



Scientix, the community for science education in Europe

“Is there a shortage of STEM teachers in Europe?” C. Kearney (Author)

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Introduction

The article [“Is there a shortage of STEM teachers in Europe?”](#) complements the report **“Efforts to increase students’ interest in pursuing science, technology, engineering and mathematic studies and careers”**, the latest in a series of reports about national efforts to increase students’ interest in pursuing STEM studies and careers.

- **Full report**

<http://www.scientix.eu/web/guest/observatory/comparative-analysis-2015>

- **Executive Summary**

<http://files.eun.org/scientix/Observatory/ComparativeAnalysis2015/Kearney-2016-NationalMeasures-30-countries-2015-Executive-Summary.pdf>

Both the reports and the article are written within the framework of the project **Scientix -the community for Science education in Europe** (<http://www.scientix.eu>)-coordinated by European Schoolnet.



Theoretical Framework/Research Question

- In the 2015 report “Efforts to increase students’ interest in pursuing Science, Technology, Engineering and Mathematics studies and careers” (Kearney, C.) the **situation regarding STEM teachers at school level** across Europe was investigated, with regard to **current or planned initiatives in place to recruit more STEM teachers at national level**.
- The article “**Is there a shortage of STEM teachers in Europe?**” explores whether or not there is (1) a **perceived shortage of STEM teachers at national level in countries across Europe**, (2) **whether there is evidence to support such claims** as well as (3) **the reasons for this shortage in different European countries**.

Methodology

- The article reports on two recent information gathering activities which took place during February – March 2016:
 - 1) **a questionnaire to Scientix National Contact Points** concerning whether there is a shortage of STEM teachers at national level and asking the reasons for this; and
 - 2) **an online survey to the Scientix Teachers Panel** concerning the situation of STEM teacher recruitment in their own school and local schools.



Methodology

Important to note:

- ✓ These surveys were part of an **informal information gathering exercise, carried out on a voluntary basis**, meaning that not all countries are accounted for
- ✓ **The level of detail** provided by the answers varies from country to country, as do the **information sources** used
- ✓ Thus, this article is **unable to give a comprehensive and accurate view of the situation in each country in Europe.**

However, the added value of the article is that it provides a useful snapshot of the overall situation in Europe that can serve as a basis for further research on the same topic.



Methodology

- Data was provided by:

1) 16 Scientix National Contact Points (the Netherlands, France, Finland, Turkey, Cyprus, Estonia, Malta, Poland, Romania, Slovenia, Croatia, Czech Republic, Ireland, Spain, Switzerland and Latvia) who answered the short survey concerning the situation at national level.

2) 33 Scientix teachers from the same group of countries who answered the survey focusing on the situation from their local perspective. No teachers from the Netherlands or Malta answered the survey.



Results

- Out of the 16 NCPs:

1) Four countries expressed that **there is a lack of STEM teachers at national level** (the Netherlands, France, Finland and Turkey).

2) Six countries (Cyprus, Estonia, Malta, Poland, Romania and Slovenia) remarked that at national level there is **no shortage of STEM teachers**.

3) Six countries (Croatia, Czech Republic, Ireland, Spain, Switzerland and Latvia) state that they are **not able to determine** whether or not there is a shortage of STEM teachers at national level, often because such data is not collected at national level.



Analysis/Conclusions

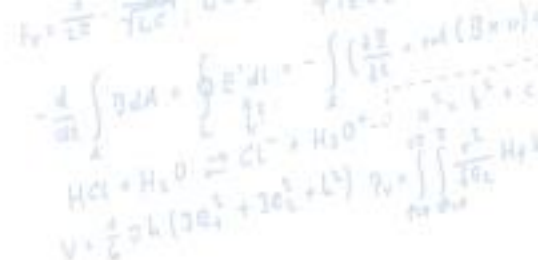
- Overall, the results of this article demonstrate that the situation concerning STEM teachers varies across Europe.
- Four countries (France, the Netherlands, Turkey and Finland) mentioned that there is **currently a shortage at national level**, while six countries (Cyprus, Estonia, Malta, Poland, Romania and Slovenia) stated **this is not the case**, even though some of these countries highlighted the **approaching retirement of STEM teachers as likely to result in a STEM teacher shortage in the near future**.
- Out of the 16 countries analyzed, the majority (56%) stated that data concerning a potential shortage of STEM teachers is **not collected at national level. Paired with a prediction of a shortage of STEM teachers in the future**, it is advisable **for countries to put instruments in place in order to collect data** to observe important trends and to provide their national governments with solid evidence to justify investing in measures to tackle the problem.



Analysis/Conclusions

- The majority of countries (both at national and local level) highlighted the **low salary of teachers in their countries as a major reason for many STEM graduates not choosing to enter the profession.**
- The only type of financial incentive identified by the Kearney Report were **scholarship schemes available in a small number of countries** (Israel, Slovakia and Hungary), aimed at attracting students to study STEM teaching at university.
- As well paid jobs in this sector are set to continue to expand, STEM graduates will increasingly have a selection of highly stimulating and well remunerated jobs to choose from. Governments will have to **invest in higher teaching salaries to ensure a long-term commitment of highly educated graduates ready to contribute to this profession.**





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