

Empowering H5P Interactive Content Features (Branching Scenario and 360 Virtual Tour) to Create Virtual Simulation in Medical Education

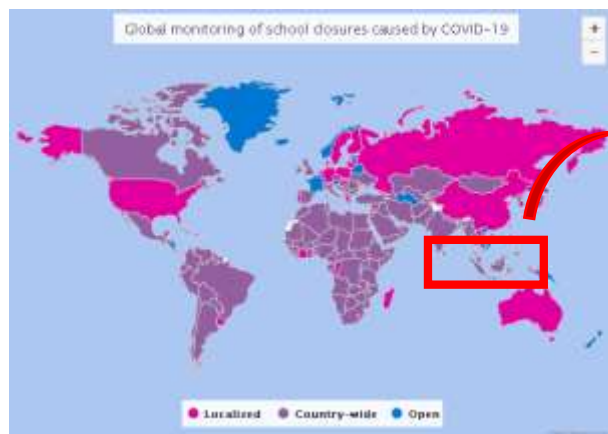
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Tujuan Pembelajaran:

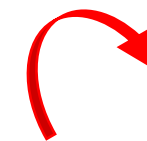
- Memahami pemanfaatan Fitur H5P Branching Scenario dan Virtual Tour 360
- Dapat membuat konten interaktif H5P Branching Scenario dan Virtual Tour 360

Pendidikan Kedokteran Saat ini

Akibat Pandemi COVID-19 hampir sebagian besar institusi pendidikan tutup sementara demi mencegah penyebaran COVID-19



<https://en.unesco.org/covid19/educationresponse>



Inovasi Terkini di Pendidikan Tinggi
khususnya di kedokteran

Menteri Pendidikan dan Kebudayaan RI menerbitkan edaran bertanggal 24 Maret 2020 yang mengatur pelaksanaan pendidikan pada masa darurat penyebaran coronavirus melalui kebijakan “Belajar di Rumah”.

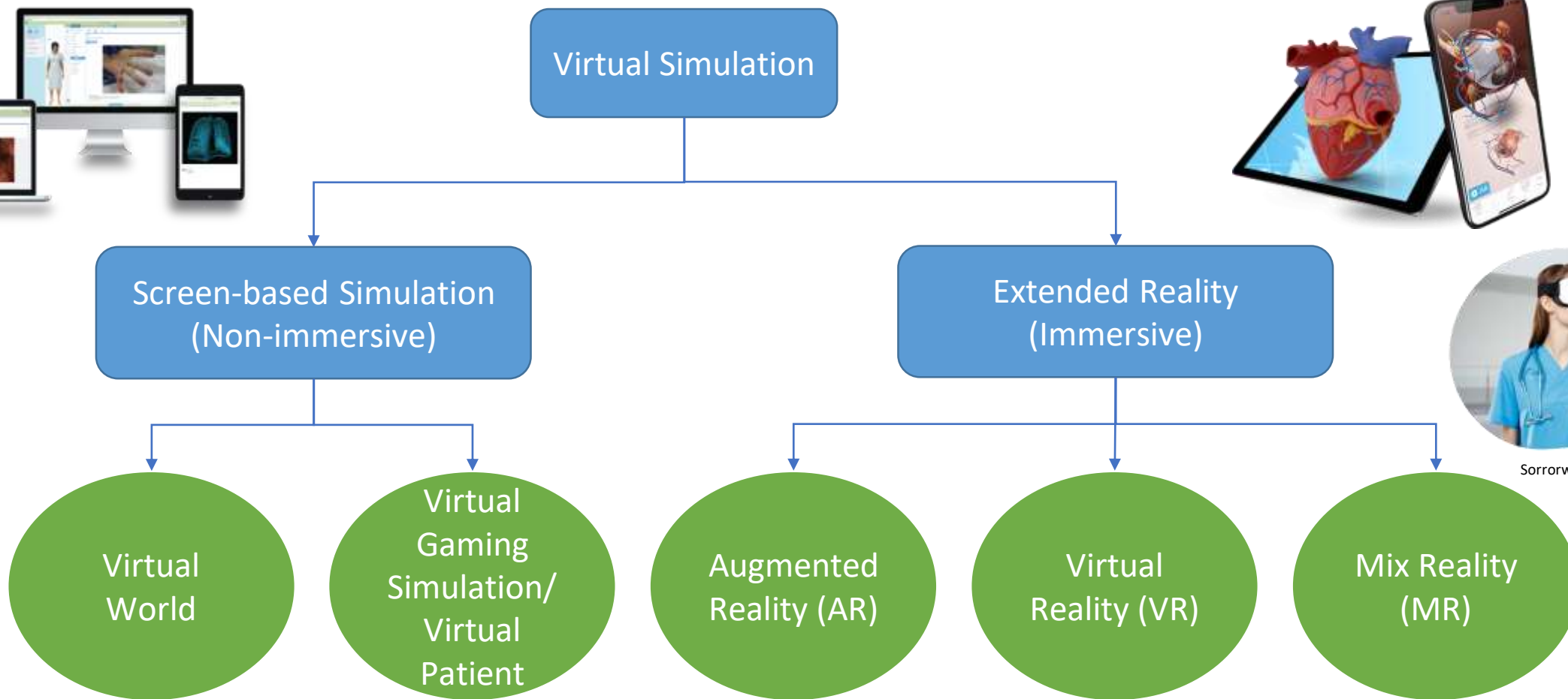
Kendala Pembelajaran Daring?

