

# A systems design approach for investigating Australian TAFE design education

Reflecting back.....lessons for the future?

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# Introduction

## This presentation will explain:

- How a systems design approach can be used to develop a model of a TAFE design education system based on the views of design teachers.
- The research methods used in this project.
- How the system was modelled and
- Finally, what was learnt from this project.

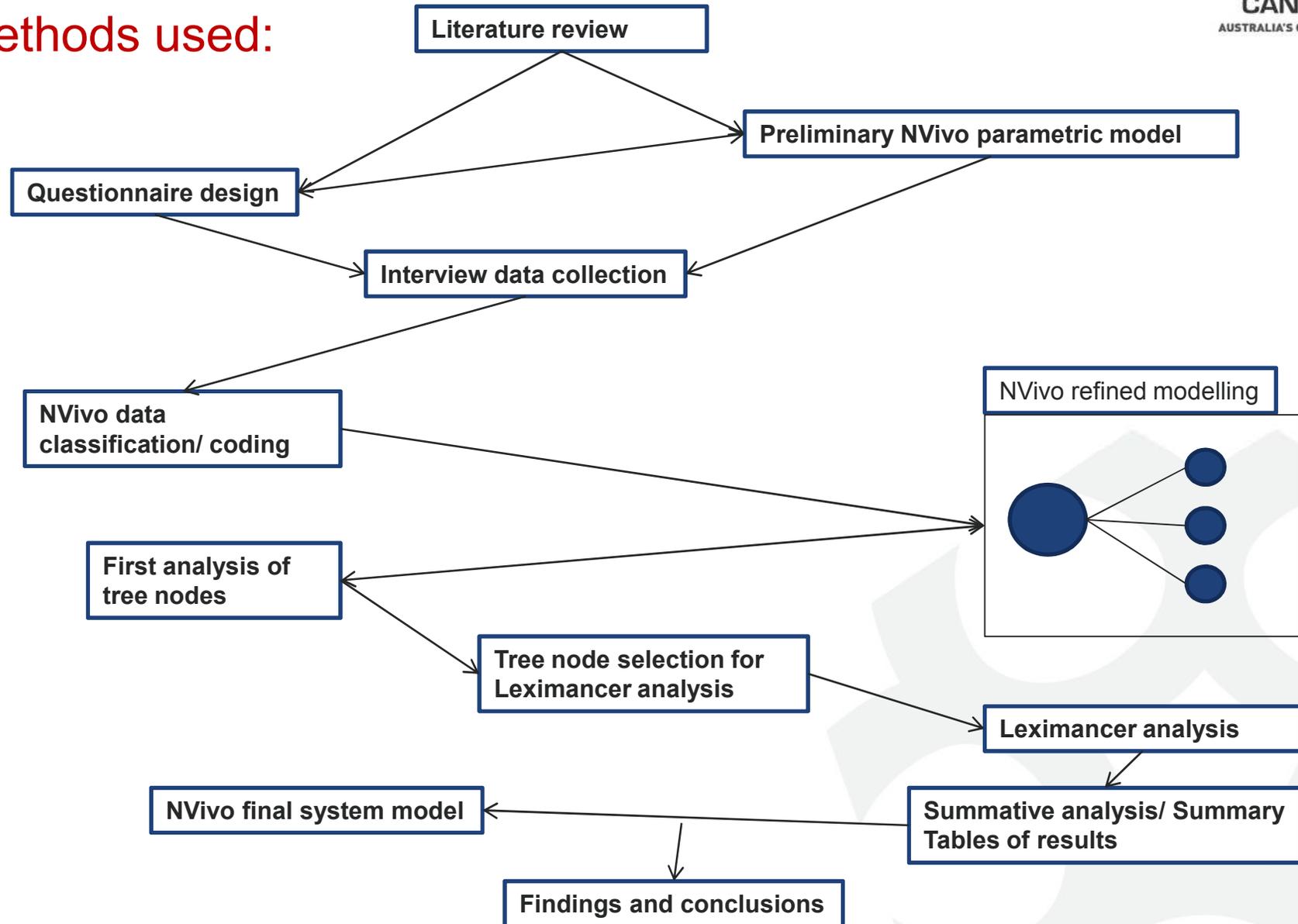
## The systems design approach:

- Systems are a ***'collections of different objects which together make up a unified whole'***.
- **Systems design approach is useful when examining a system as a whole.**
- ***'System functions'*** can be obtained almost entirely from the interrelationships between the parameters and constituent variables (which are mainly interdependent).
- ***'Parameter'***: is a distinguishing or notable characteristic.
- ***'Constituent variable'***: is an ingredient or component of the parameter with varying values.

