

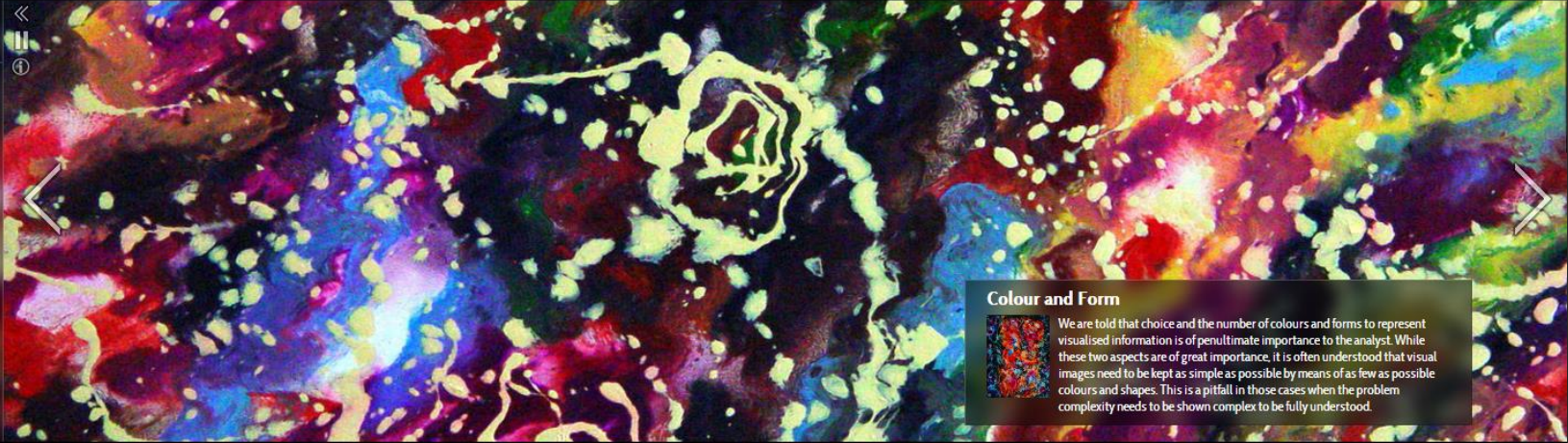
# SAS Visual Analytics Collaboratory at Deakin University

Welcome to the VA web site - enjoy the visuals!

## VAC Reflection



SOCIAL MEDIA



### Colour and Form



We are told that choice and the number of colours and forms to represent visualised information is of penultimate importance to the analyst. While these two aspects are of great importance. It is often understood that visual images need to be kept as simple as possible by means of as few as possible colours and shapes. This is a pitfall in those cases when the problem complexity needs to be shown complex to be fully understood.

by Jacob Cybulski  
Assoc. Prof. in Info and Bus Analytics  
Director of SAS Visual Analytics Collaboratory

About Jacob  
Teaching in physical space  
Teaching in virtual space  
Teaching in collaborative space  
Teaching in casual space  
Reflection

**Immersion, creativity and teamwork:  
The three factors of collateral learning**

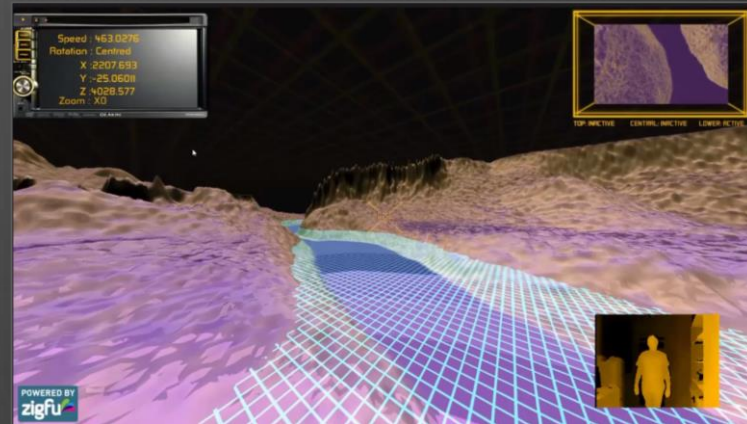
# About Jacob

- ❁ Jacob started as a graduate of Informatics, then moved into Computer Science, Software Engineering and Information Systems. His current work involves Business Analytics and Information Visualisation.
- ❁ In his free time he is involved in competitive foil fencing, fine arts and some extreme science!

