IT TAKES THE ENTIRE UNIVERSITY COMMUNITY TO EDUCATE STUDENTS IN BECOMING ACADEMICS

ABSTRACT
Development of scientific thinking is considered an essential but challenging aim of academic studies. In practice, this challenge becomes evident when students begin preparing their theses. Therefore, proper guidance combined with suitable guidance methods are needed. Based on students' genuine necessities, a new collaborative model to implement guidance for students was developed at the Open Science Centre, Library at University of Jyväskylä, Finland. The model is constructed of three intertwined principles: 1) strengthening student agency, 2) producing diverse but explicit open access e-learning material and 3) cooperation across all academic guidance units.

STUDENT AGENCY is an interrelationship between a student and his/her learning environment. It is constructed of intertwined resources for purposeful learning in the context:

• Individual resources; students' self-efficacy and competence beliefs.
• Relational resources; experiences of emotional support, trust and equal treatment from the teacher.
• Participatory resources; students' experiences of being able to influence, make choices and be heard.

To accomplish this, content-based knowledge offering more space for disciplinary wonder and pedagogical processes that offer students possibilities to grow as human beings, are needed.

THE MODEL OF SYSTEMATIC INFORMATION SEEKING
SYSTEMATIC INFORMATION SEEKING is a central part of the scientific method. A model as well as a learning material aimed at guiding the process of information seeking in research was developed

• together with students and based on their questions, needs and experienced challenges.
• to help with academic processes.
• to support students' sense of self-efficacy.

The model is presented in Library Tutorial, an open access multi-channel e-learning material.

MINIMUM KNOWLEDGE IN BASIC STUDIES:
1) Concept analysis within own research orientation
2) Identifying and use of academic resources
3) Research data and copyright
4) Citing and good scientific practices

THE JYVÄSKYLÄ MODELS OF SHARED RESPONSIBILITIES FOR GUIDANCE IN LEARNING THE SCIENTIFIC METHOD
IN ADDITION TO THE FACULTIES, two Centres offer educational services to students during their master's studies:

• The Language Centre provides discipline-specific language and communication teaching (e.g. in academic reading and writing).
• The Open Science Centre, including the university library, addresses questions of information seeking, also concerning open science and research, especially regarding academic publishing and the management of research data.

THE MODEL OF SYSTEMATIC INFORMATION SEEKING AND THE JYVÄSKYLÄ MODEL OF SHARED RESPONSIBILITIES FOR GUIDANCE IN LEARNING THE SCIENTIFIC METHOD
• combine academic content and the work processes for different types of training and disciplines.
• visualise all stages and responsibilities needed in professional guidance of students.
• respond to students' multiple guidance needs.
• are tools for communal development, and avoiding the belief that it is someone else's job to train the process.

The models were developed by the Open Science Centre, and therefore expose the research process from the information seeking perspective.