

KURIANT NACIONALINĘ ŽMOGIŠKŲJŲ IŠTEKLIŲ SISTEMĄ: PEDAGOGŲ POREIKIO PROGNOZAVIMAS

CREATING THE NATIONAL HUMAN RESOURCE SYSTEM: FORECASTING THE TEACHER NEED

21st January, 2019

PROJECT DESIGN

Aim	To improve the balance between the number of students enrolled into initial teacher training programmes and the actual need for teachers at schools in Lithuania.
Outputs	<ol style="list-style-type: none">1. Short-term (1 year) and mid-term (4 year) forecasts on new teacher demand.2. Recommendations on student admission to ITT programmes and other recommendations related to balancing the oversupply and shortage in the teacher workforce.
Implementation	<ul style="list-style-type: none">• Model creation - MOSTA project “The Implementation of Skilled Labor Supply Analysis and Monitoring System“, European Social Fund.• Technical assistance - Structural Reform Support Service (SRSS), European Commission.

SYSTEM STAKEHOLDERS

Primary data sources	Teachers Register	Pupils Register	Student Register
Regularly updated database	Education Management Information System (EMIS)		
Planning model owner	Research and Higher Education Monitoring and Analysis Centre (MOSTA)		
Analysis and recommendations	Research and Higher Education Monitoring and Analysis Centre (MOSTA)		
	Expert Group		
Users	Policy makers	HEIs	Municipalities, schools Society

MODEL CRITERIA



Data driven

Model uses data from the register of teachers and tax authorities as an input and provides quantitative projections or forecasts.



Flexible

The model allows analytics test scenarios by changing model inputs.



Automated

The model is updated annually and requires as little human-driven data mining as possible.



Relevant

The model allows flexible inputs that reflect changes in teacher training system and in general education.



Applicable

Model results are used to provide recommendations for changes in policy.



Open

The framework, input/output indicators and modelling steps are open and transparent to a wider society.

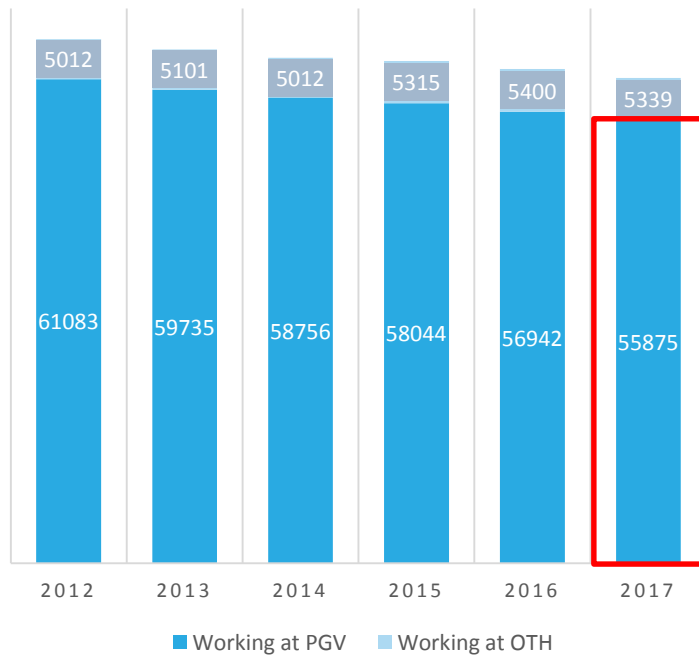


Detailed

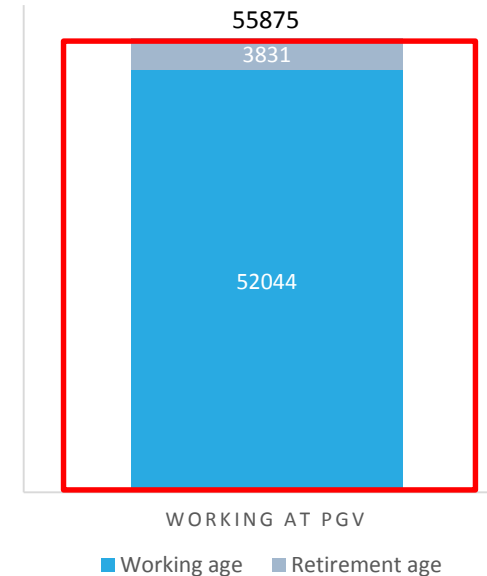
The model results are provided by agreed level of detail.