Virtual Simulation?

“**Virtual simulation (VS)** also referred to as computer-simulation is a broad term applicable to a variety of partially and fully immersive digital technologies that display case studies on a computer screen or smart phone.” (Cant, R., Ryan, C., 2022)



Sorrowwoot Chaiyawong / EyeEm



Modifikasi dari Verkuyl et al. (2022)

Manfaat Penggunaan Virtual Simulasi dalam Pendidikan Kedokteran

Expose medical students
in ethically safe
environments without
risk of jeopardizing real
patients/animals

Accessibility to
educational content
from anywhere at any
time























































Developing professional
knowledge, critical thinking skills,
comprehensive decision-making
skills, and clinical judgment.

Filled gaps in their learning

Improve learning outcome

H5P Features

 Accordion Create vertically stacked, expandable items.	 Advert Calendar (beta) Create an advert calendar.	 Agamotto Create a sequence of images that gradually change.	 AR Scavenger Augmented reality fun!	 Arithmetic Quiz Create time-based arithmetic quizzes.	 Find the words Grid word search game.	 Flashcards Create stylish and modern flashcards.	 Guess the Answer Create an image with a question and answer.	 Iframe Embedder Embed from a url or a set of files.	 Image Choice Create a task where the alternatives are images.	 Sort the Paragraphs Create a set of paragraphs to be sorted.	 Speak the Words Answer a question using your voice.	 Speak the Words Set A series of questions answered by speech.	 Structure Strip Interactive structure strip.	 Summary Create tasks with a list of statements.
 Audio Recorder Create an audio recording.	 Chart Quickly generate bar and pie charts.	 Collage Create a collage of multiple images.	 Column Column layout for H5P Content.	 Cornell Notes Take notes using the Cornell system.	 Image Hotspots Create an image with multiple info hotspots.	 Image Juxtaposition Create interactive images.	 Image pairing Drag and drop image matching game.	 Image Sequencing Place images in the correct order.	 Image Slider Easily create an image slider.	 Timeline Create a timeline of events with multimedia.	 True/False Question Create True/False questions.	 Virtual Tour (360) Create interactive 360 environments.	 Complex Fill the blanks Fill in the missing words.	 Interactive Video Create videos enriched with interactions.
 Crossword Create a crossword puzzle.	 Dialog Cards Create text-based learning cards.	 Dictonary Create a dictonary with instant feedback.	 Documentation Tool Create a form wizard with text export.	 Drag and Drop Create drag and drop tasks with images.	 Impressive Present... Create a slideshow with parallax effects.	 Interactive Book Create courses, books or tests.	 KawAr Code Create QR codes for different purposes.	 Mark the Words Create a task where users highlight words.	 Memory Game Create the classic image pairing game.	 Course Presentation Create a presentation with interactive slides.	 Branching Scenario Create dilemmas and self paced learning.			
 Drag the Words Create text-based drag and drop tasks.	 Essay Create essay with instant feedback.	 Fill in the Blanks Create a task with missing words in a text.	 Find Multiple Hotspots Create many hotspots for users to find.	 Find the Hotspot Create image hotspot for users to find.	 Multiple Choice Create flexible multiple choice questions.	 Personality Quiz Create personality quizzes.	 Questionnaire Create a questionnaire to receive feedback.	 Quiz (Question Set) Create a sequence of various question types.	 Single Choice Set Create questions with one correct answer.					