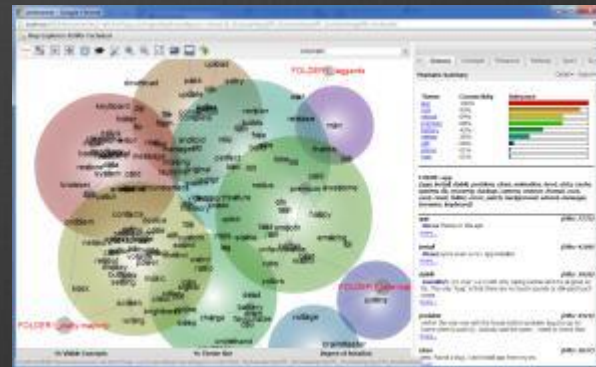
Competitive Fencing



Interactive Art Installations



Information Visualisation



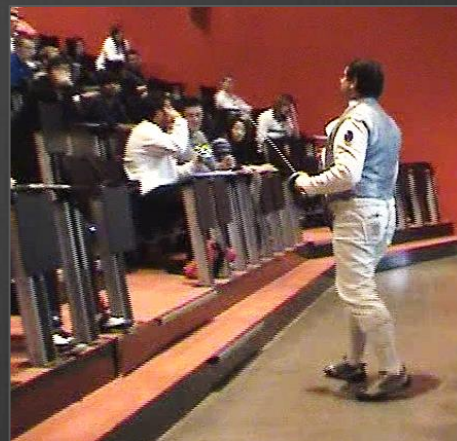
Business Analytics

# Teaching in Physical Space

## Immersion - The sharp end of IS



- ❁ Jacob is always looking for new ways to reinvigorate his classroom teaching.
- ❁ For example he has been very successful incorporating elements of his favourite sport of fencing as a vehicle for team building in Project Management classes and for teaching Business / IT Alignment.

