



ASEAN Valuers Association
**25th AVA CONGRESS
2023**

10 CPD
HOURS APPLIED
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Riverside Majestic Hotel, Kuching,
Sarawak, MALAYSIA

Scaling new heights in **Real Estate and
Business Valuation** 18 - 20 SEPT 2023



The Advance of Technology and AI in Real Estate Education

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Advance of Technology & AI and Valuation

- PropTech is characterized by the massive implementation of emerging technology such as
 - home matching tools
 - drones
 - virtual reality
 - building information modelling (BIM)
 - data analytics tools
 - artificial intelligence (AI)
 - Internet of Things (IoT) and blockchain
 - smart contracts
 - crowdfunding in the real estate sector
 - fintechs related to real estate
 - smart cities, regions, smart homes and shared economy
 - (Siniak, N., Kauko, T., Shavrov, S. and Marina, N. 2020)

Advance of Technology & AI and Valuation

- EdTech refers to products and services, which range from small digital interventions, to teach defined content - through to large-scale EdTech services, programmes, and systems.
- Some wide-ranging examples include:
 - educational radio programmes to support out-of-school learners to access learning opportunities)
 - a digital game to learn to read
 - an AI WhatsApp chatbot to support teachers with resources and keep them motivated
 - an authoring tool that empowers teachers to build 3D experiences to use in their teaching practice
 - a Geo-information system used to map schools to assist in teacher allocation
 - a national education management system to improve resource allocation and real-time data processing for decision-making
 - a platform to provide assistance or advice to teachers prior to or after they have purchased a product
 - (Vanbecelaere, S., Adam, T., Sieber, C., Clark-Wilson, A., Boody Adorno, K., & Haßler, B. 2023)

Advance of Technology & AI and Valuation

1. Automated Valuation Models (AVMs):

AVMs use AI algorithms and machine learning to assess property values by analyzing various data sources, including property characteristics, comparable sales, market trends, and historical sales data. These models provide quick and objective property valuations.

2. Big Data Analysis:

Technology enables the collection and analysis of vast amounts of real estate data. AI can process this data to identify patterns and trends that influence property values. This includes factors like demographics, economic indicators, and local developments.

3. Machine Learning Algorithms:

Machine learning models can continuously refine property valuations by learning from new data. This allows for more accurate valuations over time as the model adapts to changing market conditions.

Advance of Technology & AI and Valuation

4. Predictive Analytics:

AI-driven predictive analytics can forecast property value changes, helping real estate professionals and investors make informed decisions about buying, selling, or holding properties.

5. Property Inspection Tools:

Drones and sensors equipped with AI capabilities can assess the condition of a property. These technologies can detect structural issues, identify maintenance needs, and factor these into property valuations.

6. Blockchain for Property Records:

Blockchain technology ensures the security and transparency of property records, reducing the risk of fraud and errors in property valuation due to inaccurate or tampered records.

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7. Market Data Aggregation:

AI can aggregate and analyze a wide range of market data, such as listing prices, sale prices, and time on market, to provide a more comprehensive view of property values within a specific area.

8. Real-time Market Data:

AI-driven platforms provide real-time updates on market conditions, enabling property appraisers and investors to make timely decisions based on the most current data.

9. Enhanced Visualization:

Virtual reality and augmented reality technologies can provide property appraisers with enhanced visualization tools, allowing them to better assess property features and conditions remotely.

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10. Environmental Impact Assessment:

AI can factor in environmental sustainability and energy efficiency ratings when assessing property values, reflecting the growing importance of green building practices in property valuation.

11. Risk Assessment:

AI models can assess the risk associated with a property, accounting for factors like crime rates, environmental hazards, and economic stability in the area.

Advance of Technology & AI and Education

1. Personalized Learning:

AI can analyze a student's learning patterns and abilities to provide customized learning experiences. This helps students learn at their own pace and style, addressing their individual needs and strengths.

2. Assessment and Feedback:

AI-powered tools can quickly grade assignments and assessments, providing immediate feedback to students. This not only saves time for teachers but also allows students to identify areas where they need improvement.

3. Content Delivery:

Teachers can use technology to deliver content in various formats, such as videos, interactive simulations, and gamified lessons. This makes learning more engaging and accessible, catering to different learning styles.

Advance of Technology & AI and Education

4. Virtual Reality (VR) and Augmented Reality (AR):

These technologies can create immersive learning experiences, enabling students to explore historical sites, travel to distant planets, or dissect virtual organisms. This enhances experiential learning and makes complex subjects more understandable.

5. AI Chatbots and Virtual Assistants:

Chatbots and virtual assistants can provide students with instant answers to their questions, whether related to course material or administrative matters. This reduces the burden on teachers and administrative staff.

6. Data Analytics:

Educational institutions can use AI to analyze vast amounts of data to identify trends, predict student performance, and improve curriculum design. This data-driven approach helps in making informed decisions to enhance teaching and learning outcomes.

Advance of Technology & AI and Education

7. Language Learning:

AI-powered language learning apps can provide real-time pronunciation feedback and personalized lessons to improve language skills. They can also help students practice conversation with AI chatbots.