H5P Features



Course Presentation

Create a presentation with interactive slides



Branching Scenario

Create dilemmas and self-paced learning



Virtual Tour (360)

Create interactive 360 environments

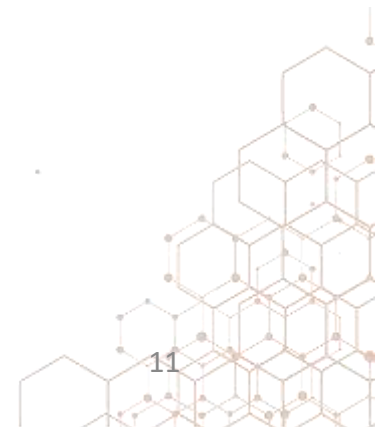


Interactive Video

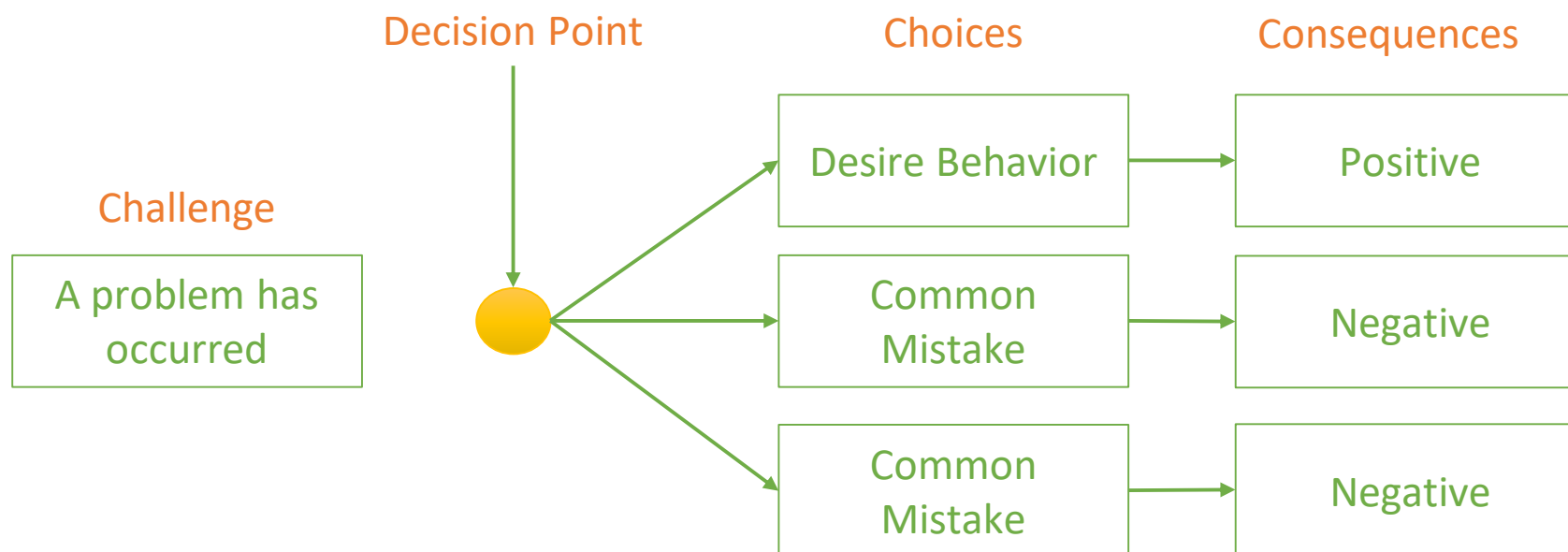
Create videos enriched with interactions