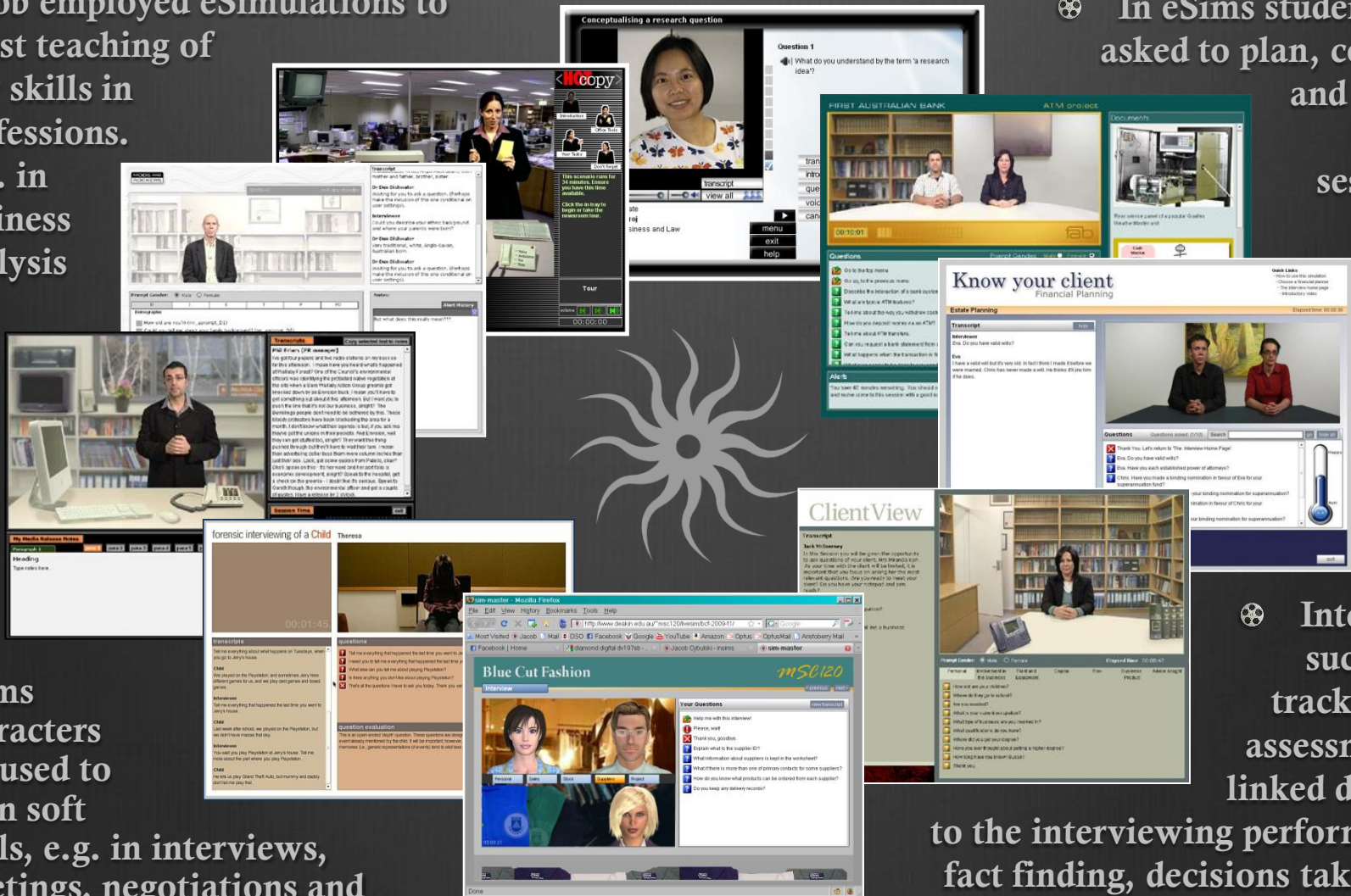


# Teaching in Virtual Space

## Immersion – Professional Skills

❁ Jacob employed eSimulations to assist teaching of soft skills in professions. E.g. in business analysis

❁ In eSims students are asked to plan, conduct and report on the sessions.



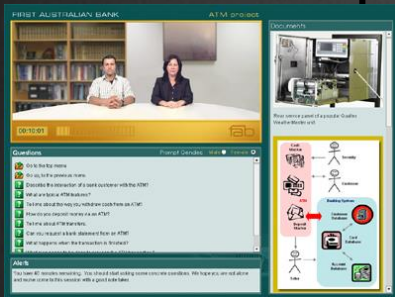
❁ eSims characters are used to train soft skills, e.g. in interviews, meetings, negotiations and provision of advice.

❁ Interview success is tracked and assessment is linked directly to the interviewing performance, fact finding, decisions taken and actions planned.

# Teaching in Virtual Space

## Dissemination of Business Analysis eSims

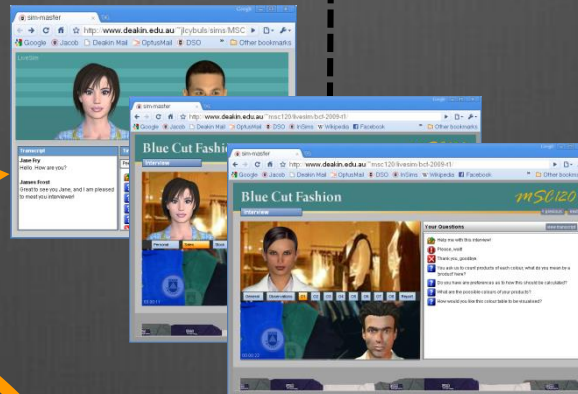
1st Generation  
(Live Sim)



Deakin



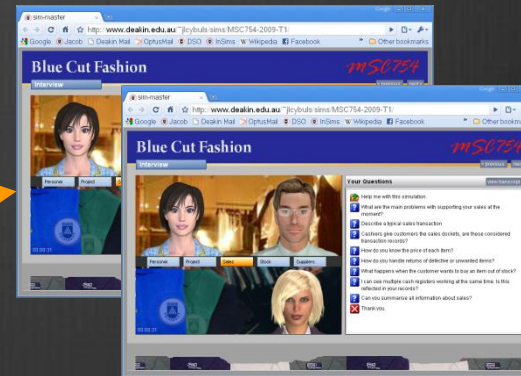
2nd Generation  
(Avatar Sim)



