Instructional Leadership: Context Matters
Preliminary Findings and Discussion

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Baseline Study on Leadership and Organizational Change

- Generate baseline data across the field of school leadership and across the entire school system of Singapore that will lead to practical benefits for school improvement and student learning;

- Team members from Policy and Leadership Study Academic Group – led by PI Clive Dimmock and subsequently taken over by Jonathan Goh as PI.

- Theme 4: Instructional Leadership practices

Research Design and Instrumentation

- Eight leadership themes (IL, DL, Work Culture, Work Values, etc.)

- FGD and Quantitative Survey

- Categorical data (time usage, self-efficacy, etc.)

- Rating scales for measurement data (IL, DL, Work Culture, Work Values)

Data Collection

- 224 Principals
- 322 Vice-Principals
- 686 Key Personnel
- 3513 Teachers
- School type: Gov, Gov-aided, Autonomous, Independent

Data Analysis

- Rasch Analysis
  - Equating measures on the same scale for comparison
  - Data cleaning (i.e., removing misfitting persons and items for further analyses
- Independent T-tests
- One-way ANOVAs with Post Hoc Tests (Tukey HSD Tests or Tamhane Tests)
- Hierarchical Linear Modeling

IL Dimensions

- Aligning teaching practices to school vision

- Leading teaching and learning

- Developing conducive environment for teaching and learning

- Promoting professional development

Respondents

- Principals' own perceptions
- Teachers' perceptions of P

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TABLE 3.1 IL Factor 2 - Ts'  LOC_T4_TperceptionsPIL_F2TL_2.OUT Feb  5 11:00 2013
INPUT: 3513 PERSONS, 8 ITEMS  MEASURED: 3503 PERSONS, 8 ITEMS, 5 CATS         3.53
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      SUMMARY OF 3295 MEASURED (NON-EXTREME) PERSONS
+-----------------------------------------------------------------------------+
|           RAW                         MODEL      INFIT        OUTFIT         |
|          SCORE     COUNT    MEASURE    ERROR   MNSQ   ZSTD   MNSQ   ZSTD     |
|-----------------------------------------------------------------------------|
| MEAN     28.7       8.0       1.74      .73    .94    -.4    .94    -.4      |
| S.D.      5.6        .0       2.62      .13    .98    1.7   1.00    1.7      |
| MAX.     39.0       8.0       7.81     1.08   9.90    7.0   9.24    6.3      |
| MIN.      9.0       8.0      -6.59      .57    .05   -2.9    .05   -2.9      |
|-----------------------------------------------------------------------------|
| REAL RMSE    .85  ADJ.SD   2.48  SEPARATION  2.92  PERSON RELIABILITY   .90  |
|MODEL RMSE    .74  ADJ.SD   2.52  SEPARATION  3.38  PERSON RELIABILITY   .92  |
| S.E. OF PERSON MEAN = .05                                                    |
+-----------------------------------------------------------------------------+

  MAXIMUM EXTREME SCORE:    191 PERSONS
  MINIMUM EXTREME SCORE:     17 PERSONS
              DELETED:      10 PERSONS
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SUMMARY OF 8 MEASURED (NON-EXTREME) ITEMS

+-----------------------------------------------------------------------------+
|              RAW                         MODEL     INFIT        OUTFIT       |
|            SCORE      COUNT    MEASURE    ERROR   MNSQ   ZSTD   MNSQ   ZSTD  |
|-----------------------------------------------------------------------------|
| MEAN     11817.0     3295.0       .00      .03    .99   -1.1    .94   -2.5  |
| S.D.       497.4         .0       .60      .00    .18    6.4    .19    6.4  |
| MAX.     12570.0     3295.0       .68      .04   1.33    9.9   1.29    8.8  |
| MIN.     11246.0     3295.0      -.92      .03    .79   -8.5    .74   -9.9  |
|-----------------------------------------------------------------------------|
| REAL RMSE    .04  ADJ.SD    .60  SEPARATION 16.73  ITEM    RELIABILITY 1.00 |
|MODEL RMSE    .03  ADJ.SD    .60  SEPARATION 17.33  ITEM    RELIABILITY 1.00 |
| S.E. OF ITEM MEAN = .23                                                     |
+-----------------------------------------------------------------------------+
UMEAN=.000 USCALE=1.000
ITEM RAW SCORE-TO-MEASURE CORRELATION = -1.00
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Instructional Leadership

Preliminary Findings

Finding 1:
# Overall IL and Individual Dimensions

Respondent Group: Principals

Demographic	% (No.) of components that are significant	Test	Components with significant differences	T-test/ ANOVA Post-hoc Result Summary
Gender	NIL	T-test	NA	No significant difference in Ps' perceptions of own IL behaviors between male and female Ps at the 0.05 level.
School Type	NIL	ANOVA	NA	No significant difference in Ps' perceptions of IL behaviors across school type at the 0.05 level.