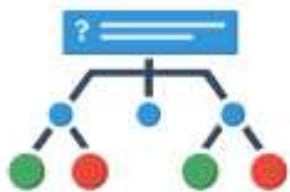
H5P Branching Scenario



Branching Scenario



Fitur Umum H5P Branching Scenario



Branching Scenario

Create dilemmas and
self paced learning

Fitur Umum:


1. Skor dapat diatur pada tiap akhir skenario atau berdasarkan poin yang dikumpulkan untuk masing-masing jalur pembelajaran yang dilalui.
2. Masing-masing percabangan dan akhir dari skenario dapat diatur untuk memiliki *feedback* dan skor berbeda.
3. Pilihan dapat diatur untuk mengarah ke simpul lain dalam struktur pohon interaktivitas.

Jenis H5P yang dapat ditambahkan:

1. Course Presentation
2. Text
3. Image

1. Image Hotspots
2. Interactive Video

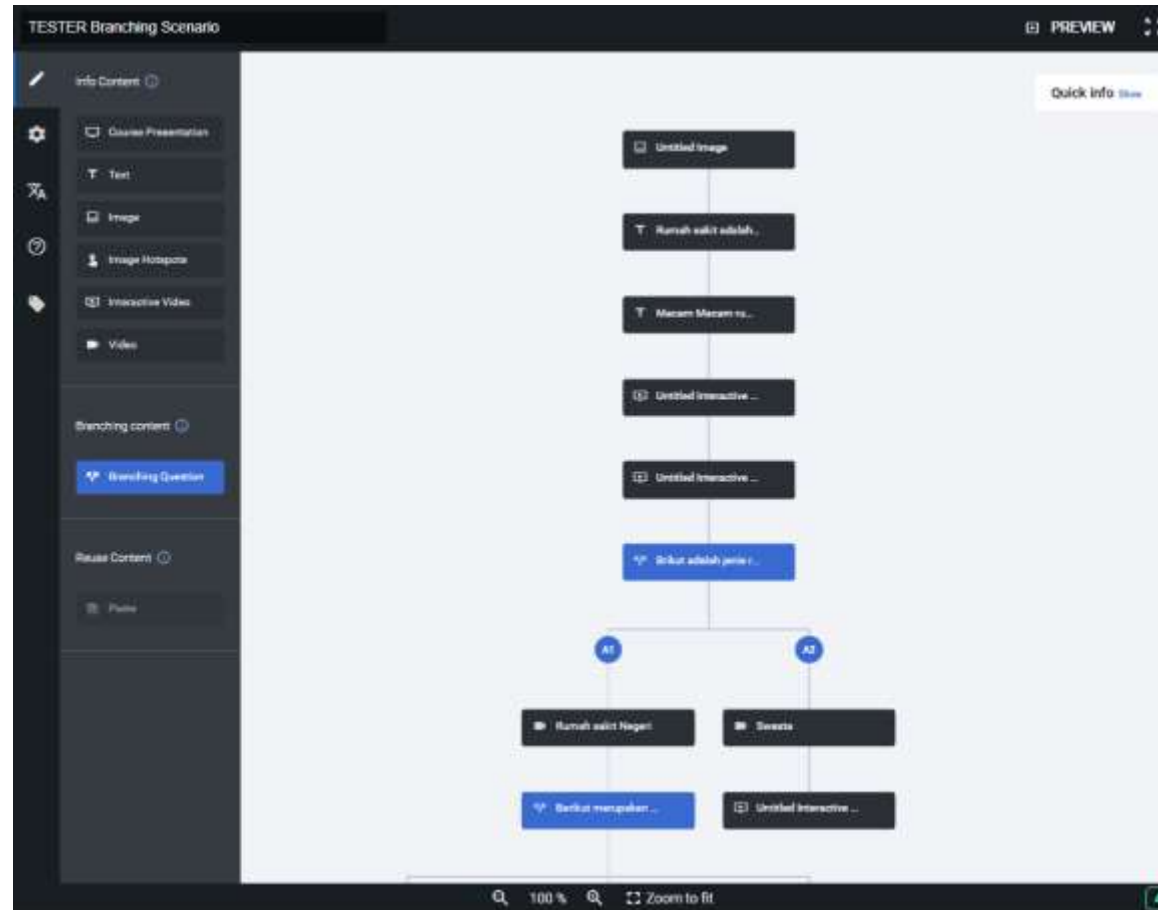
Contoh Branching Scenario di Kedokteran

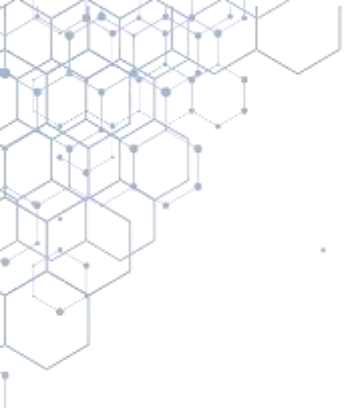


Therapeutic Communication – Schizophrenia

[Start the course →](#)

Fitur-fitur H5P Branching Scenario





H5P Virtual Tour 360°



Mari Kita Coba Bandingkan



<https://bit.ly/VirtualTourIMERI>



<https://bit.ly/DemoVirtualTour3DVista>

Perbandingan 360 Software Editor