3rd Generation  
(Templates)



RMIT



Future Gens  
(Shared)

# Business Requirements Analysis

## Workshops model - Success and fun

- ⊗ **All class activities are assessable**
- ⊗ **No exams and no assignments**
- ⊗ Do all work in teams –learn from peers not teachers
- ⊗ Work in teams even when assessed individually
- ⊗ Team work is privilege not an obligation
- ⊗ Encourage reliance on own knowledge, research skills and ingenuity
- ⊗ Have simple rules of engagement
- ⊗ Make compliance an option not law
- ⊗ Learning = side-effect of enjoyable activity (collateral learning)
- ⊗ Make readings and preparation optional but make them work
- ⊗ Cut down lecture time – students learn more by doing than by listening
- ⊗ Encourage students to explore, discover, take risks and improve
- ⊗ Emphasise problem-solving rather than facts, combine structure with creativity
- ⊗ Mix methods = games, simulations, cases, visual and communicative actions
- ⊗ Recognise creativity and reward insight



- ⊗ Make attendance optional but ensure that absence leads to lost marks
- ⊗ Encourage taking on different team roles, i.e. leaders, facilitators, reviewers
- ⊗ Make standard achievable and excellence a habit
- ⊗ Teach as a team to give examples of team work
- ⊗ Encourage independence but provide ample guidance when requested
- ⊗ Provide challenges to go ahead of the pack
- ⊗ **Above all make it fun!**

# More on BRA

## Sample projects

- ⊗ Analyse interests of various stakeholders in the hypothetical invention of turning a combination of blue gum woodchips, water and oxygen into petrol.
- ⊗ Look for a possible solution to the reduction of noise pollution associated with late-night truck deliveries to large supermarkets.
- ⊗ Suggest new uses for the “SAS Wall”