## The TAFE design education system:

- Is a smaller subsystem of the national TAFE system.
- **Plays a significant role in training for the design and creative industries.**
- Continues to respond to ongoing Australian VET reforms introduced since the 1990's.
- **Teachers tend to perceive competency standards as being less consistent with striving for excellence in art and design work.**
- There is not much empirical research to describe specific TAFE design education teaching and learning practices.
- **The views of design teachers are not made clear.**

# Research methods used:



## Lists of participating TAFE Institutes, number of interview participants and design disciplines serviced

	STATE	TAFE INSTITUTES	# PARTICIPANTS
1	NSW	Sydney institute of TAFE - Enmore Design Centre	9
2	VIC	Gordon Institute of TAFE	5
3	VIC	Swinburne University – TAFE Division	2
4	VIC	Box Hill Institute of TAFE	8
5	TAS	Institute of TAFE Tasmania - Launceston	2
6	TAS	Institute of TAFE Tasmania - Hobart	2
7	QLD	Southbank Institute of TAFE - Morningside	4
8	QLD	Sunshine Coast Institute of TAFE - Cooloola	4
9	WA	Central TAFE - City	2
10	WA	Central TAFE - Leederville	8
11	SA	SA TAFE – Croydon Park	5
12	SA	SA TAFE – Tea Tree Gully	3
13	VIC	RMIT – TAFE Division	3
		<b>TOTAL</b>	<b>57</b>

