



Open Access & Open Data & Tulosten suojaus Horisontti 2020 - ohjelmassa.

Liisa Ewart

Lakimies

Sopimus- ja kustannusasioiden NCP

VTT 27.3.2017

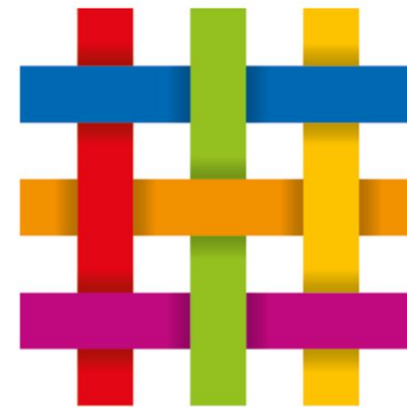
HORISONTTI 2020

EU:n tutkimus- ja innovaatio-ohjelmat

Desca -mallisopimuksen kohdan 8.4. ohje

Dissemination

Be aware that one of the main new features of H2020 is the obligation to make all publications of results available under open access, Article 29.2 MGA, and that open access to data may be foreseen, optional clause 29.3 MGA.



DESCA
Horizon 2020 Model
Consortium Agreement
www.DESCA-2020.eu

[Versio 1.2](#)
[Maaliskuu 2016](#)

HORISONTTI 2020
EU:n tutkimus- ja innovaatio-ohjelmat



Open Access **pilotti** 7PO:ssa

- Erikoislauseke 39

Open Access tieteellisille julkaisuille **pakollinen** Horisontti 2020:ssa

- Avustussopimus artikla 29.2

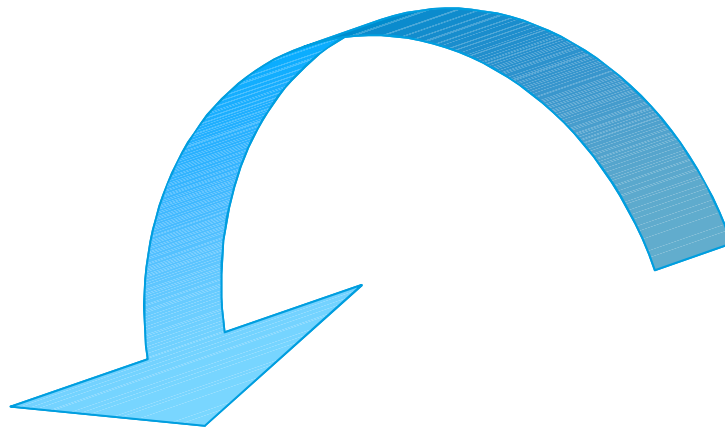
Open Access tutkimusdataalle **pilotti** Horisontti 2020:ssa

- Avustussopimus artikla 29.3 Open access to research data (*option*)

Open Access tutkimusdataalle **pääsääntö**Horisontti 2020:ssa

- Avustussopimus artiklaa 29.3 ei ole muutettu
- “new annotations” 25.11.2016





Guidelines available in
Participant Portal
H2020 Online Manual

Guidelines to the Rules on Open Access to Scientific Publications and Open Access to Research Data in Horizon 2020

Version 3.2
21 March 2017



Open access tieteellisiin julkaisuihin

- a) **Tallennettava** julkaisun koneluettava julkaistu versio tai rinnakkaisarvioitu versio (final draft)
- b) **Vahvistettava open access** tallennetulle julkaisulle
 - Julkaisussa, jos elektroninen kopio on saatavissa korvauksetta
 - Kuitenkin viimeistään 6 kk julkaisusta (12 kk social sciences and humanities)
- c) **Vahvistettava open access bibliographic metadataan**

Huom:

Vihreä tie = rinnakkaistallennus sekä
Kultainen tie = open access -julkaisu
ovat molemmat hyväksytyjä

HORISONTTI 2020

EU:n tutkimus- ja innovaatio-ohjelmat



OPEN ACCESS PUBLISHING


"final draft"

