

## Using peer assessment in inclusive digital education

Saunders-Smits, Gillian; van Helden, G.; van der Werf, V.; Specht, M.M.

**DOI**

[10.5821/conference-9788412322262.1369](https://doi.org/10.5821/conference-9788412322262.1369)

**Publication date**

2022

**Document Version**

Final published version

**Published in**

Proceedings of the 50th Annual Conference Universitat Politècnica de Catalunya · BarcelonaTech (UPC)

**Citation (APA)**

Saunders-Smits, G., van Helden, G., van der Werf, V., & Specht, M. M. (2022). Using peer assessment in inclusive digital education. In H.-M. Jarvinen, S. Silvestre, A. Llorens, & B. V. Nagy (Eds.), *Proceedings of the 50th Annual Conference Universitat Politècnica de Catalunya · BarcelonaTech (UPC)* (pp. 2305-2308). (SEFI 2022 - 50th Annual Conference of the European Society for Engineering Education, Proceedings). <https://doi.org/10.5821/conference-9788412322262.1369>

**Important note**

To cite this publication, please use the final published version (if applicable).  
Please check the document version above.

**Copyright**

Other than for strictly personal use, it is not permitted to download, forward or distribute the text or part of it, without the consent of the author(s) and/or copyright holder(s), unless the work is under an open content license such as Creative Commons.

**Takedown policy**

Please contact us and provide details if you believe this document breaches copyrights.  
We will remove access to the work immediately and investigate your claim.



SEFI

SEFI ANNUAL CONFERENCE  
19-22 September 2022  
BARCELONA

# SEFI 2022

## 50th Annual Conference of The European Society for Engineering Education

19-22 September, Barcelona, Spain

Towards a new future in engineering education, new scenarios  
that European alliances of tech universities open up



# PROCEEDINGS





# **50th Annual Conference of The European Society for Engineering Education**

**19-22 September, Barcelona, Spain**



**Towards a new future in engineering education, new scenarios that European alliances of tech universities open up**

SEFI 50th Annual Conference  
Universitat Politècnica de Catalunya · BarcelonaTech (UPC)  
19 –22 September 2022

ISBN: 978-84-123222-6-2

**Editors:**

Hannu-Matti Järvinen, Santiago Silvestre, Ariadna Llorens and Balázs Nagy

**Managing editor:**

José Miguel Quiñones

Technical editor:

Ernests Edvards Zalitis



Except where otherwise noted, content on this work is licensed under a Creative Commons license : [Attribution-NonCommercial-NoDerivs 4.0 International](https://creativecommons.org/licenses/by-nc-nd/4.0/)

Printed by: Artes Gráficas Torres S.L., Huelva 9, 08940 Cornellà de Llobregat, Spain

*The manuscript was closed on 30 November 2022.*



## USING PEER ASSESSMENT IN INCLUSIVE DIGITAL EDUCATION

**G.N. Saunders-Smiths**<sup>1</sup>

Leiden-Delft-Erasmus Centre for Education and Learning,  
Delft University of Technology, Delft, the Netherlands

[0000-0002-2905-864X](https://orcid.org/0000-0002-2905-864X)

**G. van Helden**

Leiden-Delft-Erasmus Centre for Education and Learning,  
Delft University of Technology, Delft, the Netherlands

[0000-0001-6255-1797](https://orcid.org/0000-0001-6255-1797)

**V. van der Werf**

Leiden-Delft-Erasmus Centre for Education and Learning,  
Leiden University, the Netherlands

ORCID

**M.M. Specht**

Leiden-Delft-Erasmus Centre for Education and Learning,  
Delft University of Technology & Leiden University, the Netherlands

[0000-0002-6086-8480](https://orcid.org/0000-0002-6086-8480)

**Conference Key Areas:** *Digitalisation & Hybrid models, Assessment*

**Keywords:** *Peer assessment, Peer Evaluation, Hybrid Learning, Blended Learning*

### ABSTRACT

This workshop is part of the ERASMUS+ project: RAPIDE: on Relevant Assessment and pedagogies for Inclusive Digital Education (<https://rapide-project.eu>) and is open to anyone who is interested in implementing or improving peer assessment in their

---

<sup>1</sup> Corresponding Author: G.N. Saunders-Smiths - [G.N.Saunders@tudelft.nl](mailto:G.N.Saunders@tudelft.nl)



courses. At the end of the workshop, participants will be able to make an informed decision on a suitable form of Peer Assessment for their courses.

Over the past few years, many of us have faced operating in a frequently changing teaching environment which has made evaluating and assessing students' learning outcomes and more importantly giving students feedback on their learning much more complicated.

One pedagogical tool that has been increasingly used is that of peer assessments where students give each other feedback and assess each other's work.