Perbandingan	H5P di Moodle	H5P di Web www.h5p.org	3D Vista
Biaya	Gratis	Gratis	Free Trial Full Access (Berbayar)
Format Lingkungan Virtual	Hanya Gambar (360)	Hanya Gambar (360)	Gambar dan Video (360)
Perpindahan antar ruangan	Kurang smooth (ada loading page)	Kurang smooth (ada loading page)	Cukup smooth
Navigasi (Rotasi 360°)	Ya	Ya	Ya
Interaktivitas	1. Pertanyaan 2. Hotspot (Teks, Gambar, dan Video)	1. Pertanyaan 2. Hotspot (Teks, Gambar, dan Video)	1. Pertanyaan 2. Hotspot (Teks, Gambar, dan Video)
Scoring System	Belum tersedia	Belum tersedia	Ada
Integrasi dengan platform lain	Platform berbasis HTML5 (Moodle, drupal, dan wordpress)	Platform berbasis HTML5 (Moodle, drupal, dan wordpress)	Platform berbasis HTML5 (Moodle, drupal, dan wordpress)
Spesifikasi Perangkat	Standar	Standar	Spesifikasi Tinggi
Storage Data	Bergantung server yang digunakan untuk Moodle	Server Website H5P (Subscription)	Server Website 3D Vista (Subscription)

Fitur Umum H5P Virtual Tour 360°



Virtual Tour (360)

Create interactive 360
environments

General features:

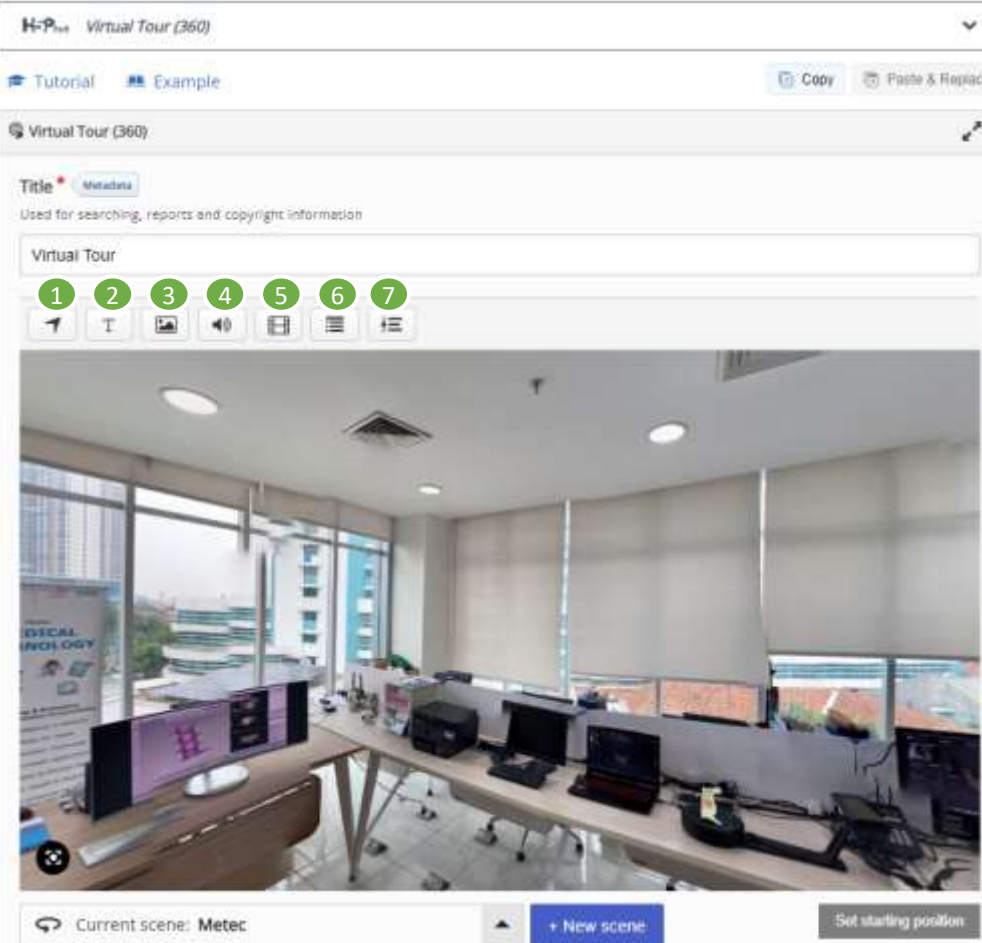
1. Virtual Tour (360) memungkinkan pengguna untuk menambahkan pertanyaan, teks, dan interaksi ke beberapa lingkungan 360 hanya dengan menggunakan browser.
2. Scoring belum dapat diimplementasikan di Virtual Tour (360).
3. Dapat diintegrasikan pada *publishing systems* seperti Canvas, Brightspace, Blackboard, Moodle and WordPress.

Jenis H5P yang dapat ditambahkan:

1. Teks
2. Gambar
3. Suara (untuk seluruh virtual tour, per scene, dan sebagai tombol scene).

1. Video
2. Single Choice Set
3. Interactive Summary

Fitur-fitur H5P Virtual Tour 360°



H5P Virtual Tour (360)

Tutorial Example Copy Paste & Replace








Virtual Tour (360)

Title Metec
Used for searching, reports and copyright information

Virtual Tour

1 2 3 4 5 6 7

Current scene: Metec + New scene Set starting position

	1 Location hotspots allow users to portal to other scenes within the workspace.
	2 Text hotspots display important information and details as text strings.
	3 Image hotspots display images from your local computer and can be useful for exposing key visual details.
	4 Sound allows you to embed audio recordings.
	5 Video hotspots enable video playback through either uploaded media files or external links.
	6 Summary questionnaires assess user comprehension.
	7 Single-choice questionnaires are a multiple-choice selection that responds to an overarching question.