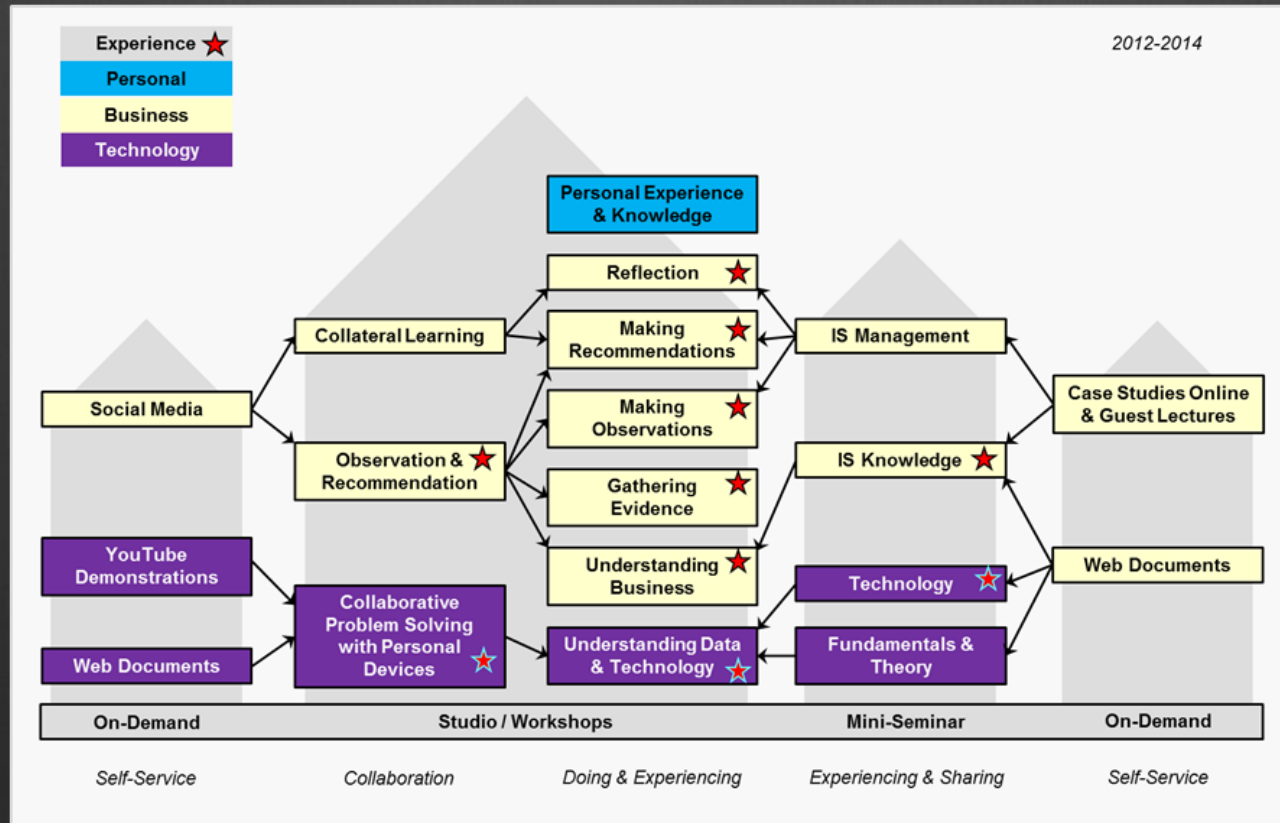


## In students' words

- ⊗ I love this format
- ⊗ Yes, gets me to class
- ⊗ Interactive group learning is an excellent progression for teaching
- ⊗ Working and communicating in groups helps strengthen each student's knowledge
- ⊗ I love how this unit is assessed weekly as opposed to small assignments and one big exam at the end of semester
- ⊗ Love peer learning
- ⊗ Low stress
- ⊗ Assessment based on actual learning not exam
- ⊗ Due to the casual nature of class, it's a great working environment
- ⊗ Staff are great
- ⊗ You doing me proud
- ⊗ Give us more chocolates  
[re: workshop with sweet treats]

# Personal strategies in curriculum design for BI

## Period 2012-2014



Curriculum design (with experience) motivated by needs of staff & students. It illustrates a shift to the use of online media on-demand, reliance on personal BYO devices, workshop/studio style of learning and de-emphasised role of lectures.

