MODELING THE RELATIONSHIP BETWEEN HEADTEACHERS’ LEADERSHIP STYLES AND SELF-EFFICACY WITH TEACHERS’ SELF- AND COLLECTIVE EFFICACY

Ioannis Savvides & Petros Pashiardis

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Presentation outline

- Introduction
- Literature review
- Research questions
- Significance of the study
- Methodology
- Results
- Discussion and interpretations
- Implications and recommendations
Introduction

The education system in Cyprus

✅ Centralised educational system
  - Enforcement of educational laws
  - Preparation of educational bills
  - Prescription of syllabi, curricula and textbooks
  - Regulation and supervision of educational institutions

✅ Ministry of Education and Culture: run by the Minister, followed by the Permanent Secretary
Introduction (2)

The education system in Cyprus (2)

✓ 345 primary schools
✓ 4250 teachers approx.
✓ 50 000 students approx.
✓ Teachers: University graduates, government employees, job security, relatively well-paid
✓ Headteachers: Teachers being promoted by “birth certificate”, not adequately trained before assuming the post
✓ Frequent transfers of teachers and headteachers
✓ No substantial funds available to the head (except from a very small amount for emergency repairs/buys)
Introduction (3)

- Which aspects of the individual determine work and other behaviours of headteachers and teachers in schools?
- What motivates such behaviours?
Introduction (4)

- Multiple answers can be given to these questions because
  - individuals are complex personalities and
  - human behaviour is multidimensional and can be the object of multidisciplinary study

- Exploration of their beliefs and motivations
Introduction (5): Aim of the study

To investigate the relationship between headteachers’ leadership styles and self-efficacy with teachers’ self- and collective efficacy in primary schools in Cyprus

- by testing a theoretical model
- by developing valid and reliable scales (for measuring the variables of the model) adapted to the educational context of Cyprus
Introduction (6): Definitions

**Self-efficacy**
*A person’s belief in his/her capabilities to carry out certain tasks successfully.*

**Collective efficacy**
An individual’s judgment on the collective capabilities of a group to structure a particular course of action in order to produce desired outcomes.
It is argued that teachers’ beliefs are more important than their directly observed behaviours have been linked with high student achievement are the key in every effort for change and school improvement

Importance of efficacy beliefs
Literature review (2)

Why efficacy?

✓ Efficacy beliefs are decisive for
  ➢ the goals set by individuals,
  ➢ the effort they expend,
  ➢ the length of their perseverance in the face of difficulties and
  ➢ their resilience to failure.

✓ Efficacy beliefs determine the level of motivation.
So far, research on self-efficacy has shown:

- its importance on teachers’ performance and student achievement
- the important role that school headteachers can play in creating the necessary conditions for increased levels of self-efficacy
- judgment of personal efficacy affects one’s choice of activities
- beliefs about self-efficacy determine the level of motivation
Self-efficacy and collective efficacy: important constructs for the study of organizational behaviour. Inadequately addressed within the context of educational organizations.

Prior research focused on teachers’ and students’ efficacy beliefs.

Relatively few attempts to explore the issue of headteachers’ self-efficacy.

Studies that examine the relationship between headteachers’ self-efficacy and their leadership behaviours are totally absent from the literature.

Recent focus on collective efficacy as a school trait.
Literature review (5)

✓ Heads’ behaviours and actions contribute to the formation of high self and collective efficacy beliefs.

✓ Bolman and Deal’s frames of leadership
  ✓ Indicates the complexity of contemporary leaders’ work
  ✓ Provides a multiperspective frame for the study of leadership behaviours and actions
  ✓ Includes elements from various leadership theories
  ✓ Applied to educational organisations
The theoretical model

Leadership styles

- Structural style
- Human style
- Political style
- Symbolic style

School level

- Teachers' self-efficacy
- Teachers' collective efficacy

Teacher level

- Headteachers' self-efficacy
Research questions

1. Are there valid and reliable instruments for assessing headteachers’ leadership styles, headteachers’ and teachers’ self and collective efficacy beliefs within the specific context of public primary schools in Cyprus?

2. Is there any relationship between headteachers’ self-efficacy and their leadership styles?

3. Is there a relationship between headteachers’ self-efficacy and teachers’ self- and collective efficacy?

4. Is there any relationship between teachers’ self- and collective efficacy?

5. Is there any relationship between headteachers’ leadership styles and teachers’ self- and collective efficacy?
Significance of the study

1. A multidisciplinary approach of an educational leadership issue (Leadership and Psychology)
2. Originality of the conceptual model
3. Largely unexplored area: Efficacy beliefs and leadership in schools
4. Development of valid and reliable instruments
5. School leadership studies in Cyprus: Unidimensional focus (headteachers’ effectiveness)
6. Global originality (study of heads’ leadership styles and self-efficacy)
Methodology: Stages

