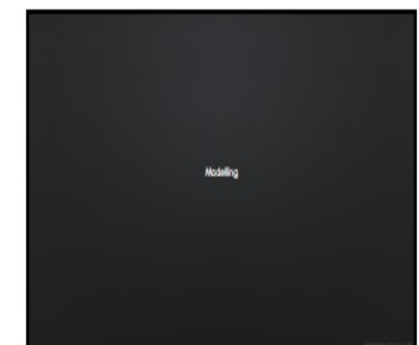
Evaluation Techniques

- practice-oriented

- small-sized exercises
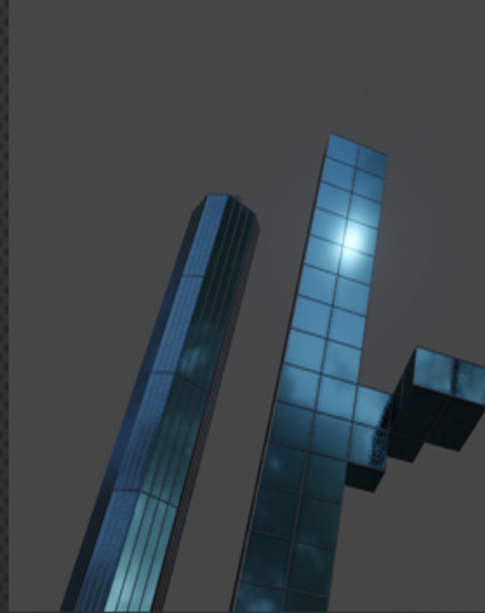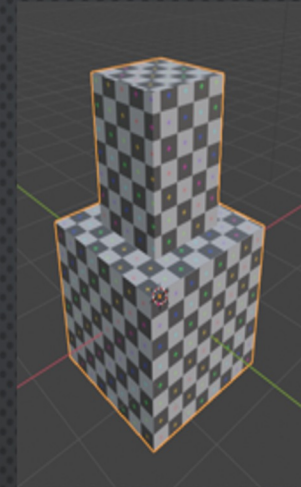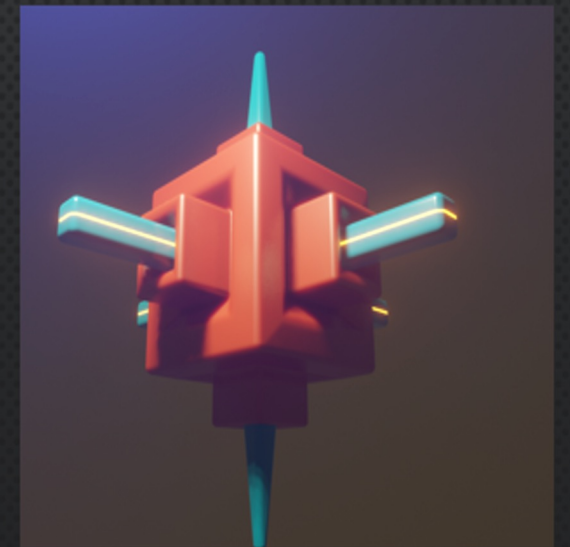
Results and Discussion

The feedback form

5 strongly agree (excellent), to 1 as in strongly disagree (very poor).

sample of questions:
- The general environment (e.g. training room, equipment, seating) was conducive to learning.
- The concepts and skills taught are useful for my work.
- The duration of the course is appropriate.
- The course has met its stated objectives.
- My overall rating of the course.

15

Courses' overall average response:
4.5

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Results and Discussion

The feedback form

Additional yes/no and open-ended questions:
- Will you recommend your colleagues/friends to attend this course?
- 2. Other comments about this course?
- 3. What other course/training areas would you be interested in?

90% of the learners reported they would recommend the course to colleagues and friends

The 2-days course was definitely a big help in starting my journey to learning more of the Blender programs. It provided sufficient info to transit my current knowledge of other 3D software into this one. If there was an advance course, I will consider taking it.

Easy, clear and concise. Materials supplemented were efficient and hands on, making it easy to grasp.

Glad that NYP conduct these courses and have learned good pointers from the trainer. Looking forward to the next blender course.

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Results and Discussion

Suggestions for improvements and adjustments

- courses' duration

- offering extra resources

Conclusion and Future Directions

- Courses positive ratings

- Format

- Use of Blender

In-person setting	• engaging all senses • individualized support of preferred learning style
Small size class	• increased pupil-teacher engagement time • personalized feedback
Short duration	• less daunting • enough time for acquisition of knowledge and skills
Microlearning	• bite-sized information • quicker to consume by adult learners
Project-based	• application of skills in real world scenario • tangible milestones
Storytelling	• engaging and memorable experience

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Conclusion and Future Directions

Weaknesses

- Limited sample size

- Lack of in-depth interviews or observations

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Conclusion and Future Directions

Future studies

- Different situations / populations

- Different andragogies and teaching techniques

- Additional courses