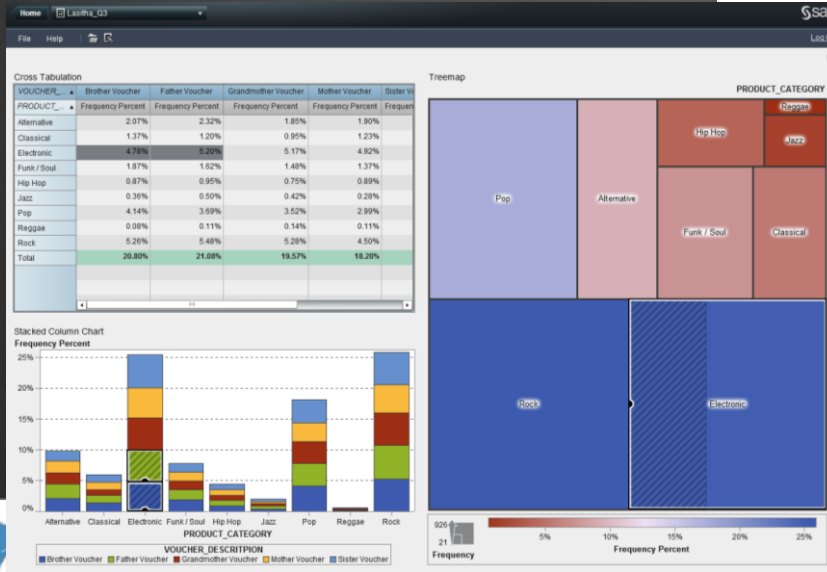


# Teaching Business Analytics

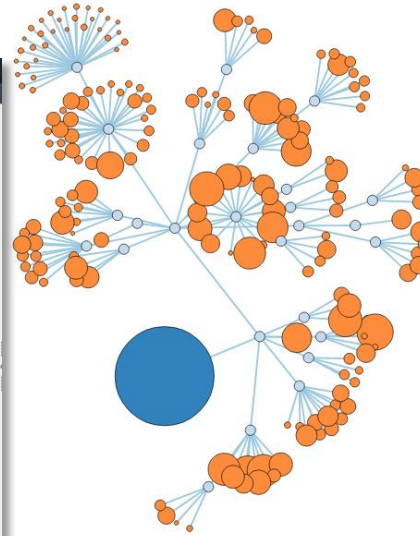
## Creativity - Data, Sense, Action

Interactive

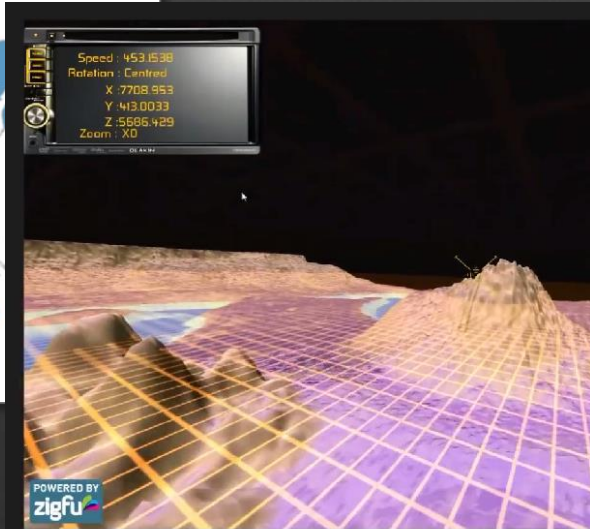
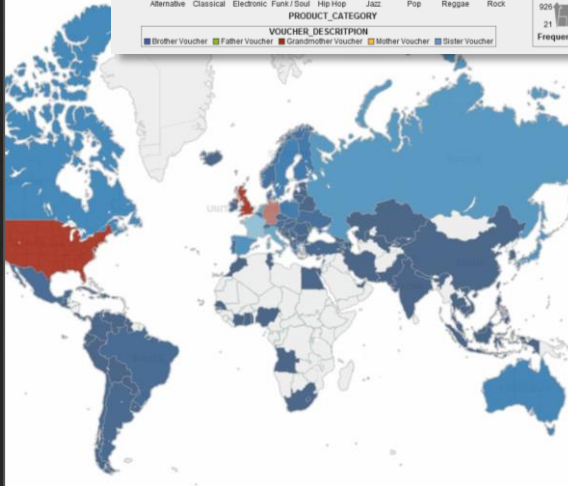
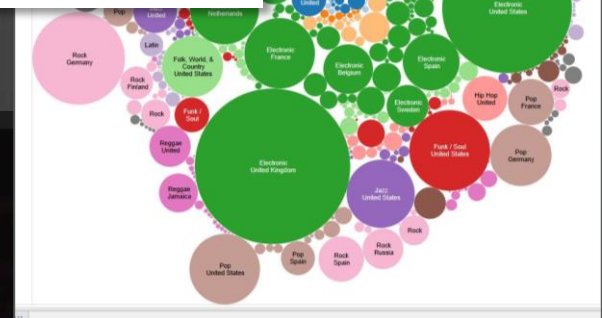
Informative & Actionable