Sequential Explanatory Strategy (Creswell, 2003)

1. Collection and analysis of quantitative data
2. Collection and analysis of qualitative data
3. Interpretation of results

Straightforward design, easy implementation, description and reporting of results
## Methodology (2)

<table>
<thead>
<tr>
<th>Stages</th>
<th>Actions</th>
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</thead>
</table>
| 1<sup>st</sup> | ✓ Development and validation of heads’ and teachers’ self and collective efficacy instrument  
✓ Development of interview (heads and teachers) and observation protocols |
| 2<sup>nd</sup> | ✓ Formulation of two questionnaires (one for headteachers, one for teachers)  
✓ Face and content validity checks  
✓ Pilot administration of questionnaires- Generalizability and construct validity checks  
✓ Pilot test of interview (heads and teachers) and observation protocols |
| 3<sup>rd</sup> | ✓ Finalization of questionnaires, administration and data collection (main stage) |
## Methodology (3)

<table>
<thead>
<tr>
<th>Stages</th>
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</table>
| 4<sup>th</sup> | ✓ Statistical analysis of quantitative data for validity, reliability and generalizability checks  
✓ Development of structural equation models |
| 5<sup>th</sup> | ✓ Four case studies (observation and semi-structured interviews) |
| 6<sup>th</sup> | ✓ Qualitative data analysis |
| 7<sup>th</sup> | ✓ Comparison of quantitative and qualitative data analysis for interpretation purposes |
Methodology (4): Sampling

Teachers and headteachers of public primary schools (with 10+ teachers) in Cyprus

**Stratified sampling** (quantitative data)
114 (113) heads
1697 (1177) teachers

Purposeful sampling for the selection of cases (qualitative data)
4 primary schools- Case studies
Methodology (5): Data analysis

**QUAN**

- Descriptive & inferential stats
- Instrument validation: One-way ANOVA, non-parametric Kendall’s W, Exploratory - Confirmatory Factor Analysis, Cronbach alpha (SPSS, EQS)
- Test of the theoretical model: Structural Equation Models (SPSS, EQS, Mplus)

**QUAL**

- Cross-case analysis
- Phenomenological analysis
- Constant comparative method
Results: Means, SD & reliability coefficients of the instruments

<table>
<thead>
<tr>
<th>Variables</th>
<th>M</th>
<th>SD</th>
<th>Cronbach $\alpha$</th>
<th>Original number of items</th>
<th>Final number of items</th>
</tr>
</thead>
<tbody>
<tr>
<td>Headteachers’ self-efficacy (single factor) *</td>
<td>5.21</td>
<td>.76</td>
<td>.90</td>
<td>14</td>
<td>12</td>
</tr>
<tr>
<td>Teachers’ self-efficacy (single factor) *</td>
<td>4.89</td>
<td>.79</td>
<td>.80</td>
<td>9</td>
<td>7</td>
</tr>
<tr>
<td>Teachers’ collective efficacy (single factor) *</td>
<td>4.88</td>
<td>.82</td>
<td>.83</td>
<td>9</td>
<td>8</td>
</tr>
<tr>
<td>Structural leadership style**</td>
<td>2.75</td>
<td>.43</td>
<td>.86</td>
<td>6</td>
<td>4</td>
</tr>
<tr>
<td>Human leadership style**</td>
<td>2.73</td>
<td>.47</td>
<td>.91</td>
<td>6</td>
<td>5</td>
</tr>
<tr>
<td>Political leadership style**</td>
<td>2.42</td>
<td>.36</td>
<td>.82</td>
<td>6</td>
<td>4</td>
</tr>
<tr>
<td>Symbolic leadership style**</td>
<td>2.05</td>
<td>.41</td>
<td>.86</td>
<td>6</td>
<td>4</td>
</tr>
</tbody>
</table>

*Scale 1-7 (1=none, 7= fully)

**Scale 1-4 (Ordinal) (1= the style that characterizes heads the least, the style that characterizes heads the most)
Results (2): Parameter estimates for the multilevel structural model

Leadership styles

- structural style
- human style
- political style
- symbolic style

School level

Teacher level

Teachers’ self-efficacy

Teachers’ collective efficacy

Headteachers’ self-efficacy

Parameter estimates:

$\chi^2 = 4.55$
$df = 13$
$x^2/df = 0.35$
$p = 0.55$
$RMSEA = 0.007$
$CFI = 0.992$
Results (3): QUAL Data Analysis

- Analysis of the interviews with four headteachers
- Analysis of the interviews with teachers
- Analysis of school observation in each case (school)
- Comparative analysis based on the selection criteria of the cases (headteachers’ self-efficacy, collective teachers’ efficacy)
- In many instances the qualitative data analysis confirms the theoretical model
- Some results beyond the theoretical model
Results (4): QUAL Data Analysis (2)