Kebutuhan Perangkat

Hardware

- PC atau Laptop
- Kamera 360 atau Smartphone
- Tripod atau Gimbal Stabilizer



Insta360 ONE R Twin Edition



Samsung Gear 360



Gimbal Stabilizer

Software

- H5P (*360 Software Editor*)
- Photoshop (*Image Editor*)
- Google Street View (*360 Software Camera*)



Virtual Tour (360)



Google Street View

Contoh- contoh Virtual Tour 360

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pubs.acs.org/jchemeduc

Technology Report

360° Virtual Laboratory Tour with Embedded Skills Videos

Stephan M. Levonis,* Amanda L. Tauber, and Stephanie S. Schweiker

 Cite This: *J. Chem. Educ.* 2021, 98, 651–654

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 Metrics & More

 Article Recommendations

 Supporting Information



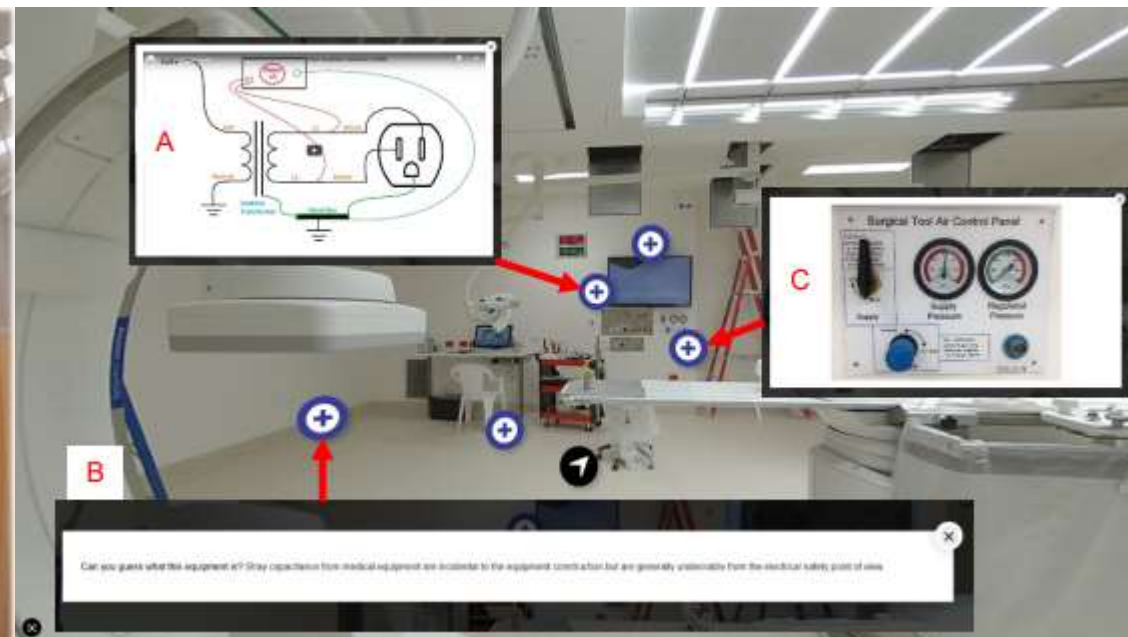
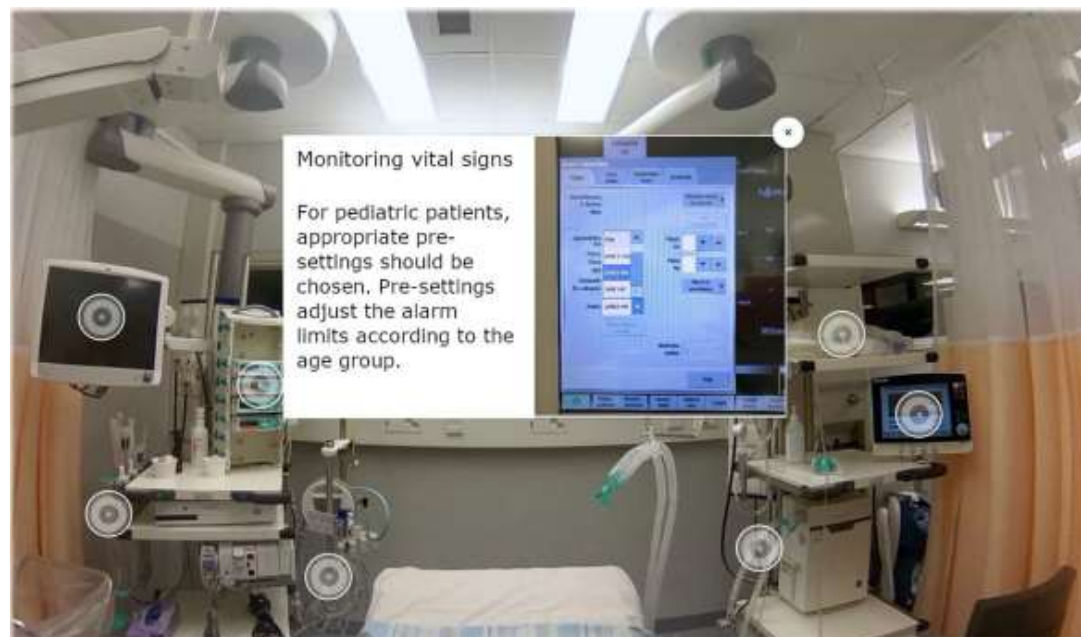
ABSTRACT: This paper describes the design and effectiveness of a 360° (identified as 360) virtual laboratory tour which was implemented in a second-year undergraduate chemistry subject to familiarize the students with the research laboratory environment, equipment, and skills needed to undertake the subject and first laboratory session. We include step by step guides on how to produce a virtual laboratory tour using freeware and on how to produce and incorporate interactive videos into the tour. The virtual laboratory tour that we developed was given to the students prior to their first laboratory class and was well-received by students with 100% of students surveyed reporting that it was an effective learning aid. Virtual laboratory tours offer a promising option for creating a personalized online laboratory experience.