8. Accessibility:

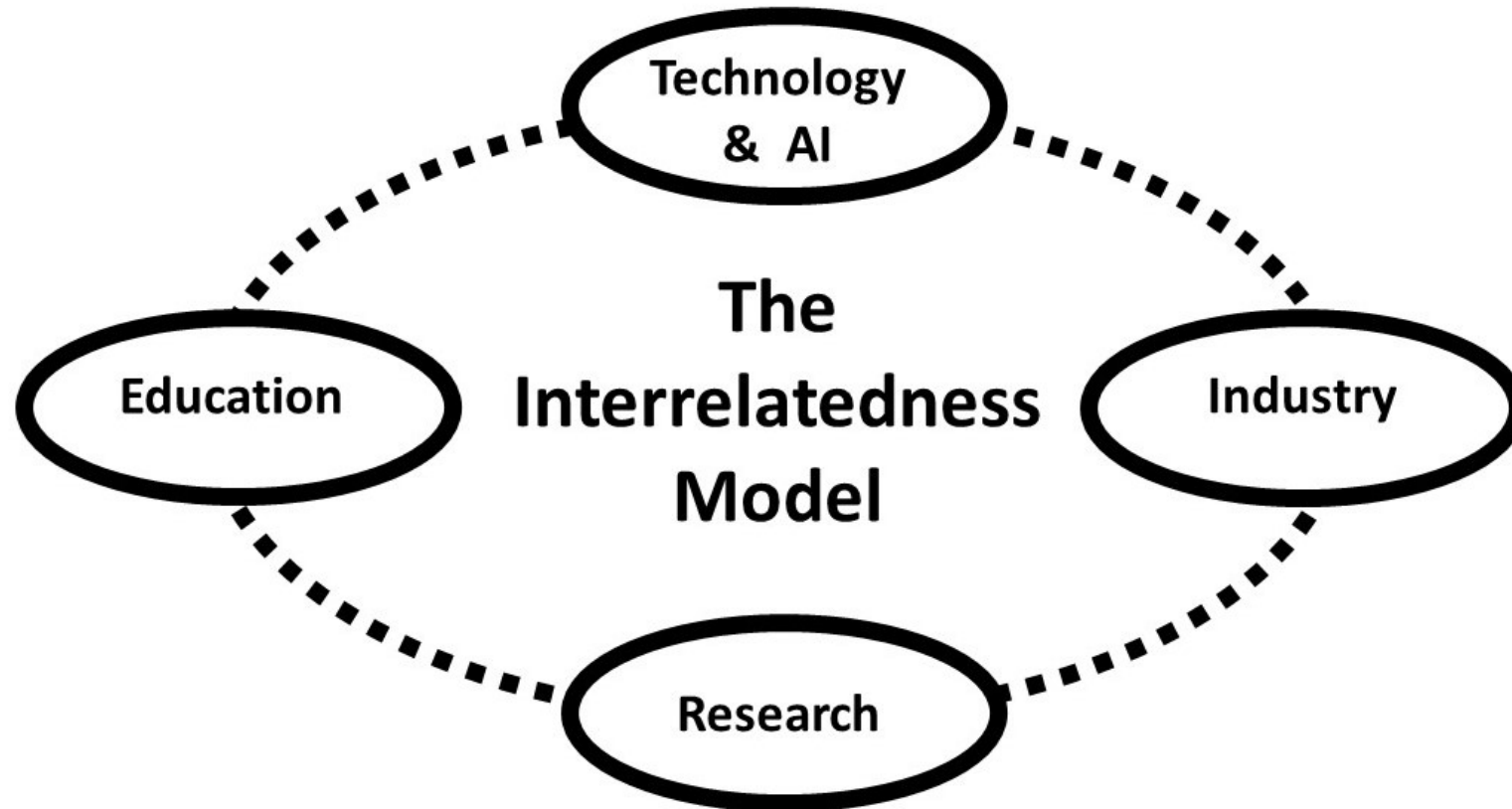
Technology and AI can make education more accessible for students with disabilities. Text-to-speech and speech-to-text tools, as well as screen readers, can help students with visual or hearing impairments participate in class.

9. Teacher Support:

AI can assist teachers by automating administrative tasks, helping with lesson planning, and offering insights into student performance. This allows teachers to focus more on teaching and mentoring students.

Towards An Interrelatedness Model

Mapping PropTech and EdTech, an interrelatedness model was constructed to investigate the congruence of PropTech and EdTech in real estate education, specifically property valuation:



Challenges in Adopting Technology and AI

- The concept of real property is physical “land and place-based” and by this nature it means that the value, use and legal status are directly related to the physical characteristics and location of the of property.
- Local land laws and regulation, planning laws and development controls, land use regulations, property taxation, physical condition and market condition, among others, all contribute significantly in determining the value and rights associated with real property in a specific place or geographical area (*in-situ*).
- In adopting technology and AI in delivering education and practice, care must be taken to include
 - the element of change, especially rapid change into any data set adopted.
 - care and relevancy needs to be to be considered in its adoption
 - training for professionals and educators needs to be provided to effectively leverage these technologies
 - ethical and privacy considerations need needs to be taken into consideration to ensure data security
 - professional judgement of the educator and valuer must be exercised

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