- Interviews with headteachers
  - Personal traits and views
  - Heads’ self-efficacy
  - Heads’ leadership styles
  - Factors influencing the school and the head’s work
  - Other head’s actions and competences

- Interviews with teachers
  - Teachers’ self-efficacy
  - Teachers’ collective efficacy
  - Heads’ leadership styles
  - Other head’s actions and competences

- Observation
  - Heads’ leadership styles
  - Other head’s actions and competences
Discussion and interpretations

- Discussion in the light of existing theories and prior research
- Interpretations not exhaustive
- Consideration of the context in which participants acted
- Headteachers’ self-efficacy and teachers’ self- and collective efficacy scales: an important result
- Empirical confirmation of the integrated model of Tschannen-Moran et al. (1998)
  - Evaluation of personal and collective competences
  - Job analysis
  - Evaluation of available resources and constraints in the specific school context.
Discussion and interpretations(2)

✓ Empirical development of valid and reliable efficacy scales in Cyprus
✓ Use of self-evaluation instruments in a context that lacks an evaluation culture
✓ Development of self-evaluation instruments that facilitate the identification of self and school development needs (Bandura, 2006· Pajares, 1997· Skaalvik & Skaalvik, 2007· Tschannen-Moran et al,1998)
Discussion and interpretations(3)

Leadership styles instrument

✓ In the final structural equation model correlations were found among the four leadership styles, contrary to Bolman & Deal’s theory

✓ Difficulty in measuring leadership styles using the translated “Leadership Orientations (Other)” instrument

✓ Another two studies in Cyprus could not validate the first part of the above “Leadership Orientations (Other)” instrument

✓ Qualitative results raise questions about the theoretical framework of Bolman & Deal
Discussion and interpretations (4)

✓ Competing styles
✓ Situational leadership models
✓ Bolman & Deal’s criticism on situational leadership models
✓ Bolman & Deal’s framework: another situational leadership model?
✓ Deficiencies in Bolman & Deal’s model?
Discussion and interpretations (5)

Positive relationship teacher self – and collective efficacy: teachers level only

✓ Prior research: Powerful relationship between teachers’ self- and collective efficacy (Goddard & Goddard, 2001 · Skaalvik & Skaalvik, 2007)

✓ Teachers in high collective efficacy schools feel that it is expected from them to function at the same high level and succeed. Therefore, they try harder

✓ Qualitative analysis confirms the positive relationship, thus enhancing the internal validity of the study
Discussion and interpretations (6)

**Statistically significant effect of the symbolic leadership style on the aggregated collective efficacy of teachers**

- Higher predictive validity of aggregated collective efficacy
- Effect on the collective and not on self-efficacy as a result of the focus of headteachers on the teachers as a faculty and not on individual teachers
- Small effect as a result of the low validity of the leadership styles instrument
- Interpretation based on the centralization, the absence of personnel stability and the lack of adequate training of headteachers in the educational system of Cyprus
Discussion and interpretations (7)

Why only the symbolic leadership style has an effect on the aggregated collective efficacy of teachers

✓ Symbolic leadership style

- Development of a sense of shared purpose, collective action, commitment and unique identity
- Creation conditions that enhance motivation
- Use of symbols, routines and rituals
- Formation of shared attitudes, beliefs and behaviours

COLLECTIVE EFFICACY
Discussion and interpretations (8)

Leadership style and heads’ self-efficacy

✓ **Structural and political** styles: Significant effect on heads’ self-efficacy beliefs

✓ **Structural style**: Bureaucracy theory- Expectations of the education system for heads- Duties and responsibilities of heads

✓ **Political style**: Centralized nature of the education system in Cyprus- low sensitivity in the contextual needs of individual schools- Need for the establishment of support networks- Resource availability
Implications and recommendations

For educational policy and practice

✓ Utilization of self- and collective efficacy scales for formative evaluation purposes

✓ Policies and practices for enhancing collective efficacy in schools:
  ▪ Opportunities for success (mastery experiences), models of good practice (vicarious experience), positive feedback (social persuasion), support networks
  ▪ Exercise of symbolic leadership (heads training)
  ▪ Heads efficacy (Training, mentoring, mastery, modeling)
  ▪ Re-organization of school units (increased autonomy, reduction of bureaucracy)
  ▪ Personnel stability
Implications and recommendations (2)

For future research

✓ Restrictions

- Conceptual framework of leadership styles
- Causal relationships of the SEM within certain limits
- Subjectivity of the researcher in noting and coding facts
- Cases (schools) not representative of the school units in Cyprus
Implications and recommendations (3)

✓ Recommendations

- Collecting longitudinal data
- Re-define leadership styles or increase them
- Comparative research
- Replication with a different population (e.g. secondary heads and teachers)
- Expansion of the theoretical model with items that derived from the qualitative analysis
Thanks for being attentive ...

Self- efficacy in action!

Contact at: yiannis.savvides@ouc.ac.cy