Are there significant differences in Ps' self-reported IL perceptions and teachers' perceptions of their Ps' overall IL and individual IL components?)

Demographic	% (No.) of components that are significant	Test	Components with significant differences	T-test/ ANOVA Post-hoc Result Summary
Respondents' Position	100% (4 of 4)	ANOVA	All (Overall measure of IL)	Tamhane: P > T
			Aligning teaching practices to school vision	Tamhane: P > T
			Leading teaching and learning	Tamhane: P > T
			Developing conducive environments for teaching and learning	Tamhane: P > T
			Promoting professional development	Tamhane: P > T

Finding 2:

Influence of Context and possible multi-dimension items in 'Leading in Teaching and Learning' dimension of IL

PERSONS MAP OF ITEMS
<more>|<rare>

Wright Map

Teachers' Perceptions of Ps' Leading in T&L Component of IL
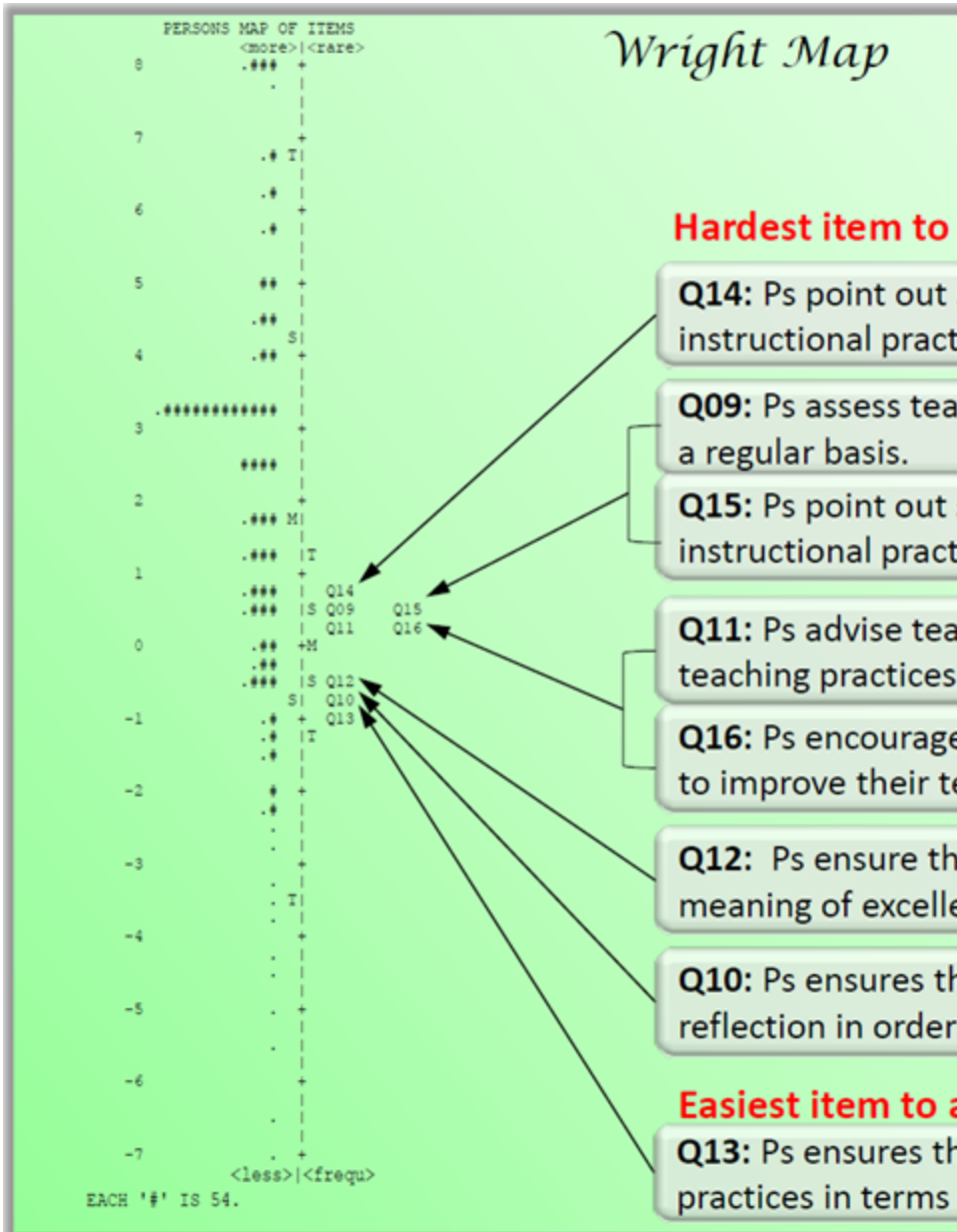
Hardest item to agree to:

Q14: Ps point out specific strength in teachers' instructional practices during classroom observations.

Q09: Ps assess teachers' classroom teaching on a regular basis.

Q15: Ps point out specific areas for improvement in teachers' instructional practices during classroom observations .

Q11: Ps advise teachers on how to improve their teaching practices.

Q16: Ps encourage teachers to use research evidence to improve their teaching practices.

Q12: Ps ensure that all teachers agree on the meaning of excellence in teaching.

Q10: Ps ensures that teachers systematically engage in reflection in order to improve their teaching practices.

Easiest item to agree to:

Q13: Ps ensures that teachers evaluate their teaching practices in terms of student learning outcomes.

EACH '#' IS 54.

Jonathan Goh: LOC Presentation Slide to MOE Sep 2012

Principals

- Because the KP, is their job. Because they know the subject matter, maybe they can know that whether they are align with SOP. But as a principal when we go there is to see the principal as authority that the one to make the final decision. So the fear and the insecurity is still there.

- You know, these are things *(initiatives, programmes…)* need to be enforced. And some of these things there's no room to be creative, because they are required.

- So it's all... not clearly seen but it's all there *(all the guidelines to help you, take the correct actions)*. You will never fail in Singapore as a principal because you just follow all the guideline, you will never fail

Teachers

- …there will be times where, especially now you talk about incorporating ICT and all that, so they'll spell out, you must have how many ICT lessons (laughter), you must make use of...there must be outdoor, some kind of outdoor lesson, even when I'm teaching the topic and I find that there's no need for outdoor lesson, but because I have to make the number, **that's** when I feel that I'm not empowered. It's like I have to meet certain requirements even though I feel that it doesn't quite meet the objective of my lesson

Teachers

- So…you teach the best that you can. you deliver the 21st century skills, and then you become uncomfortable because they ask about the results – 'Why' if the result go down

- you know, now when exams are coming up, like the 'A' Levels, then there's, obviously, the kick into high-gear in terms of, like, pushing the students academically, very intensive curriculum, but they do things like, there's, like, protected time for teachers…

Teaching and Learning **Directives** in Singapore

'Teach Less Learn More'

