School Characteristics, Teacher Beliefs and Innovative Teaching Practice

EARLI Presentation

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ITL research
Innovative Teaching and Learning

Microsoft
Partners in Learning

INNOVATIVE TEACHING & LEARNING IN AUSTRALIA

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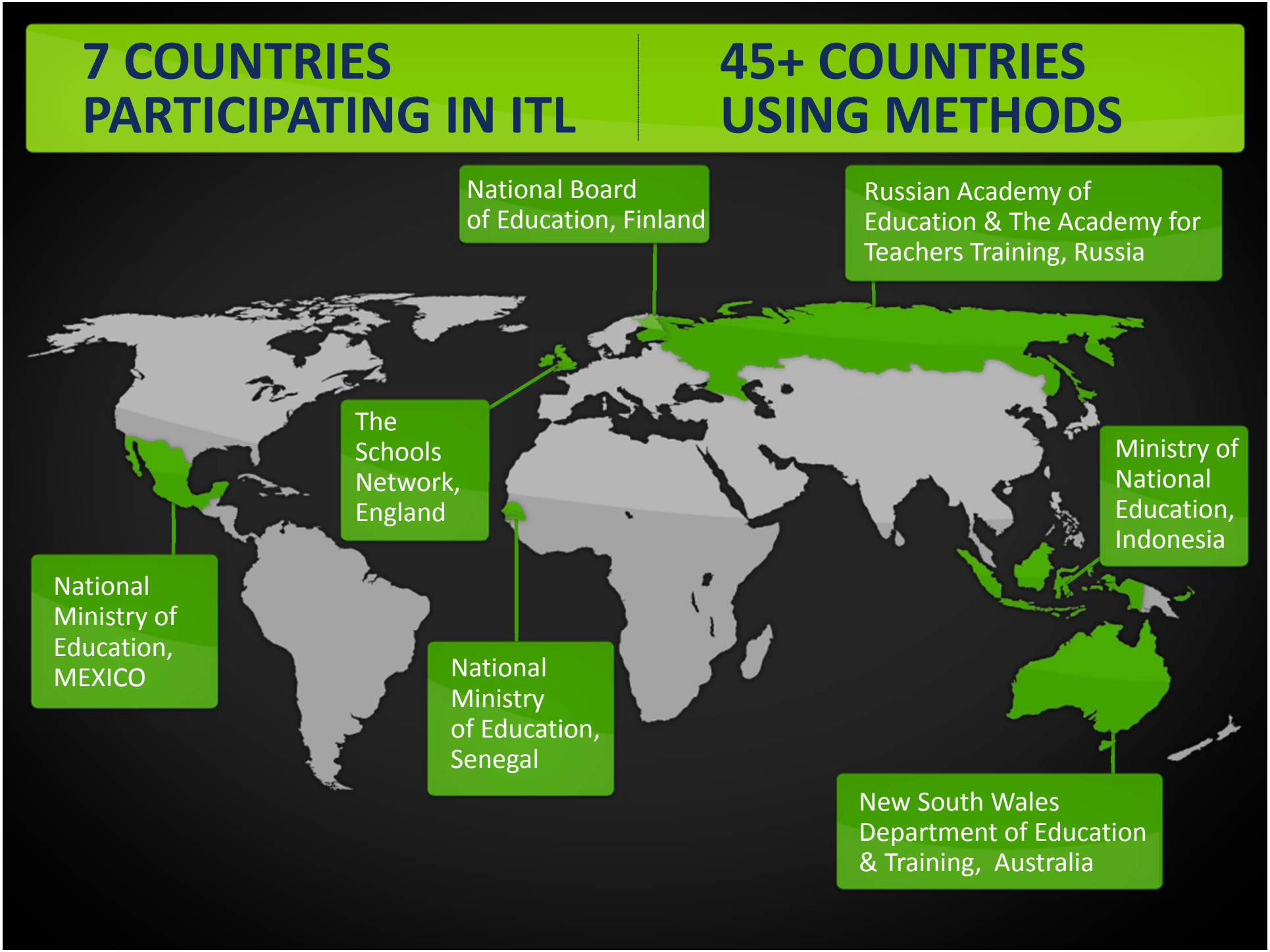
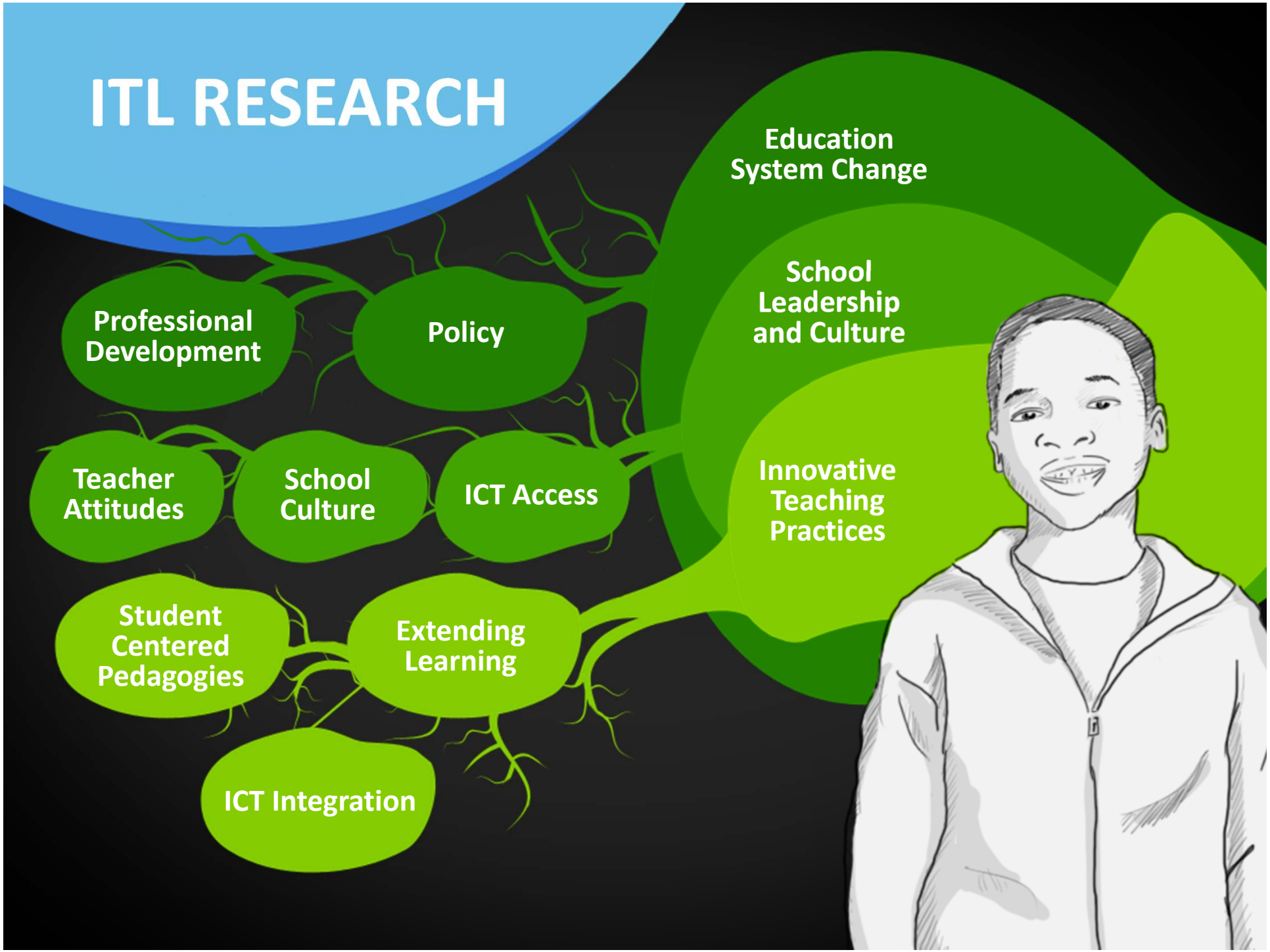
7 COUNTRIES PARTICIPATING IN ITL

