



Heading for New Shores: Moving From Traditional to Modern Paradigm of Teacher Professional Development

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Theoretical Framework

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Professional development (PD) becomes increasingly important to prepare teachers for future challenges and demands of teaching (Darling-Hammond et al., 2009, 2017; Fischer et al., 2018; Hendriks et al., 2010; OECD, 2019)

PD paradigms (Borko et al., 2010; Darling-Hammond et al., 2017; Stein et al., 1999)

- **Traditional:** Learning as a transmissive process in which knowledge is passed on from one person (teacher educator) to another person (teacher)
- **Modern:** Learning as an active, (co-)constructive, self-controlled process

PD strategies

PD paradigms differ in the way teachers assemble their PD activities

- Traditional: **Less diversified PD strategy** – seen as **less effective**
- Modern: **More diversified PD strategy** – seen as **more effective**

Few teachers engage in PD on a regular and extended basis across their professional career (Dede & Eisenkraft, 2016)

=> call for teachers to **pursue more diversified PD strategies** (Borko et al., 2010; Darling-Hammond et al., 2017; Desimone & Garet, 2015; Powell & Bodur, 2016)

Factors associated with teachers' PD (Krille, 2020; Kwakman, 2003; Lipowsky & Rzejak, 2015)

- Teacher characteristics (e.g., work engagement, time in profession)
- Contextual factors (e.g., financial compensation, time constraints)

Research Questions

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(RQ1) Which level of diversification in PD strategies do teachers show?

(RQ2) Which teacher characteristics and school contextual factors are associated with PD strategies?

(RQ3) Do teachers change their PD participation strategy over time? If so, how can these changes be described, and which teacher characteristics and school contextual factors are related to these changes?

Sample

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Teachers from NEPS Data Starting Cohort Grade 5 (doi:10.5157/NEPS:SC3:8.0.1) and Starting Cohort Grade 9 (doi:10.5157/NEPS:SC4:10.0.0)

$N = 3,539$ teachers (63% female, age: $M = 44.28$ years [$SD = 11.33$])

- t_1 (2010): $n_{t1} = 2,238$ teachers
- t_2 (2011): $n_{t2} = 1,701$ teachers
- t_3 (2012): $n_{t3} = 785$ teachers

Statistical Analyses

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(RQ1) Latent class analyses (at t_1)

Measures

- Information on participation in seven different PD activities (had [= 1] or had not [= 0] participated); e.g., PD1 = courses/workshops, PD5 = working group for PD; PD7 = mentor programs/training programs

(RQ2) Multivariate multiple linear regression models (at t_1)

Dependent variables (DV)

- Probabilities (pb) for a specific PD strategy ($0 \leq pb \leq 1$)

Predictors (selection)

- Work engagement (7 items, $\alpha = .70$)
- Collaboration (3 items, $\alpha = .83$)
- PD leave (i.e., paid temporary leave from teaching; single item)

(RQ3) Multiple logistic regression models

Dependent Variables (DV):

- **Ascent** indicated whether a teacher changed from a less to a more diversified PD strategy across all three measurement points (= 1) or not (= 0)
- **Descent** indicated whether a teacher changed from a more to a less diversified PD strategy across all three measurement points (= 1) or not (= 0)