Curriculum 2015

21st Century Competencies

Holistic Assessment

ICT Master Plan 3

Citizenship and Character Education
Strategies for English Learning and Reading

Classroom Observation Form
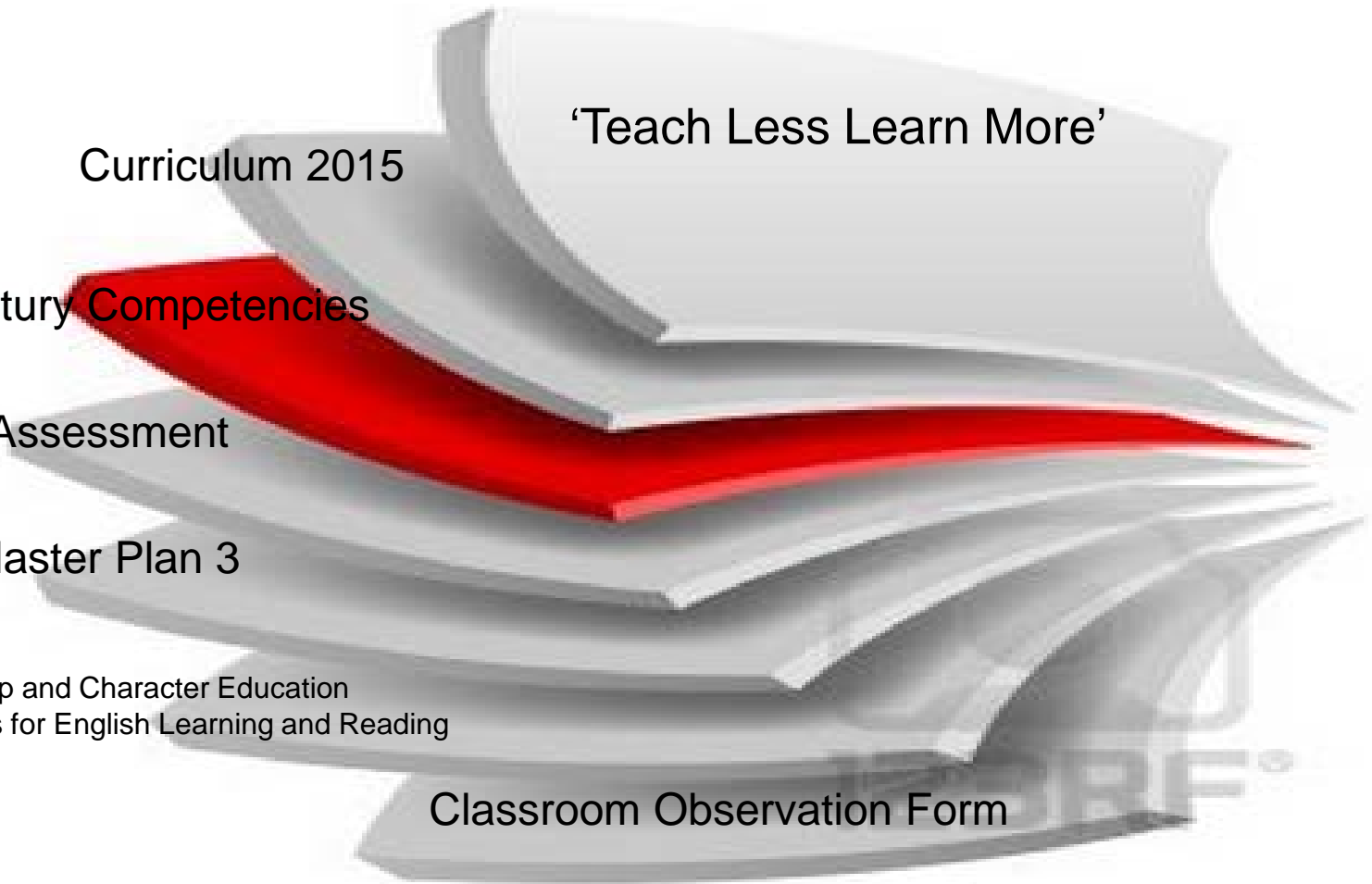
Initiatives Briefs

| TLLM: Teach Less Learn More	Shift from teacher-centric to student centric
	(SAIL: Strategies for active and independent learning. SEED: Strategies for Effective Engagement and Development)
C2015: Curriculum 2015	Strong fundamentals, Future Learnings
	(Maintain standards and benchmarking; Develop assessment framework – assess skills and mindsets)
21st Century Competencies	Nurturing our young for the future
	(New framework: Desired Outcomes of Students; Strengthening PE, ART, Music)
Holistic Assessment	Assessment for Learning and Assessment of Learning
	(Assessment framework; Assessment practices

Paradoxes of Leadership in Singapore Schools

- Centralized curriculum and curriculum innovation
- Common exams and consistent international assessment (TIMSS, PISA, Olympiads)
- Bureaucratic procedures and innovative leadership practices and knowledge
- The 'science of leadership and 'art of leadership' and 'creative insubordination' (Hughes, L.)