45+ COUNTRIES USING METHODS




ITL RESEARCH
Education System Change
School Leadership and Culture
Innovative Teaching Practices
Professional Development
Policy
Teacher Attitudes
School Culture
ICT Access
Student Centered Pedagogies
Extending Learning
ICT Integration

ITL RESEARCH
MIXED METHODS USED

Across	159 survey schools 24 site visit schools
Teacher & School Leader Interviews	**86** teachers **18** school leaders
Teacher & School Leader Surveys	**4,038** teachers **159** school leaders
Classroom Observations	**81** classrooms
Learning Activity Analysis	**967** learning activities
Student Work Analysis	**3,367** student work
Student Focus Groups	**33** focus groups

Methods Published at: www.itlresearch.com

ITL RESEARCH AUSTRALIA

Interview:
Australian education policy leaders

Survey:
24 Schools, representing 3 regions, balanced between 'innovative' and 'comparison samples

Site Visit:
6 'Innovative' Schools

Teacher Survey – Australia (n = 683)

- 22 Secondary Schools across 3 regions of NSW (13 innovative, 9 comparison)
- Level of qualification: 6.6% teaching certificate or diploma; 79.0% bachelor's degree; 14.4% master's degree.
- Gender: 59.6% Female; 40.4% Male
- Age:

<25	6.5%
25-29	12.5%
30-39	26.6%
40-49	26.9%
50-59	25.4%
>60	2.1%

CONSTRUCTION OF THE INNOVATIVE TEACHING PRACTICES INDEX

SUB-CONSTRUCT (SCALE RELIABILITY)	CONSTRUCT	INDEX
Knowledge-building (α = 0.814)	Student-centred pedagogies	Innovative teaching practices (ITP)
Self-regulation & assessment (α = 0.863)		
Small group work (α = 0.791)		
Personalised & individualised learning (α = 0.738)		
Extended classroom community (α = 0.838)	Extension of learning beyond the classroom	
Global awareness/cultural understanding (α = 0.661)		
Teacher ICT use (α = 0.811)	ICT integrated into teaching and learning	
Student ICT use (α = 0.873)		

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Summary of results-ITP Index

- Scale scores for a focus on knowledge building, and teacher and student use of ICT had the strongest relationships with the teacher's ITP index score.
- Next in importance was a focus on self-regulation and assessment, and on personalised and individualised learning.
- Using small group instruction and fostering global awareness were also relatively important.

Summary of results-School Level results

- But whether teachers were at innovative or comparison schools was not strongly related to their ITP index score.
- At the school level, the number of computers available in a school was positively related to teacher innovation, indicating that ICT infrastructure was an important factor in fostering innovation.
- schools with a website and online learning management system tended to have more innovative teachers.

RESULTS OF REGRESSION ANALYSIS WITH TEACHER ITP SCORE AS DEPENDENT VARIABLE

EXPLANATORY VARIABLES	Standardised coefficient (β)*	Standard error
Teacher age (6 categories)	-0.227	.039
Proportion of student time working on extended project (of at least one week) (Q32)	0.222	.040
Collaboration with colleagues at your school (Q72 scale)	0.171	.042
Student use of ICT is beneficial to their learning (Q43 scale)	0.168	.038
No. of computers available to students (Q41)	0.137	.040
School in the regional centre as compared with schools in the other two areas	-0.124	.044
Teacher level of participation across a range of PD activities (Q52 scale)	0.113	.043
Teacher level of participation across a range of PD topics (Q51 scale)	0.105	.043
School has website accessible to students from outside the school (Q21)	0.100	.044
School leader view that teacher training/interest is a barrier to ICT use in schools (Q21 scale)	0.096	.040
School leader view that external sources are a barrier to ICT use in their school (Q21 scale)	0.070	.041
Highest level of teacher education (Q22: 3 categories)	0.069	.039
Teacher view that lack of infrastructure support is a barrier to ICT use with their class (Q45)	0.065	.039
Proportion of variance explained	*33.3%*	

Summary of Results

- There were 13 other variables significantly related to the ITP index, accounting for approximately 33% of the variance.
- At the teacher level teacher age was most strongly related, with older teachers tending to be less innovative.
- Teachers who more frequently allowed their students to work on projects lasting for more than one week were likely to score higher on the ITP index.
- Teachers who collaborated with their colleagues more frequently or attended professional development were more innovative, as were those teachers who believed that ICT use was beneficial to student learning

More Information ?

http://www.newcastle.edu.au/research-and-innovation/centre/sorti/research/itl-australia-project

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Thank You