

Science education and Science communication in Agrometeorology – Time for paradigm changes?

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CA20108 FAIRNESS FOR SE&SC

Motivation:

- SE&SC failure during pandemics (anti vaccine campaign), CC skepticism...
- Awareness of educational methodology importance

Outline:

- Intro
- SE&SC purpose

Science education = science **in** education

OR

Science education = education **of** science (physics, biology, chemistry)?

“To prosper in this modern age of **innovation** requires the capacity to grasp the essentials of diverse problems, to recognise meaningful patterns, to retrieve and apply relevant knowledge. **Science education** has the potential for helping the development of the required abilities and understanding by focusing on developing powerful **ideas of science** and **ideas about the nature of scientific activity** and its **applications.**” (*The InterAcademy Partnership (IAP)*)

Science education

- education based on scientific facts;
- education introducing scientific methods and new scientific findings;
- education that embraces the importance of both STEM and social sciences (arts, literature etc.) for individual development regardless of the subject.

Science communication

"What is science communication?"

Science communication is an umbrella term for the practice of informing and inspiring the public about scientific knowledge. Science communication comes in a range of forms, from documentaries, books, and podcasts to mass media journalism and public talks."

Why we need science education and why we need it in agrometeorology, **especially?**

Science education is an integral part of the education process

At the end of the day, do we have engaged, enthusiastic students looking forward to the next class, keen on learning more?

At the end of schooling, is the labor market really satisfied with most young people coming from university?

This labor market should face some of the greatest challenges of the 21st century, such as food security, adaptation to climate change, vector-borne diseases, and climate-smart urban living through greener cities and enhanced urban agriculture.

No matter how you approach these challenges,
agrometeorology is an inevitable element of the response.

“The four purposes of public education are economical, cultural, social, and personal”
(Sir Ken Robinson)

Purposes of SE in AgM

Economical. Through acquired knowledge and skill, SE should set the ground for economical independence for students (future employees) and economic benefit for employers

What sort of SE we need for that?

What sort of SE we need for that?

IBM study of 1700 CEOs from 17 countries

The adaptability of employees and companies

The creativity of employees. It is the key element of a successful enterprise.



Children's University | Education | News

Round table on critical thinking

25 May 2018 | 190 views

At Jovan Jovanović Zrnaj Grammar School in Novi Sad, with 3rd year students, we organized a round table on critical thinking.

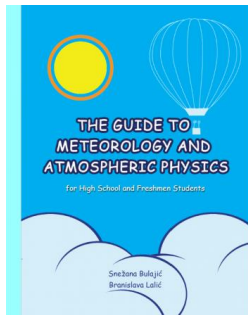
Approximately 20 students attended the event, and discussion lasted 1.5 hours. As a starting point we presented two opposite sides from the climate changes debate (alarmist vs. denierist). We went through several prominent arguments from both sides and analyzed how and to what extent they distort scientific facts. Towards the end we discussed general critical thinking skills: what are they and how they can be applied.



Personal.

RRI additional topics.

Keep **ethics, governance**, open access, public engagement, and gender. They are future food producers, health officers, governing bodies members.

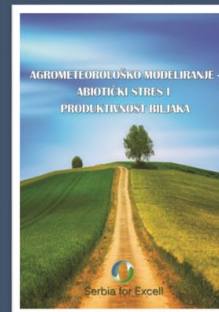


The Guide to
Meteorology and Atmospheric Physics
for High School and Freshmen Students
in English



BRANISLAVA LALIĆ, JOSEF EITZINGER,
ANNA DALLA MARTA, SIMONE ORLANDINI,
ANA FIRANJ ŠREMAC, BERNHARD PÄCHER

AGRICULTURAL
METEOROLOGY AND
CLIMATOLOGY



Teaching material for PFNS students
for improved curricula

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| | УНИВЕРЗИТЕТ У НОВОМ САДУ, ПОЉОПРИВРЕДНИ ФАКУЛТЕТ 21000 НОВИ САД, ТРГ ДОСИТЕЈА ОБРАДОВИЋА 8 |
| | СТРУКТУРА СТУДИЈСКИХ ПРОГРАМА |