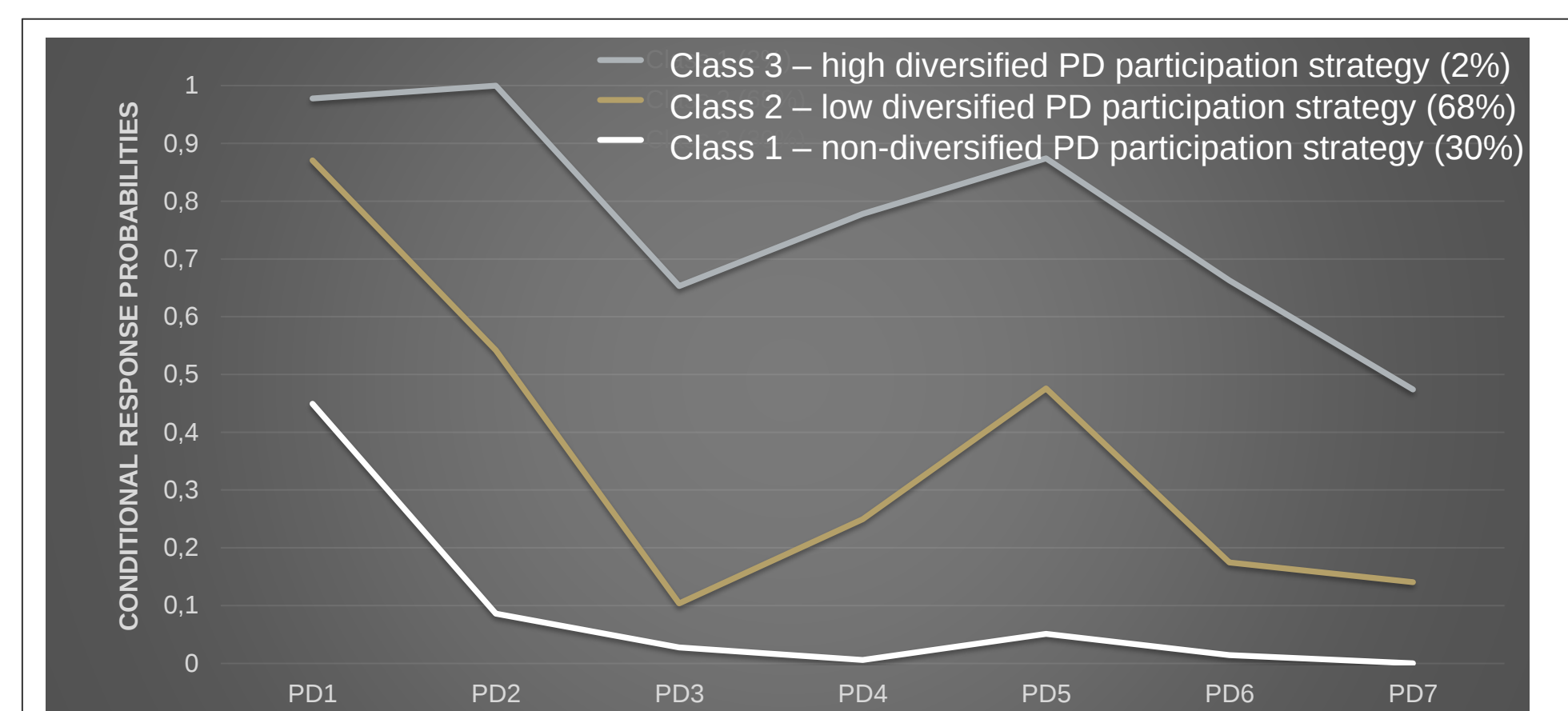
Same predictors and control variables as for RQ2

Results

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(RQ1)

Three different PD strategies are identified!



(RQ2)

Work engagement and PD leave predicted teachers' PD strategies!

DV: Probability for non-diversified PD strategy ($R^2_{adj} = .192$)

- Work engagement: $\beta = -.284$, $SE = .048$, $p < .001$
- PD leave: $\beta = -.218$, $SE = .028$, $p < .001$

DV: Probability for low-diversified PD strategy ($R^2_{adj} = .111$)