### Design disciplines serviced in participating TAFE Institutes

Graphic design

Multimedia

Photography

Film and TV production

Stage design and production

Design foundation

Fashion and textile design

Jewellery design

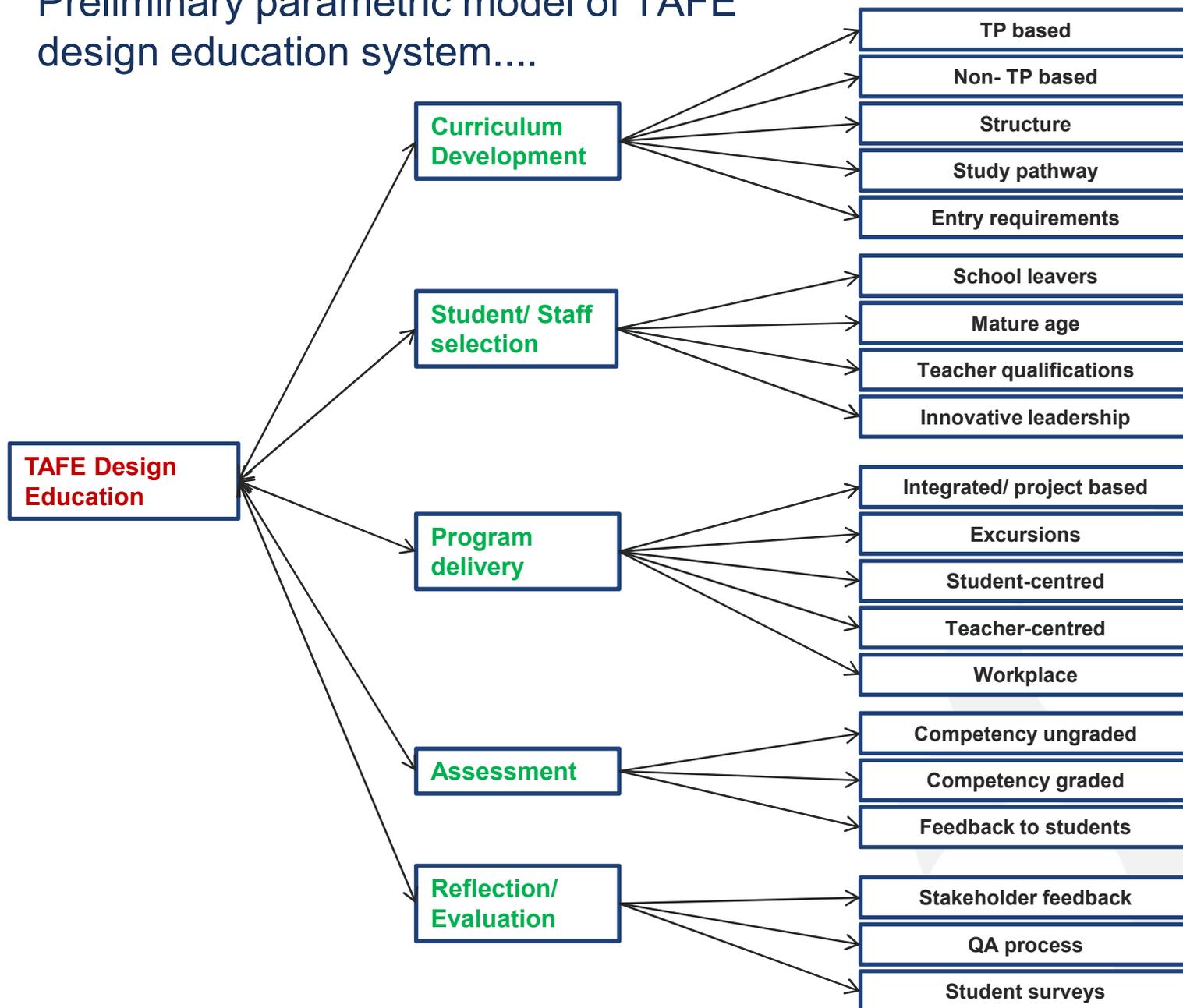
Visual arts and crafts

Building design and drafting

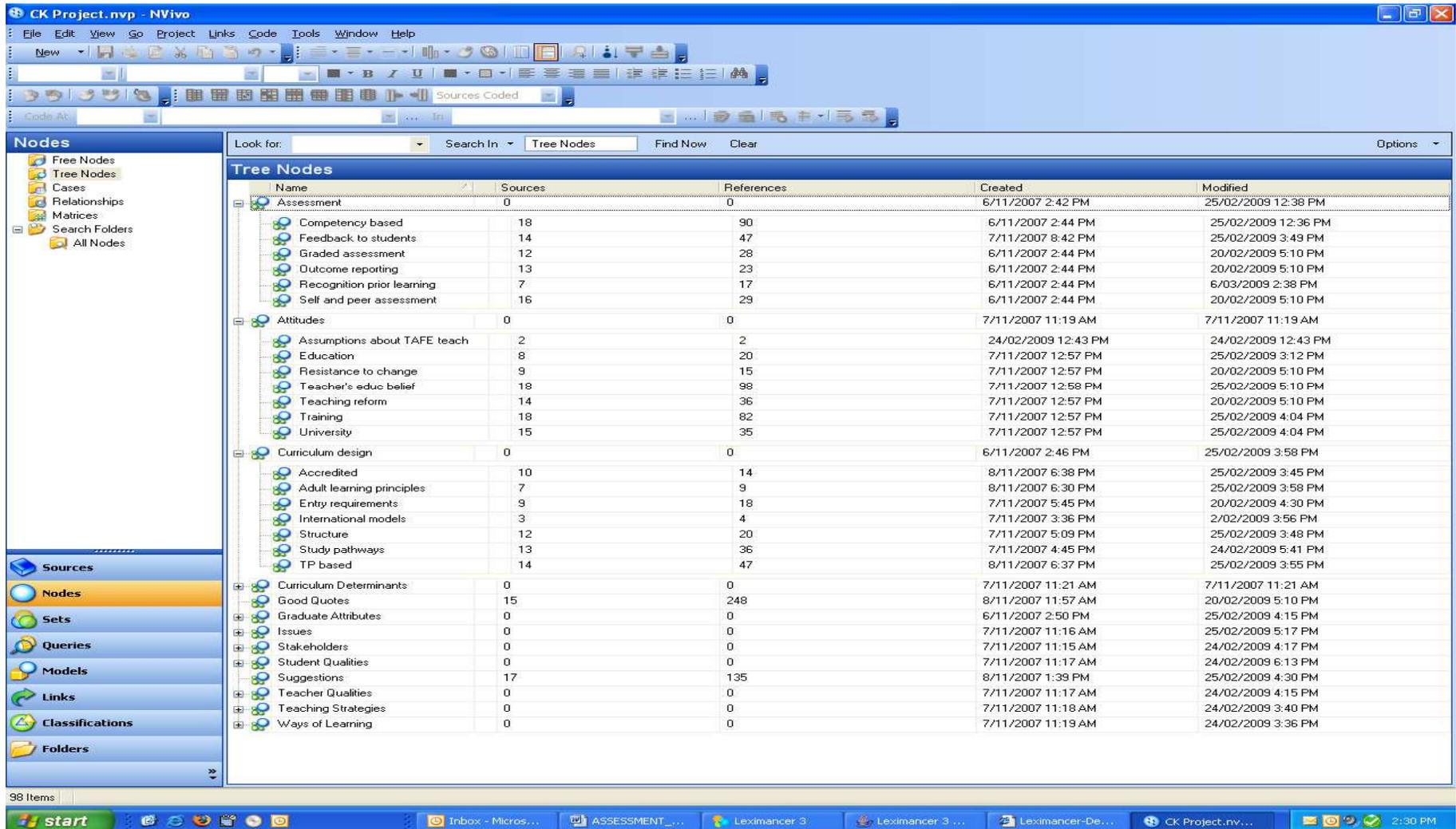
Interior design and decoration

Industrial/ product design

# Preliminary parametric model of TAFE design education system....



**Table 2: Partial view of a refined parametric model of the TAFE Design Education System – parameters and their constituent variables shown expanded here: ASSESSMENT; ATTITUDES and CURRICULUM DESIGN**



The screenshot shows the NVivo software interface with a tree view of nodes on the left and a data table on the right. The data table lists nodes under three main categories: Assessment, Attitudes, and Curriculum design. Each node has associated source and reference counts, and creation/modification dates.