Artist similarity by genre and style



Intuitive



Geolocated

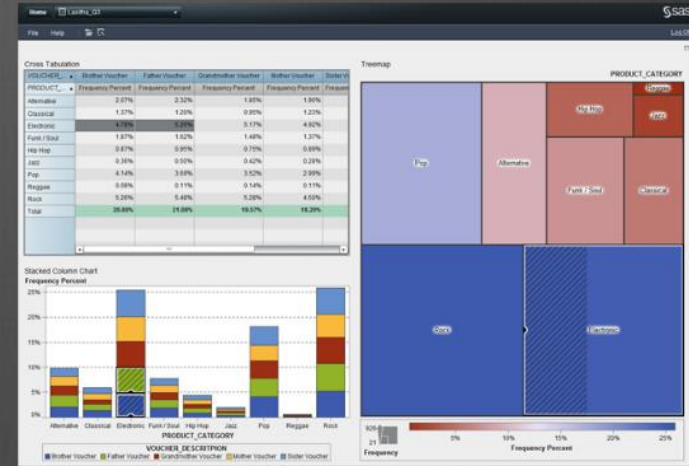
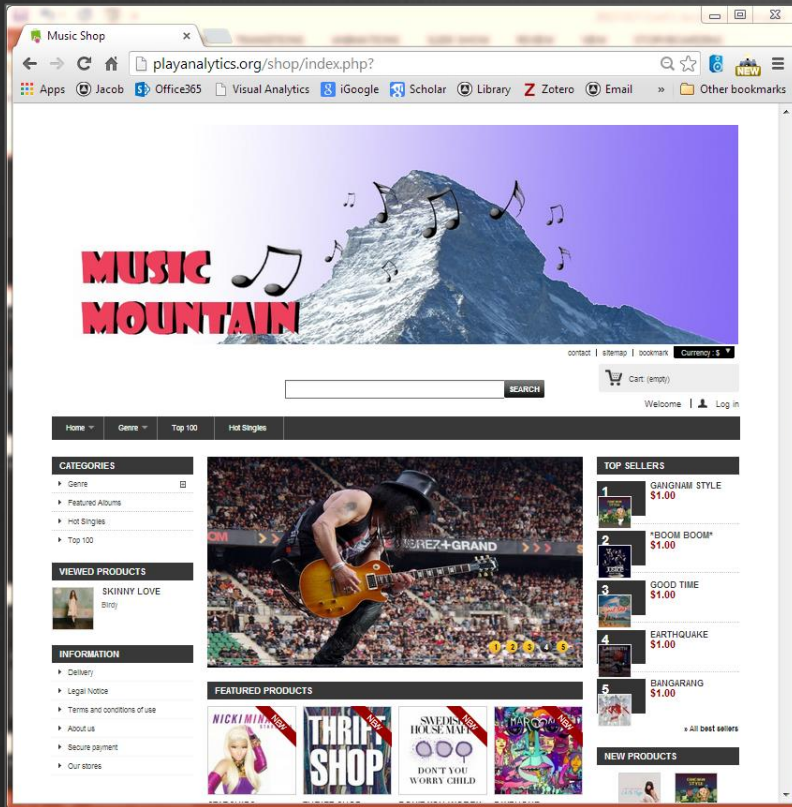
Immersive & Engaging

# Teaching Business Analytics - Process

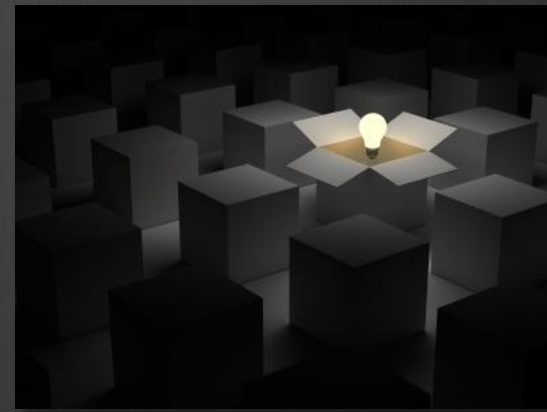
Business Simulation  
Visual Analytics  
Business Decisions