NOVICE STUDENT PROGRAMMING MISCONCEPTIONS 1

Abstract

This paper presents a study aimed at examining the novice student answers in an introductory programming final e-exam, to identify misconceptions and types of errors. Our study used the Delphi Concept Inventory (DCI) to identify student misconceptions and Skill, Rule, and Knowledge (SRK) based errors approach to identify the types of errors made by novices in Python programming. The students' responses to each question were scrutinized by using the DCI, heuristic-analytic theory and Neo-Piagetian theory of cognitive development for qualitative data analysis. Moreover, the motivation for this exploratory study was to also address the misconceptions that students held in programming, and help educators to redefine the teaching methods to correct those alternative conceptions. Student misconceptions were spotted in list referencing and inbuilt functions in Python. In a further quantitative analysis the study found that students who had misconceptions, made knowledge errors and failed to complete the coding tasks. Surprisingly, and coincidentally, it was identified that only a few students were able to write code related to mathematical problems.

Keywords: Delphi's CI, Programming courses, ~~VILLE~~, Exam, Student misconceptions, Taxonomy of errors



Article

Journal of Educational Technology Systems
2016, Vol. 45(1) 50-73
© The Author(s) 2016
Reprints and permissions:
sagepub.com/journalsPermissions.nav
DOI: 10.1177/0047239515627263
ets.sagepub.com

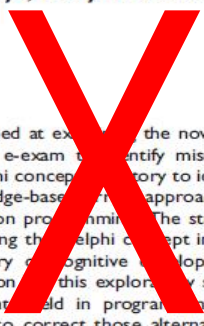
Identifying Novice Student Programming Misconceptions and Errors From Summative Assessments

Ashok Kumar Veerasamy¹, Daryl D'Souza², and Mikko-Jussi Laakso¹

Abstract
This article presents a study aimed at examining the novice student answers in an introductory programming final e-exam to identify misconceptions and types of errors. Our study used the Delphi concept inventory to identify student misconceptions and skill, rule, and knowledge-based errors approach to identify the types of errors made by novices in Python programming. The students' responses to each question were scrutinized by using the Delphi concept inventory, heuristic-analytic theory, and neo-Piagetian theory of cognitive development for qualitative data analysis. Moreover, the motivation for this exploratory study was to also address the misconceptions that students held in programming and help educators to redefine the teaching methods to correct those alternative conceptions. Student misconceptions were spotted in list referencing and inbuilt functions in Python. In a further quantitative analysis, the study found that students who had misconceptions made knowledge errors and failed to complete the coding tasks. Surprisingly, and coincidentally, it was identified that only a few students were able to write code related to mathematical problems.

¹Department of Information Technology, University of Turku, Finland
²School of Computer Science and Information Technology, RMIT University, Melbourne, Australia

Corresponding Author:
Ashok Kumar Veerasamy, Department of Information Technology, University of Turku, Turku 20014, Finland.
Email: ashok.veerasamy@utu.fi



Millainen tallennus on hyväksyttävä H2020:ssä?

“A repository for scientific publications is an online archive.”

- Organisaatiokohtainen
- Asia-/alakohtainen
- Keskitetty
- Kansallinen
- Kansainvälinen
 - ...eli H2020 ei rajaa arkistojen/kirjastojen “laatua”
- Rahoituksensaajien **ei pitäisi valita** arkistoa, joka
 - Vaatii oikeuksia julkaisuun
 - Estää vapaan pääsyn julkaisuun
- Komissiolla mallilauseke julkaisusopimukseen rinnakkaistallentamisen mahdollistamiseksi (**new!** 20.3.2017)

HORISONTTI 2020

EU:n tutkimus- ja innovaatio-ohjelmat



Kustannukset

- Kaikki avoimen julkaisemisen kustannukset ovat hyväksyttäviä suoria kustannuksia H2020-projektissa, kunhan ne aiheutuvat projektin kuluessa.
- OpenAIRE-projektin budjetissa varoja korvata projektin jälkeisiä projektiin liittyviä open access –kuluja liittyen 7PO:aan. Ns. OpenAIRE "GOLD OA Pilot" (Niin kauan kun varoja riittää – 4M€). Hakuohjeet ja hakulomake: <http://blogs.helsinki.fi/openaire2020/>



Open Research Data Pilot (extension)

- Kaikkiin H2020-ohjelman teemoihin. (New!)
- Ei sovellu:
 - "co-fund" and "prizes" instruments
 - "ERC proof of concept" grants
 - "ERA-Nets" that do not produce data
 - SME instrument, phase 1



Mitä on tutkimusdata?