Name	Sources	References	Created	Modified
<b>Assessment</b>	0	0	6/11/2007 2:42 PM	25/02/2009 12:38 PM
Competency based	18	90	6/11/2007 2:44 PM	25/02/2009 12:36 PM
Feedback to students	14	47	7/11/2007 8:42 PM	25/02/2009 3:49 PM
Graded assessment	12	28	6/11/2007 2:44 PM	20/02/2009 5:10 PM
Outcome reporting	13	23	6/11/2007 2:44 PM	20/02/2009 5:10 PM
Recognition prior learning	7	17	6/11/2007 2:44 PM	6/03/2009 2:38 PM
Self and peer assessment	16	29	6/11/2007 2:44 PM	20/02/2009 5:10 PM
<b>Attitudes</b>	0	0	7/11/2007 11:19 AM	7/11/2007 11:19 AM
Assumptions about TAFE teach	2	2	24/02/2009 12:43 PM	24/02/2009 12:43 PM
Education	8	20	7/11/2007 12:57 PM	25/02/2009 3:12 PM
Resistance to change	9	15	7/11/2007 12:57 PM	20/02/2009 5:10 PM
Teacher's educ belief	18	98	7/11/2007 12:58 PM	25/02/2009 5:10 PM
Teaching reform	14	36	7/11/2007 12:57 PM	20/02/2009 5:10 PM
Training	18	82	7/11/2007 12:57 PM	25/02/2009 4:04 PM
University	15	35	7/11/2007 12:57 PM	25/02/2009 4:04 PM
<b>Curriculum design</b>	0	0	6/11/2007 2:46 PM	25/02/2009 3:58 PM
Accredited	10	14	8/11/2007 6:38 PM	25/02/2009 3:45 PM
Adult learning principles	7	9	8/11/2007 6:30 PM	25/02/2009 3:58 PM
Entry requirements	9	18	7/11/2007 5:45 PM	20/02/2009 4:30 PM
International models	3	4	7/11/2007 3:36 PM	2/02/2009 3:56 PM
Structure	12	20	7/11/2007 5:09 PM	25/02/2009 3:48 PM
Study pathways	13	36	7/11/2007 4:45 PM	24/02/2009 5:41 PM
TP based	14	47	8/11/2007 6:37 PM	25/02/2009 3:55 PM
Curriculum Determinants	0	0	7/11/2007 11:21 AM	7/11/2007 11:21 AM
Good Quotes	15	248	8/11/2007 11:57 AM	20/02/2009 5:10 PM
Graduate Attributes	0	0	6/11/2007 2:50 PM	25/02/2009 4:15 PM
Issues	0	0	7/11/2007 11:16 AM	25/02/2009 5:17 PM
Stakeholders	0	0	7/11/2007 11:15 AM	24/02/2009 4:17 PM
Student Qualities	0	0	7/11/2007 11:17 AM	24/02/2009 6:13 PM
Suggestions	17	135	8/11/2007 1:39 PM	25/02/2009 4:30 PM
Teacher Qualities	0	0	7/11/2007 11:17 AM	24/02/2009 4:15 PM
Teaching Strategies	0	0	7/11/2007 11:18 AM	24/02/2009 3:40 PM
Ways of Learning	0	0	7/11/2007 11:19 AM	24/02/2009 3:36 PM

## DEVELOPED MODEL OF TAFE DESIGN EDUCATION

SYSTEM	PARAMETERS (13)	CONSTITUENT VARIABLES (86)
	STAKEHOLDERS - NEW	INDUSTRY; GOVERNMENTS; LEARNERS; TAFE
	ATTITUDES - NEW	TEACHERS' EDUC BELIEFS; TRAINING; UNIVERSITY and others
	CURRICULUM DESIGN	TRAINING PACKAGE BASED; NON-TP; STUDY PATHWAYS and others
	CURRICULUM DETERMINANTS - NEW	INDUSTRY, STUDENT AND EMERGING TRAINING NEEDS; DESIGN PRACTICE
	STUDENT QUALITIES - EXPANDED	SCHOOL LEAVERS; MATURE AGE; SELECTION CRITERIA AND PROCESSES
	TEACHER QUALITIES -EXPANDED	QUALIFICATIONS/ EXPERIENCE; INNOVATION LEADERSHIP; CHANGE AGENTS
<b>TAFE DESIGN EDUCATION SYSTEM</b>	TEACHING STRATEGIES -EXPANDED	TEACHING PRACTICE; PROGRAM DELIVERY; INTEGRATION and others
	WAYS OF LEARNING - EXPANDED	PROJECT BASED; REFLECTION and others
	ASSESSMENT	COMPETENCY BASED; FEEDBACK TO STUDENTS; SELF AND PEER ASSESSMENT; GRADED ASSESSMENT and others
	GRADUATE ATTRIBUTES - NEW	EMPLOYABILITY DESIGN SKILLS
	ISSUES - NEW	QUALITY ASSURANCE; TEACHER'S WORKLOAD; ADMINISTRATION and others
	SUGGESTIONS (virtual) - NEW	many
	GOOD QUOTES (virtual) - NEW	many

## SUMMARY OF CONCLUSIONS and RECOMMENDATIONS

- A novel method of modelling a design education system based on a systems design approach has been developed to gather and analyse empirical data.
- It was found that the initial system model was incomplete and the method can be used to develop a more complete model of the system based on the views of the design teachers.
- This enhanced model demonstrates the practicality of the systems design approach as an important research tool for identifying important parameters and their constituent variables of a TAFE design education system.