SCOPE: PRE-SCHOOL, GENERAL AND VOCATIONAL

TEACHERS AND STAFF BY INSTITUTION TYPE



BY AGE GROUP



Working PGV – pedagogical staff member with at least one record of employment at either pre-school, general or vocational education school.

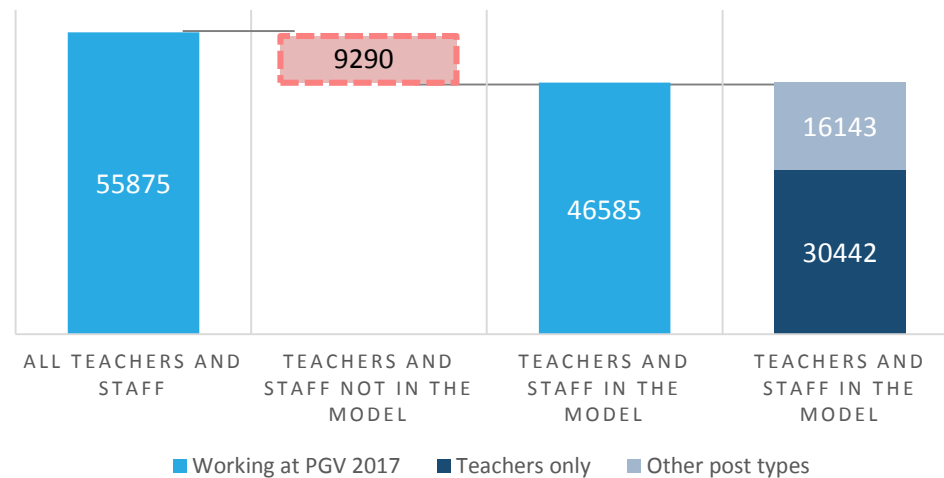
Working OTH – pedagogical staff member with at least one record of employment at non-formal education provider and no records of employment at either pre-school, general or vocational education school.

MODEL SCOPE: SPECIALISATIONS

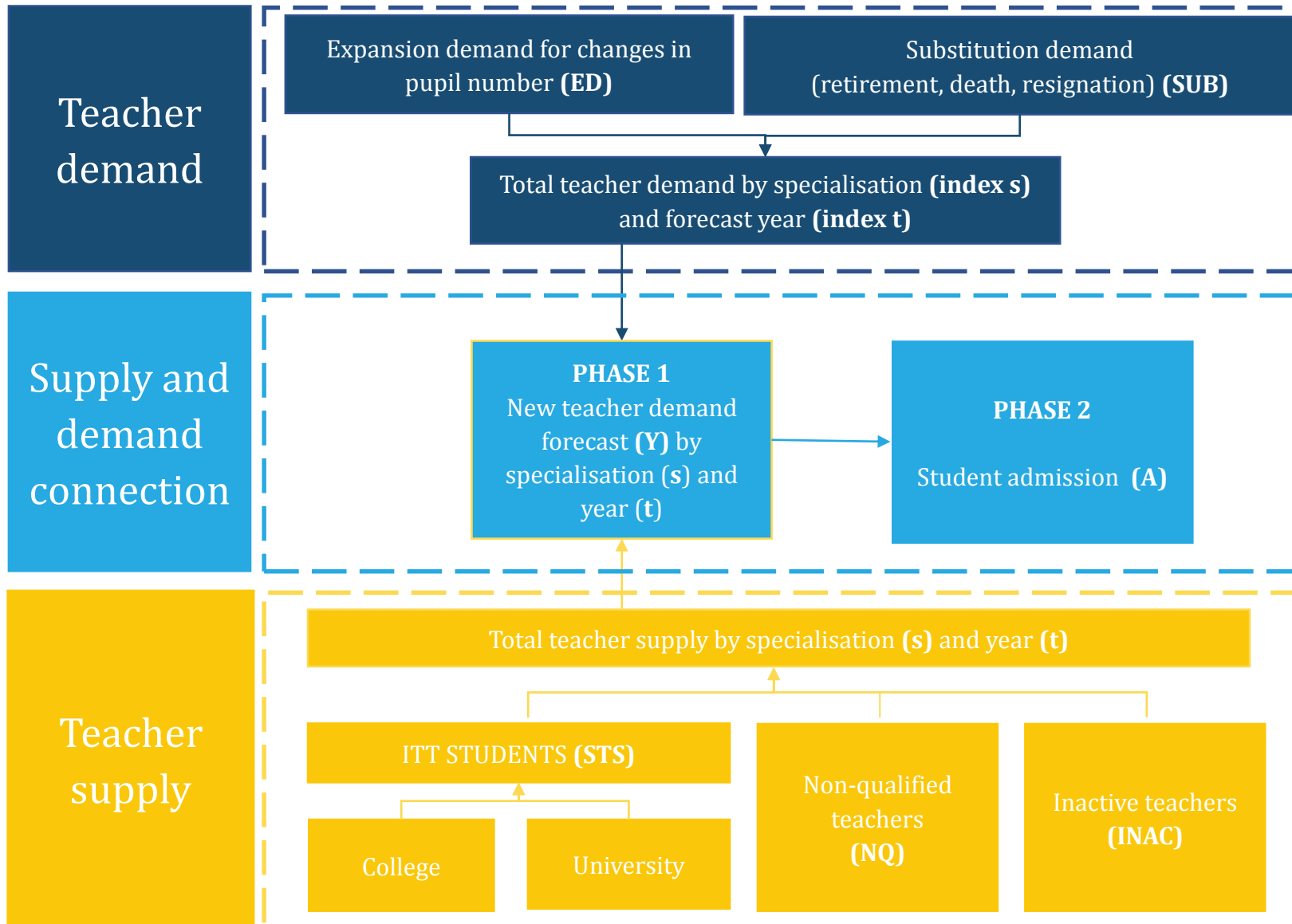
SPECIALISATIONS NOT IN THE MODEL	UNIT
Integrated subject teacher	teaching hours
Other art discipline teacher	teaching hours
Non-formal education teacher	teaching hours
Profession teacher (vocational school)	teaching hours
Principal or other manager	FTE
Other pedagogical staff member	FTE
Artistic training teacher	FTE
Assistant psychologist	FTE
Sports coach	FTE