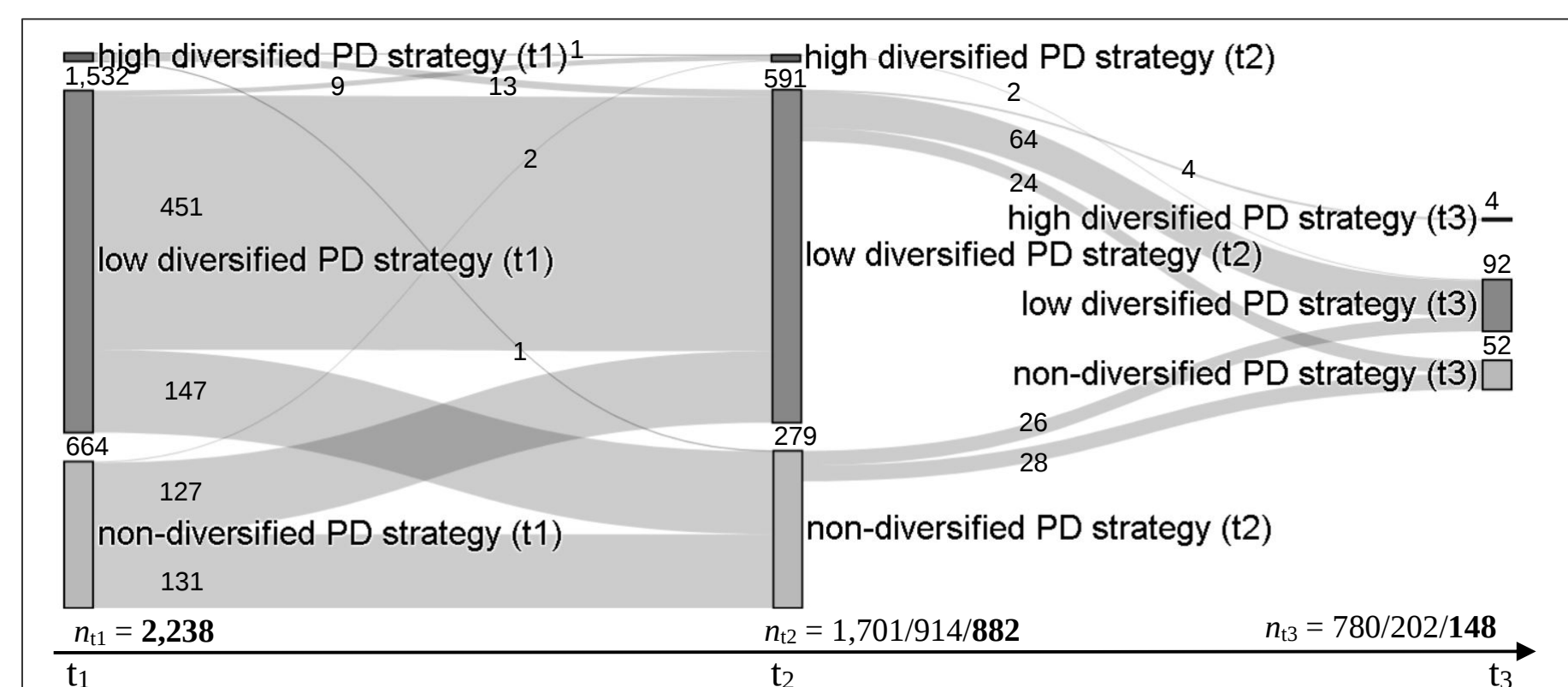
- Work engagement: $\beta = .207$, $SE = .050$, $p < .001$
- PD leave: $\beta = .203$, $SE = .028$, $p < .001$

DV: Probability for high-diversified PD strategy ($R^2_{adj} = .084$)

- Work engagement: $\beta = .191$, $SE = .049$, $p < .001$
- PD leave: $\beta = .038$, $SE = .019$, $p = .038^\dagger$

(RQ3)

- 34% of teachers changed their PD strategy (across 3 years)
- Work engagement and PD leave prevented teachers from "downgrading" their PD strategy



DV: Descent ($R^2 = .389$)

- Work engagement: $\beta = -.392$, $SE = .077$, $p < .001$
- PD leave: $\beta = -.104$, $SE = .044$, $p = .018^\dagger$

Key References

- Blossfeld, H.-P., Roßbach, H.-G., & von Maurice, J. (Eds.). (2011). Education as a lifelong process – The German National Educational Panel Study (NEPS). [Special Issue]. *Zeitschrift für Erziehungswissenschaft*, 14(2).
- Borko, H., Jacobs, J. K., & Koellner, K. (2010). Contemporary approaches to teacher professional development. In P. Peterson, E. Baker, & B. McGaw (Eds.), *International Encyclopedia of Education* (3rd ed., pp. 548–556). Elsevier. <https://doi.org/10.1016/B978-0-08-044894-7.00654-0>
- Darling-Hammond, L., Hyler, M. E., & Gardner, M. (2017). Effective teacher professional development. Learning Policy Institute. <https://learningpolicyinstitute.org/product/effective-teacher-professional-development-report>

[†] Not statistical significance after correction according to Benjamin and Hochberg (1995)