There is a need to:

- Research the need to establish a common educational vocabulary to more effectively describe the practices of TAFE design education pedagogy.
- Survey the views, aspirations and criticisms of other key stakeholders using the developed model and method framework.
- Investigate student's reluctance to engage in self and peer assessment and develop appropriate strategies to overcome barriers.

Thank you.  
Reflecting back....lessons for the future?



## Some selected 'Good Quotes':

The following quotes highlight some of the existing barriers to discourse and innovation in relation to TAFE design education practices:

*"It's very fundamental.... But it's not a higher level philosophical discussion about methods of learning or methodologies. And I mean if you'd said 'pedagogy' to half the staff here they wouldn't know what you meant." (SPEAKER 5, Melbourne)*

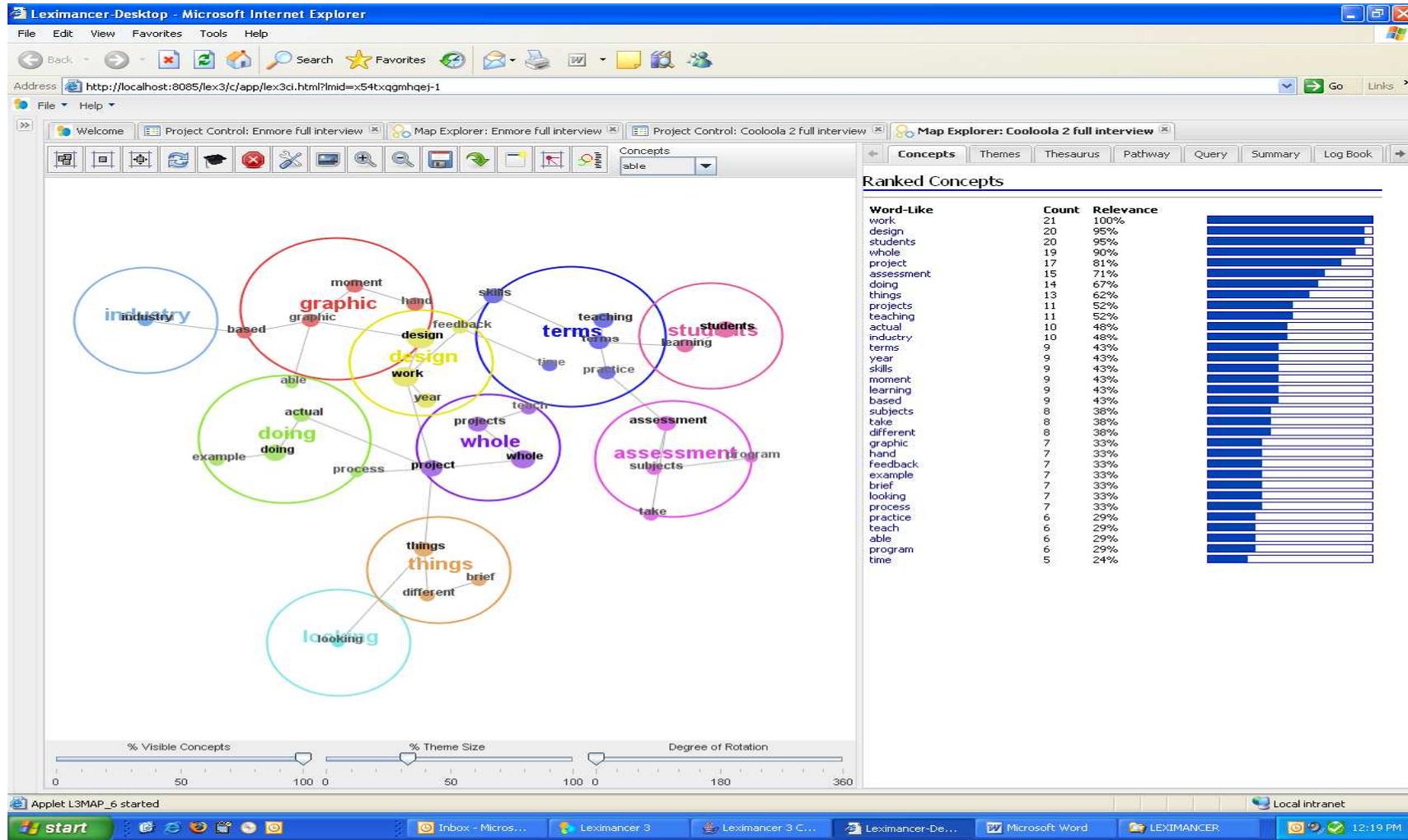
*"I think there's a basic lack of understanding about the way in which Training Packages now work." (SPEAKER 1, Launceston)*