Изборно подручје - модул: КЛИМАТСКЕ ПРОМЕНЕ-ПРИЛАГОЂАВАЊЕ БИЉНЕ ПРОИЗВОДЊЕ

Организација студија: Семестар

| Р.Бр. | Шифра | Назив предмета | Б | Тип | Активна настава | | | | Остали часови | ЕСПБ | |
|-------------|-----------|--|---|-----|---|-------|-------|-------|---------------|-------|-------|
| | | | | | П | В | СИР | ДОН | | | |
| ПРВА ГОДИНА | | | | | | | | | | | |
| 1 | 19.ZB9001 | Принципи експерименталног рада | 1 | ТМ | 2.00 | 0.00 | 1.00 | 0.00 | 0.00 | 5.00 | |
| 2 | 19.ZB9001 | Климатске промене и екстремне временске прилике | 1 | НС | 3.00 | 2.00 | 0.00 | 0.00 | 0.00 | 5.00 | |
| 3 | 19.ZB9002 | Физиолошки одговори биљака на промене еколошких фактора | 1 | НС | 3.00 | 2.00 | 0.00 | 0.00 | 0.00 | 5.00 | |
| 4 | 19.ZB9010 | Изборни предмет 9 (Бира се 2 од 6) | 1 | | 6.00 | 4.00 | 0.00 | 0.00 | 0.00 | 10.00 | |
| | 19.ZB9007 | Климатске промене и инсекти | 1 | НС | 3.00 | 2.00 | 0.00 | 0.00 | 0.00 | 5.00 | |
| | 19.ZB9008 | Моделирање у биљној производњи и заштити биља | 1 | СА | 3.00 | 2.00 | 0.00 | 0.00 | 0.00 | 5.00 | |
| | 19.ZB9009 | Новe технологије | 1 | СА | 3.00 | 2.00 | 0.00 | 0.00 | 0.00 | 5.00 | |
| | 19.ZB9010 | Мере адаптације на климатске промене у биљној производњи | 1 | НС | 3.00 | 2.00 | 0.00 | 0.00 | 0.00 | 5.00 | |
| | 19.ZB9011 | Земљиште и мере управљања за пољопривреду прилагођену климатским променама | 1 | НС | 3.00 | 2.00 | 0.00 | 0.00 | 0.00 | 5.00 | |
| | 19.ZB9012 | Наводњавање и климатске промене | 1 | НС | 3.00 | 2.00 | 0.00 | 0.00 | 0.00 | 5.00 | |
| | | | | | Укупно часова по виду настава у блоку | 14.00 | 8.00 | 1.00 | 0.00 | 0.00 | |
| | | | | | Укупно часова активне настава и ЕСПБ у блоку | | | | | 23.00 | 25.00 |
| | | | | | Укупно часова настава у блоку | | | | | 23.00 | |
| 5 | 19.ZB9004 | Теоријске и експерименталне основе мастер рада | 2 | ТМ | 0.00 | 0.00 | 10.00 | 0.00 | 0.00 | 10.00 | |
| 6 | 19.ZB9005 | Стручна пракса | 2 | СА | 0.00 | 0.00 | 0.00 | 0.00 | 6.00 | 5.00 | |
| 7 | 19.ZB9006 | Завршни рад | 2 | СА | 0.00 | 0.00 | 10.00 | 0.00 | 3.00 | 20.00 | |
| | | | | | Укупно часова по виду настава у блоку | 0.00 | 0.00 | 20.00 | 0.00 | 9.00 | |
| | | | | | Укупно часова активне настава и ЕСПБ у блоку | | | | | 20.00 | 35.00 |
| | | | | | Укупно часова настава у блоку | | | | | 29.00 | |
| | | | | | Укупно часова по виду настава у години | 14.00 | 8.00 | 21.00 | 0.00 | 9.00 | |
| | | | | | Укупно часова активне настава и ЕСПБ у години | | | | | 43.00 | 60.00 |
| | | | | | Укупно часова настава у години | | | | | 52.00 | |



Science communication

- **Medium-and-form-of-information-transfer challenge**
- **SC trainings are focused on social media use to transfer "science information,,**
- **Scientist + journalist = Science communication articles**
- **Microtargeting**