KEYWORDS: *First-Year Undergraduate/General, Second-Year Undergraduate, Demonstrations, Laboratory Instruction, Safety/Hazards, Computer-Based Learning, Distance Learning/Self Instruction, Hands-On Learning/Manipulatives, Internet/Web-Based Learning, Multimedia-Based Learning*



Figure 1. (A) HPLC room. (B) Chemistry Laboratory, thin layer chromatography. (C) Chemistry Laboratory, column chromatography and rotary evaporator. (D) Cell culture room.

Contoh-contoh Virtual Tour 360



(Ravishankar, J., Tan, D., Armour, W., 2019)

Development of Virtual Simulation

- Pre-produksi
 - Purpose/Outcomes
 - Identify Requirements
 - Designing activities
 - Choose the activities that best fits the learning objectives
- Produksi
 - Proses Shooting
 - Upload Video to Youtube
 - Create simulation using H5P
- Pasca Produksi
 - Evaluation

Fitur-fitur yang diharapkan

- Participants suggested several features in virtual simulation including
 - Explanation,
 - Instruction,
 - User interface (animation and graphics),
 - Accessibility,
 - Feedback,
 - Interesting scenario, or storyline (based on the real situation, simulation, case-based),
 - User-friendly (navigation),
 - Gamification elements (checkpoint, goal, achievement, reward, leader board, hint, review, and evaluation),
 - Interactivity (forum discussion and direct message).

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Ada Pertanyaan?

Praktek #1 - Virtual Tour 360

- Install aplikasi Google Street View pada smartphone \gyro
- Ambil gambar menggunakan 360 Camera atau Smartphone
- Buat Virtual Tour 360 di Platform Moodle
- Upload 360 Images ke H5P Virtual Tour 360
- Tambahkan interaktivitas (Navigasi)
- Tambahkan hotspot (Text, Image, Video, atau Question)

Praktek #2 – Branching Scenario

- Pelajari skenario yang telah tersedia di Kelas OCI
- Buat Simulasi Virtual berdasarkan skenario tersebut
- Seluruh bahan yang dibutuhkan sudah tersedia di platform OCI