SPECIALISATIONS IN THE MODEL	UNITS	WEIGHTED UNIQUE
Pre-school tutor	FTE	10744
Speech therapist	FTE	1133
Pre-primary (grade 0) class teacher	FTE	1920
Psychologist	FTE	580
Social educator	FTE	1102
Teacher for children with special needs	FTE	665
Biology teacher	teaching hours	683
Chemistry teacher	teaching hours	536
Art teacher	teaching hours	790
Religion education or Ethics teacher	teaching hours	1368
Economics teacher	teaching hours	340
Physics teacher	teaching hours	657
Nature and Human Being teacher	teaching hours	339
Geography teacher	teaching hours	703
Native language (other) teacher	teaching hours	252
History teacher	teaching hours	975
IT teacher	teaching hours	908
Physical education teacher	teaching hours	1756
Lithuanian language teacher	teaching hours	2861
Mathematics teacher	teaching hours	2083
Music teacher	teaching hours	1704
Optional subject teacher	teaching hours	2265
Basics of Civil Education teacher	teaching hours	342
Primary school (grade 1-4) teacher	teaching hours	5664
Subject for children with special needs teacher	teaching hours	17
Technologies teacher	teaching hours	1251
Foreign language (English) teacher	teaching hours	2982
Foreign language (Other) teacher	teaching hours	1538
Human Safety teacher	teaching hours	427

WEIGHTED UNIQUE 2017



FORECASTING MODEL FRAMEWORK



SCENARIO TESTING AND MODELING

1.

3 different scenarios (baseline; scenario 1; scenario 2).
Publicly available.

2.

New scenario creation based on built-in assumptions.
Publicly available.

3.

Modeling of certain model elements as an input to the new
teacher demand forecast. Publicly available.

4.

New scenario and assumption creation. Available only for
model creators. To be determined by the work/ expert
group.

PILOT PROJECT RESULTS AND AN INTERACTIVE TOOL

ABOUT THE PROJECT, INTERIM DOCUMENTS, MEETING REPORTS AND OTHER

<https://mosta.lt/lt/apie-mosta/vykdomi-projektai/pedagogu-pronozavimas>

FINAL REPORT (ENGLISH)

<https://mosta.lt/images/pedagogai/2018-11-07-Forecasting-the-Teaching-Workforce-in-Lithuania.pdf>

INTERACTIVE TOOL:

https://mosta.lt/images/pedagogai/MODEL_v3_public_v1_secured.xlsx



Mokslo ir studijų stebėsenos ir analizės centras
www.mosta.lt