

Note

Introduction to the special issue: Addressing Complex Problems in Higher Education Talent Programs

Albert Pilot¹ and Ron Weerheijm²

1. Member Editorial Board, Utrecht University, The Netherlands, A.Pilot@uu.nl
2. Member Editorial Board, Rotterdam University of Applied Sciences, The Netherlands, ron@honorscouncil.eu

Correspondence: a.pilot@uu.nl

Published: December 29th 2023

--

1. Introduction

The Editorial Board is honored to present a new Special Issue of the Journal of the European Honors Council (JEHC), focused on Complex Problems in Higher Education Talent Programs.

The grand challenges of our time are so complex and/or multifaceted that they can best be addressed using innovative approaches, such as interdisciplinary or transdisciplinary approaches. Such approaches require crossing boundaries between perspectives and science domains. Talent programs in higher education (i.e. programs aimed at assisting talented students in accelerating their academic or professional growth) can provide particularly fruitful environments in which students can prepare themselves for handling complex challenges by familiarizing themselves with inter-/transdisciplinary problem-solving.

How students work on familiarizing themselves with inter/transdisciplinary problem-solving varies greatly within and between talent programs. This special issue of JEHC aims to provide a platform for educators, educational researchers and other stakeholders to showcase their efforts and share knowledge. The goal is to facilitate the exchange of both success stories and lessons learned that can help others to (further) develop their talent programs.

The aim of the Journal of the European Honors Council (JEHC) is to share research results, knowledge and good practices related to talent development in higher education. JEHC publishes peer-reviewed research papers, as well as notes on good practices or preliminary research results. It is published in open access. The author(s) retain(s) copyright of their contributions. Contributions are distributed under the terms of the Creative Commons Attribution 4.0 International License (CC-BY 4.0). The Journal's contents are archived through PKP PN and through depositing at the National Library of the Netherlands / Koninklijke Bibliotheek. Publishing in JEHC is free of charge (no article processing fee or other submission charges).

2. Contributions received for the special issue

The contributions originally received for the special issue share a focus on interdisciplinary and transdisciplinary higher education. We open this issue with a paper of a large group of authors from different universities in the United States of America. The ten authors belong to a group of honors professionals from 14 U.S. institutions that recently emerged to develop approaches to prepare students to address the world's grand challenges. This group of individuals in a sustained partnership had a shared passion and quickly began functioning as a team to prepare a recently funded federal higher education grant proposal. Over time the team has identified additional intellectual endeavors to shape the future of honors education. Members of this collaborative trust that they are *simul fortior* -better together- in this high-functioning and reciprocally beneficial working relationship. The article outlines also the benefits others may realize in forming similar collaboratives.

A second contribution is a book review by Albert Pilot of the book: *Meaningful Assessment in interdisciplinary Education, A Practical Handbook for University Teachers*. This book is Volume 7 of the Series *Perspectives on Interdisciplinarity*, mainly written by authors of the Institute for Interdisciplinary Studies (IIS). This Institute is the knowledge Centre of Interdisciplinary Learning and Teaching of the University of Amsterdam (UvA) in The Netherlands. The authors of this book stress that assessment is important as an integral building block of all learning, when assessment stimulates learning and is based on intrinsic motivation. The book includes twenty examples of assessment in higher education by teachers who in innovative ways assess competences of their students, like integration of disciplines, cooperation, reflection and critical thinking. Many examples are from honors programs in European Higher Education.

The third contribution comes from the Virginia Tech Honors College. Rachael Budowle and colleagues focus on the idea that complex problems of ten warrant collaborative and transdisciplinary approaches that provide a way to solve complex, urgent and global problems such as climate change and sustainability, that have long proven useful in higher education settings. Accordingly, honors programs increasingly aim to integrate complex problems into their curricula and to prepare students to work across disciplines. However, honors students tend toward perfection, often craving to achieve high grades within more rigid disciplinary trajectories. This note describes the specific path forged by the Virginia Tech Honors College to guide students through exploring complex, transdisciplinary problems, particularly with a

new Minor in Collaborative Discovery. The Philosophy of Teaching and Learning that aids in that transdisciplinary collaboration is described. This note finishes with a section on Mapping best practices in collaborative transdisciplinary risk-taking.

A second book review comes from Maria Garcia Alvarez. She reviews the book 'Creative Universities: Reimagining Education for Global Challenges and Alternative Futures.' Maria writes: "This book is a must read for any professional working in education, especially for those working in honors education, as this learning environments usually go deeper in challenging students to deal with complex societal issues." The author, Anke Schwittay proposes a pedagogy of hope: the critical-creative pedagogy. "How do we maintain hope at the same time avoiding sugar coating reality?" She is also critical with the neoliberal structures and mental models of western universities and the role that these universities have had in contributing to create and maintain colonization structures through Eurocentric knowledge production. She finishes with a section on the role of educators in this perspective.

A contribution from Norway describes the Norwegian Center for Interdisciplinary Education (INTED) at the University of Oslo. Line Horgen Thorstad and colleagues describe that interdisciplinarity in higher education is crucial for addressing complex issues such as sustainable development, and that the development and implementation of interdisciplinary curricula requires careful consideration of pedagogical and epistemological issues. As in many other universities, the University of Oslo is organized as an institution with strong disciplinary traditions. In 2019 the first honors program was established as one of the first larger education programs with the collaboration of three departments and with the intent to give students interdisciplinary competence. The INTED Center was established as a national and international hub for the research-based integration of interdisciplinary competence in higher education. It is a 10 year project, financed by the Ministry of Education and Research to establish a center for excellence to enhance the quality of Norwegian higher education. This contribution finishes with a description of the INTED Activities in 2023-2024 like interdisciplinary workshops, and the Interdisciplinary Facilitator Program, also gives an overview of the Research at INTED.

A Final contribution comes from Beata Jones from Texas Christian University in the USA. Beata focuses on Breaking Boundaries with Generative AI: Good Practice of Unleashing the Power of ChatGPT for Inter- and Transdisciplinary Breakthroughs in the Age of Complexity. Beata writes that "The next generation of complex problem solvers that engage in inter- and transdisciplinary inquires ia fostered in higher education using talent or honors programs. [...] Talent programs create an excellent setting for students to engage with complicated challenges and develop the aft of interdisciplinary and transdisciplinary problem-solving by offering tools, mentorship, and opportunity for cooperation in teams and across disciplines." Recently the conversations around generative AI in higher education began to shift to "expand our intellectual discourse and boost research" and that brings Beata to a section on ChatGPT Capabilities for Inter- and Transdisciplinary Breakthroughs. She finishes with a section on the Limitations of ChatGPT and on Helpful Frameworks for Implementing ChatGPT in Coursework and Conclusions.

Acknowledgments

The Editorial Board would like to thank Jorien Vugteveen at Hanze University of Applied Sciences Groningen (the Netherlands) for preparing and coordinating this special issue, and Hanze University of Applied Sciences Groningen (the Netherlands) for supporting the hosting of the journal.