*"I don't believe we train people,..... any better under Training Packages than we did when I was trained forty years ago. Because I don't think we teach, ..... the diagnostic skills, the analytical skills, research skills are not taught as well under Training Packages as they are under curriculum based programs." (SPEAKER 1, Melbourne)*

*"I think there is something of a problem with baseline competency training given that we work in ... a range of industries that want more than mediocrity. They're looking for real pursuit of excellence." (SPEAKER 1, Hobart)*

# LEXIMANCER ANALYSIS OUTPUT

Results of Leximancer analysis of data from COOLOOLA 2 showing the ranked concept clusters.



# Key findings and needs - ATTITUDES

## POSITIVE

- Practicing designers value and bring current industry experience to teaching.
- The focus is on developing creativity and sensitivity to design issues at para-professional level.
- There is agreement that there is a need to retrain or replace a maturing TAFE design education workforce.

## NEGATIVE

- The concept of competency standards and Training Packages (TP's) in design education is still an unresolved issue for some teachers.
- There is increased awareness of how to teach design processes – but focus is still predominantly on pragmatic and functional aspects.

## Key findings and needs – CURRICULUM DESIGN

- Continuing resistance to TP-based curriculum – perception that non-TP curriculum provides more complete and rounded design education.
- Still a dual system with some restrictions on Training Package design qualifications beyond Certificate IV level.
- Risk of non-TP courses becoming outdated where accreditation repeatedly extended
- Dominant role of industry has reduced teachers' capacity to contribute to TP development.
- Difficulties with mapping accredited non-TP outcomes to TP qualification framework requirements
- Non-Training Package based curriculum perceived as having more scope to develop design education in emerging areas of design practice.

## Key findings and needs – TEACHING STRATEGIES

### POSITIVE

- Project based learning is used widely to holistically simulate workplace design practice.
- Using formative learning tasks followed by a major holistic summative assessment projects.
- Striving to balance practical skilling and theoretical knowledge development.
- Emerging trend towards student-centred teaching.
- Emphasising development of STUDENT research skills to increase capacity for informed decision making, creative problem solving and improved design presentation skills.

### NEGATIVE

- Perception that most design teaching is teacher-centred and driven by industry needs, assessment and registration compliance requirements.
- Teaching practices of teachers are not fully apparent and understood as the scope for monitoring and discourse is decreasing.
- Teaching is becoming less focussed and integrated due to reduced cohesion within the teaching teams.
- TAFE design education is not responding effectively to the changing nature of employment within the creative industry sector.

## Key finding and needs - ASSESSMENT

- Since the introduction of Training Packages assessment is more complex and workload intensive.
- Assessment of Employability Skills needs to be more explicit and integrated.
- More emphasis is required on developing student self and peer assessment.
- Interpretation of assessment criteria tends to be subjective
- Holistic approaches to assessment and work placement experience contribute to accelerated completion.
- Perception that ungraded assessment does not motivate students to excel.
- There is need to develop closer links between education sectors to improve articulation.

## Teachers' aspirations and suggestions for improvement:

- More provision of underpinning design foundation programs for school leavers.
- Review of information communication strategies and formats to simplify and minimise the amount of duplication and contradictions as well as associated workloads.
- Where appropriate and valid implement graded competency assessment.
- Develop and integrate more effectively small business and practice management units to prepare graduates for current preferred industry employment model.
- Increase research into emerging design related occupations arising from changes in technology and regulations in the creative industries.