Context Matters in IL Study

- **Research context** - environmental factors that may influence the research process and/or the instructional outcomes under study including geographic location, the physical environment, …

- Propositions concerning how leadership practices are shaped by the *following contexts*:
  - Social-cultural
  - **Directives**
  - Economic
  - Technology
  - Political

  of Singapore and East Asian societies

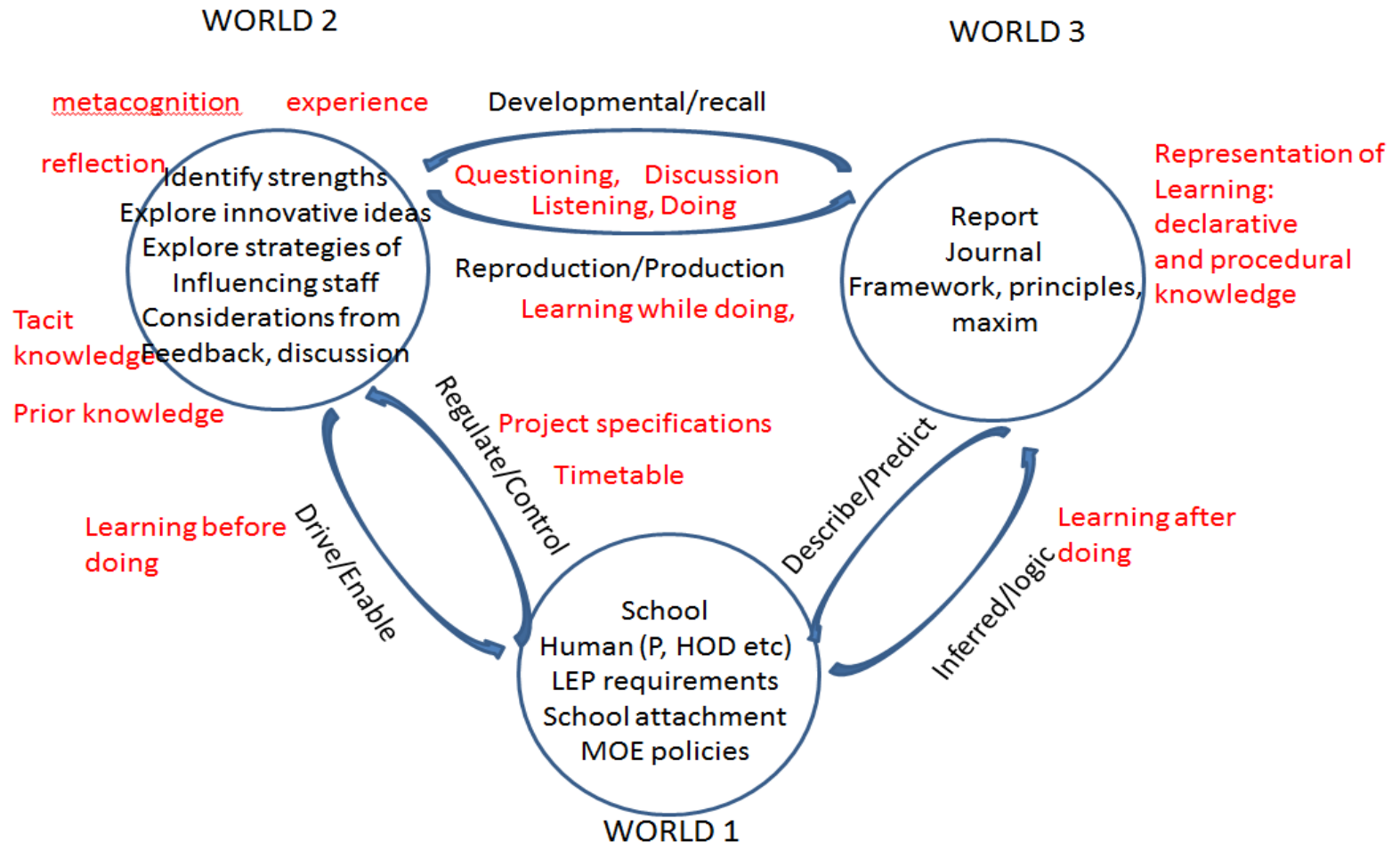# Proposed Model for Studying Influence of Context on Leadership
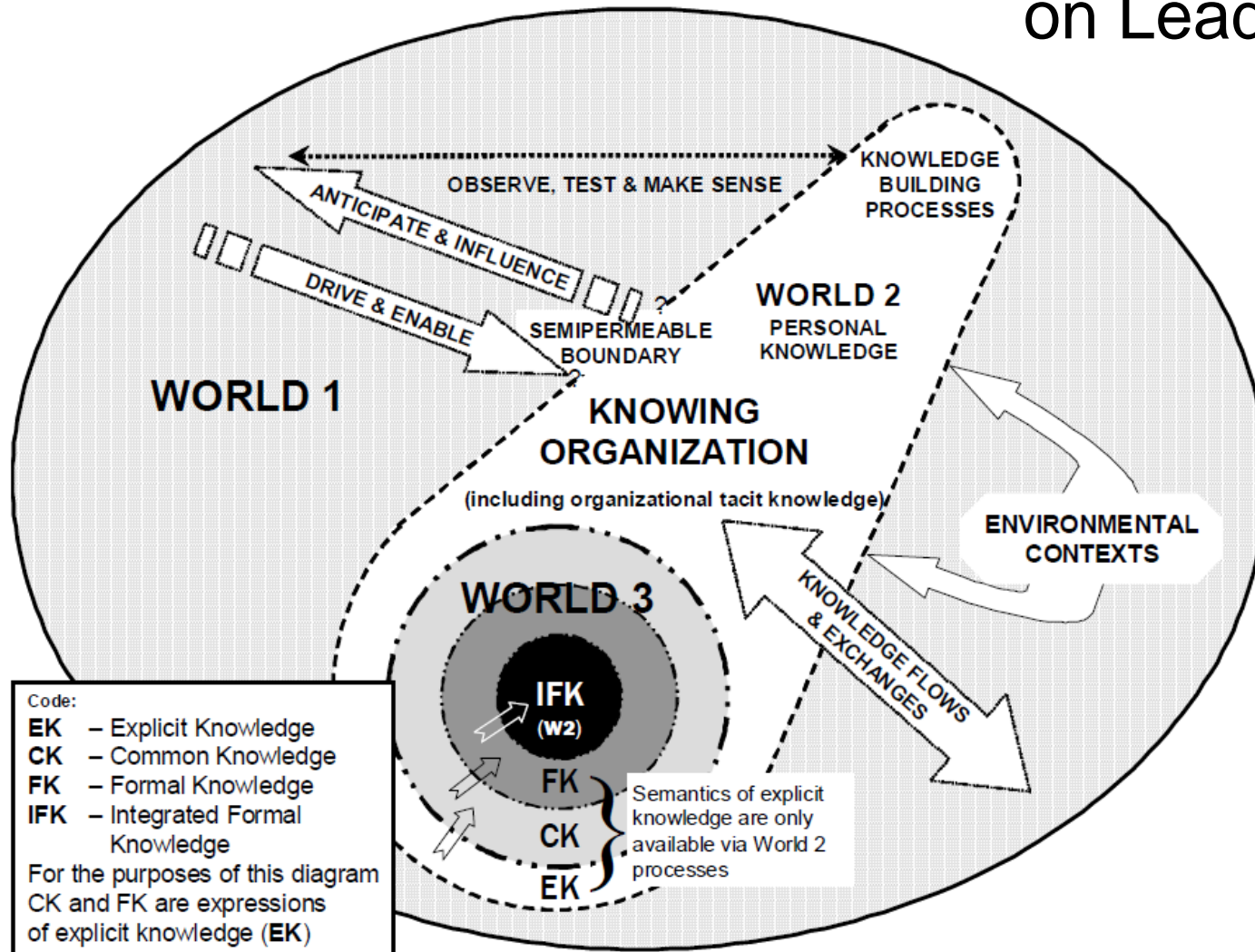
Karl Popper's three worlds (adapted from Hall, 2003):

Hall, W.P. 2003 Organisational autopoiesis and knowledge management. Presented, ISD '03 Twelfth International Conference on Information Systems Development - Methods & Tools, Theory & Practice, Melbourne, Australia, 25 - 27 August, 2003 - http://tinyurl.com/85q6uen.

Karl Popper's Three Worlds

World 1 Existence/Reality Knowledge *(Contexts)*	Types of school, Organizational structure, Educational Policies Directives/Initiatives Curriculum Assessment/Examinations
World 2 Organismic/Personal Knowledge	Cybernetic, Cognition, Consciousness, Beliefs Values
World 3 Objective Knowledge	Expressed languages Content of training package Documented Processes

Ng, D.F.S. (In press): Leadership Learning Through the Lens of Complexity Theory. *Human Systems Management*

Karl Popper's Three Worlds

Ng, D.F.S. (In press): Leadership Learning Through the Lens of Complexity Theory. *Human Systems Management*

Thank You