In this workshop, participants will be introduced to many different types of peer assessment that can be used in engineering education, such as peer reviewing (each other's work), peer grading(continuous feedback on mastery), and peer evaluation (group work) whether face-to-face, hybrid or in a fully online environment and how to do so in an inclusive way thus maintaining the important safe place that education should be.

Participants will then in small groups discuss what types of peer evaluations they use or want to use in their courses and brainstorm on ideas for implementation in their own specific case or for one of the general cases that the facilitators will have available.

At the end of the workshop participants will present their main findings back to the whole group so that they may also learn from each other. We aim for participants to leave feeling inspired at the end of the workshop to implement or improve peer assessment in their own courses.

The aggregated main findings and ideas contrived in the workshop on how to implement peer assessment will also be shared with a wider audience through the conference proceedings and the RAPIDE project website.

---





## 1 INTRODUCTION

This workshop is part of the ERASMUS+ project: RAPIDE: on Relevant Assessment and pedagogies for Inclusive Digital Education (<https://rapide-project.eu>) and is open to anyone who is interested in implementing or improving (digital) Peer Assessment (PA) in their courses.

## 2 WHY THIS WORKSHOP?

With increasing student numbers entering Higher Education across the globe and with an increasing need for flexibility in how education is delivered, lecturers are in need of more digital tools to help them in their teaching. As the recent COVID-19 pandemic has shown us, lecturers must be able to almost seemingly switch between online, blended, flipped classroom (FC), or face-to-face education in the case of on-campus education. At the same time, similar tools are needed to support Work-Based Learning (WBL) and fully online or remote learning.

One area where lecturers can struggle to deal with both the required flexibility and the increasing student numbers is in the area of assessment. At our own institution, for instance, student numbers have increased by over 15% in the last four years. Next to the debatable, all-important grade, it is also important that students are provided with timely feedback on their performance and their deliverables if we want our students to truly learn and mature. However, this can have serious implications for the workload of the lecturers involved.

## 3 PEER ASSESSMENT AS A SOLUTION

One pedagogical tool that has been increasingly used is peer assessment, where students give each other feedback and assess each other's work. Being able to reflect and give and receive feedback are important transversal skills for engineering students to learn to enhance their employability [1]. Already in 1998, Keith Topping published a literature review on the use of Peer Assessment in Higher Education [2]. He defined PA as:

*“an arrangement in which individuals consider the amount, level, value, worth, quality, or success of the products or outcomes of learning of peers of similar status.”*  
(Topping, 1998, p.250 [2]).

Whereas PA in the 20<sup>th</sup> Century was very much a paper-based or verbal exercise, these days optimal use can be made of Virtual Learning Environments such as BlackBoard, Brightspace, Canvas or Moodle and the digital software tools available to educators when it comes to using PA.

## 4 WHAT WILL PARTICIPANTS LEARN & DO IN THE WORKSHOP?

In this workshop, participants will be introduced to different types of peer assessment that can be used in engineering education, whether face-to-face, hybrid or in a fully online environment and how to do so in an inclusive way thus maintaining the important safe space that education should be.

The main learning outcome at the end of the workshop will be that participants are able to make an informed decision on how to design or select an appropriate form of Peer Assessment for their course.





Participants will be introduced to the pros and cons of the different methods and which type of PA type is suitable for what educational activity, using some of the case studies developed in the RAPIDE project as an example.

Case studies to be covered are Peer Assessment in terms of reviewing students' products, peer grading where students grade each other's work and peer evaluation where students review each other's performance in group work

Participants will also learn about the requirements digital peer evaluation systems must meet to provide a safe and inclusive learning space as well as meet the various data protection requirements.

Participants will then in small groups discuss what types of peer evaluations they use or want to use in their courses and brainstorm on ideas for implementation in their own specific case or for one of the general cases that the facilitators will have available.

At the end of the workshop, participants will present their main findings back to the whole group so that each group may also learn from the other.

## 5 MAIN TAKEAWAYS

We aim for participants to leave feeling inspired at the end of the workshop to implement or improve peer evaluations and peer assessment in their own courses. Participants will also be provided with some of the resources developed within the RAPIDE project for them to take home with them and use when looking at implementing PA using digital systems in their own courses.

The aggregated main findings and ideas contrived in the workshop on how to implement peer assessment in courses will also be shared with a wider audience through the conference proceedings and the RAPIDE project website.

## REFERENCES

- [1] Leandro Cruz, M., "Measurement and Practice of Transversal Competencies in Engineering Education: Evaluation of Perceptions and Stimulation of Reflections of industry, lecturers and students," 2021. DOI: 10.4233/uuid:730e80b5-e567-494d-8bb2-df8c71e6de69
- [2] Topping, K., "Peer Assessment Between Students in Colleges and Universities," *Review of Educational Research*, vol. 68, no. 3, pp. 249–276, Sep. 1998, DOI: 10.3102/00346543068003249.