- 'Research data' refers to information, in particular **facts or numbers**, collected to be examined and considered and as a basis for reasoning, discussion, or calculation. In a research context, examples of data include statistics, results of experiments, measurements, observations resulting from fieldwork, survey results, interview recordings and images. The focus is on research data that is available in digital form.
- **Source:** http://ec.europa.eu/research/participants/data/ref/h2020/grants_manual/hi/oa_pilot/h2020-hi-oa-pilot-guide_en.pdf



Open access tutkimusaineistoihin

- a) **Tallentaa** tutkimusaineisto digitaaliseen arkistoon
 - Data ja metadata tutkimustulosten jälkikäteiseksi arvioimiseksi
 - Data management plan (pakollinen!)

- b) **Tarjota tieto menetelmistä ja työkaluista** tulosten arvioimiseksi



Opt Out

Kokonaan tai osaksi, ennen tai jälkeen avustussopimuksen allekirjoituksen

Hyväksytyt/pakolliset perusteet

- Suojaaminen kaupallisesti tai teollisesti potentiaaliselle tulokselle
- Security –vaatimukset
- Henkilötiedot
- Ristiriita projektin päätarkoituksen kanssa
- Projektissa ei synny tutkimusdataa
- Muut perusteltu syy



DMP

DMP



DMP

DMP

DMP



HORISONTTI 2020

EU:n tutkimus- ja innovaatio-ohjelmat

PROJECTS MUST HAVE

DATA
MANAGEMENT
PLAN
(DMP)

Provides information on:



the data the research
will generate



how to ensure its
curation, preservation and
sustainability



what parts of that data
will be open (and how)

Data management
costs are fully eligible
for funding

No repository imposed:
deposit data where
you want



Lähde: http://ec.europa.eu/research/press/2016/pdf/opendata-infographic_072016.pdf#view=fit&pagemode=none

HORISONTTI 2020

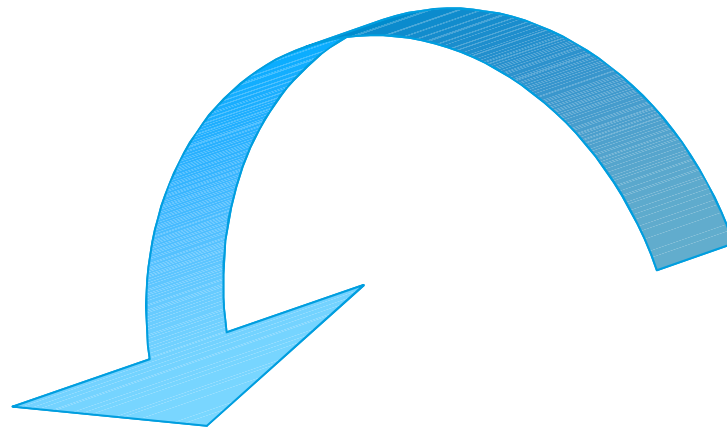
EU:n tutkimus- ja innovaatio-ohjelmat

FAIR Data

- F = Findable
- A = Accessible
- I = Interoperable
- R = Re-usable

Löydettävissä
Saavutettavissa
Yhteentoimiva
Uudelleenkäyttö





Guidelines available in
Participant Portal
H2020 Online Manual

H2020 Programme

Guidelines on FAIR Data Management in Horizon 2020

Version 3.0
26 July 2016



Aineistonhallintasuunnitelma

Data Management Plan



www.dmptuuli.fi

<https://dmponline.dcc.ac.uk/>

Pakollinen, kun säilytetään Opt-in.

Vapaaehtoinen ja suositeltava, kun Opt-out.

HORISONTTI 2020

EU:n tutkimus- ja innovaatio-ohjelmat



What's new



[Q&A session from the OpenAIRE webinar "Open Research Data in H2020 and Zenodo repository", 26 October 2016](#)

[Q & A Session OpenAIRE/EUDAT "Research Data Management - an introductory Webinar", 26 May 2016](#)



[Briefing Paper Research Data Management](#)



HORISONTTI 2020

EU:n tutkimus- ja innovaatio-ohjelmat

Data is a new oil

As open as possible,
as closed as necessary