Conduct Visual Analytics

Shop and Rate



Make Decisions



# Available Infrastructure

SAS VA Collaboratory

Touch



Motion,  
Gesture &  
Voice

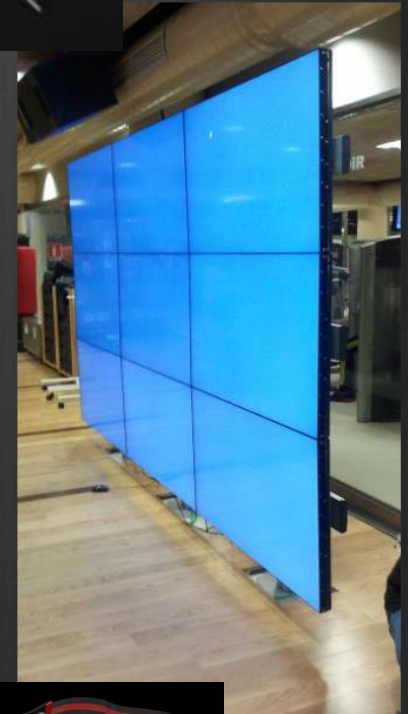


Large  
Displays

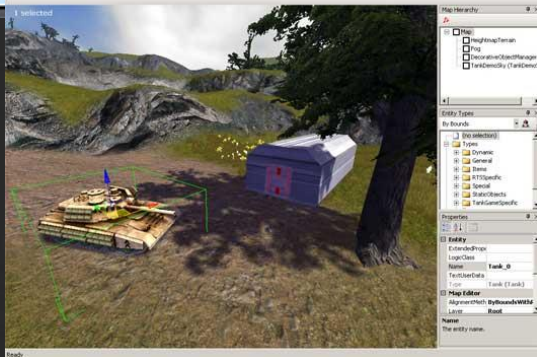
Analytics



Team



Gaming Technology



Virtual Reality

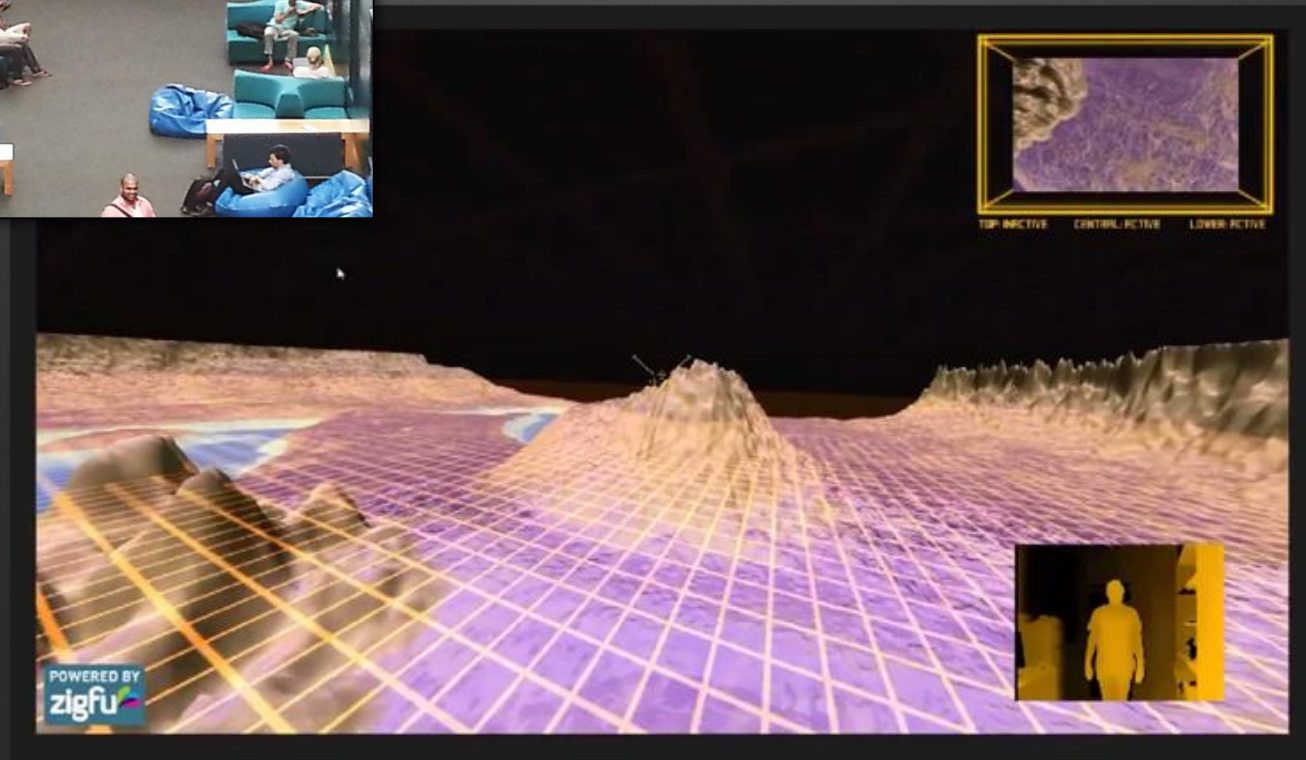


# Passer-By Analytics

Learning by Casual Users and Public



Fully immersive game with motion tracking for collateral learning of Business Analytics concepts by passing-by business students (with the use of a specially constructed large screen located in the building foyer)



# Summary

## Collateral Learning

Learning as a unintended side effect

Learning which is active

Learning which is enjoyable

Learning everywhere

Learning with friends

Learning without stress

Learning without compulsion