

# **Master in Educational Sciences**

## **New track *Evidence-informed education***

### **Introduction**

The Master in Educational Sciences in Groningen has the aim to train and educate professionals at a master's level in such a way that they will possess solid theoretical and methodological knowledge and skills in the field of educational sciences. Graduates are expected to use their knowledge and skills in conducting good quality educational research and/or working in educational settings.

Currently, the master in Educational Sciences has four, Dutch-taught, specialization lines:

- a) Educational and student counselling;
- b) Learning environment, instruction and learning;
- c) Educational policy and organization;
- d) Educational improvement and innovation.

The last track, *Educational improvement and innovation*, had been recently developed (from academic year 2014-2015), mainly to accommodate the interests of master's students coming from the academic teacher training in Groningen (Academische Opleiding Leraar Basisonderwijs, AOLB).

In addition, up until academic year 2014-2015, the master in Educational Sciences offered the track *Educational effectiveness and instructional design*, which was open exclusively to international students. The track consisted of a combination of courses from different tracks of the (Dutch) master's programme, and courses offered exclusively for the international track. In the past few years, the international track has experienced a decline in the number of students, and has dealt with problems derived from the great heterogeneity of the students' initial skills (particularly those related to methodology and statistics). This led to a process of redesign intended to update the educational provision, and to improve the match between the international track and the other (Dutch-taught) tracks.

The new master track *Evidence-informed education* comes to replace both the track *Educational improvement and innovation* and the international track *Educational effectiveness and instructional design*. It will be an English-taught track, open to both Dutch and international students, and it has the potential to attract many new students, both internationally as well as from the academic teacher training programme.

### **1. Aims of the track**

The track Evidence-informed education intends to form graduates that have a state-of-the-art understanding of educational reforms and interventions that have demonstrated effects on student academic, meta-cognitive, socio-emotional and behavioural outcomes—consistent with the GION's aim to contribute to better education in ways that positively affect pupils' school trajectories. Not only will students be able to distinguish *what works from what doesn't*, but perhaps more importantly they will be able to critically assess the conditions under which these reforms and interventions are

successful. The probabilities of success of interventions—attested by improved outcomes—depend on processes that occur at different, nested layers of the educational structure: the *macro* level of policy development, the *meso* level of management and leadership within educational organizations, and the *micro* level of teaching and classroom processes. The core principle of the track is that, from macro- to micro-levels, stable educational improvement can only occur if a solid knowledge base feeds the educational practice. This occurs through a (continuous) process of gathering and using valid evidence to inform educational practice. Ultimately, students will be equipped to undertake evidence-informed educational improvement initiatives, at any level in which they will operate as professionals.

### Final qualifications

As a track of the Master in Educational Sciences, the new track Evidence-informed education shares to a great extent (at least 60%) the final qualifications defined for the programme as a whole, defined as follows:

#### *a) Content*

The student has knowledge and understanding of concepts and theories in educational sciences, and he/she specializes in one of the offered specializations. While applying this knowledge and understanding, the student is able to reflect on educational practices, and to critically evaluate their effectiveness.

#### *b) Methods and techniques*

The student has knowledge and understanding of techniques and methods in social sciences research, and is able to conduct a complete research cycle.

#### *c) Academic skills*

The student can report—both verbally and in writing—on scientific educational research conducted by him/herself, and is able to debate the results of this research.

Specific to this track will be the following aims at the *content* level:

- a) The student has state-of-the-art knowledge of educational reforms and interventions that have demonstrated effects on student academic, meta-cognitive, socio-emotional and behavioural outcomes;
- b) The student can critically judge the interrelated roles of the diverse levels of the educational structure in educational improvement initiatives, and is knowledgeable of the strategies and instruments that can be used for data-driven management and policy-making;
- c) The student can design, undertake, and rigorously evaluate evidence-informed educational improvement initiatives;
- d) The student adopts an evidence-informed stance towards educational improvement whilst being aware of the challenges involved.

### Entry moments

The track will be organized with two entry moments, September and February. In practice, however, this may only be applicable to Dutch students, as in our experience international students usually depend on scholarships that run on fixed academic years.

## 2. How are the aims achieved?

The track comprises a full set of courses that cover the intended goals. The division of the total 60 EC required for graduation is the same as in the other tracks of the master: 30 EC correspond to courses, 10 EC to tutor-group and traineeship, and 20 EC to the Master thesis. Table 1 lists the course offer in the track, indicating with a double asterisk (\*\*) those courses that are newly developed, and with a single asterisk (\*) courses that are redesigned from courses already taught in the master's programme. These new courses are briefly described below.

Table 1: Course offer Evidence-informed education track

Course	EC
** Introduction to evidence-informed education	5
Methods and techniques for evaluation-research	5
* Evidence-informed organizational management	5
* Evidence-informed teaching and instructional design	10
** Capita Selecta	5
Internship	5
Tutor-group	5
Master thesis	20

Description of newly developed courses:

Introduction to evidence-informed education (5 EC): This course offers an advanced and comprehensive introduction to the programme. The focus of the course—and connecting thread of the track—is the issue of bridging research and educational practice. Students will reflect on the goals and processes of educational improvement at diverse levels (macro, meso and micro) of the educational structure, and will work on formulating a sound theory of change and improvement plan on a defined outcome. Central will be the issue of collecting valid evidence to attest that change, and the usage of that evidence to feedback the practice. Also concerns related to the implementation of educational improvement initiatives will be examined, such as fidelity of implementation, variation of impacts and scalability. Finally, critique to the evidence-informed approach to educational practice will be reviewed and evaluated.

Evidence-informed organizational management (5 EC): The starting point of this course is that there are diverse approaches to school organization, which derive from different theoretical viewpoints on organizations. Particular attention is paid to the contingency theory, which posits that the optimal structure of an organization and the most effective way to coordinate work processes depends on internal and external factors of the organization. These theoretical underpinnings are discussed in the light of research evidence on the role of school organization, leadership and culture on educational quality.

Evidence-informed instructional design and classroom processes (10 EC): An assumption of this module is that ultimately educational change oriented to improve students' outcomes occurs in the classroom. In this course students will get acquainted with theories of and empirical evidence on the effectiveness of diverse approaches to instructional design and the effects of classroom processes on different student outcomes. At least three types of outcomes will be covered: academic outcomes, defined as those related to school subjects such as math or literacy; meta-cognitive and self-regulatory outcomes, such as those related to the monitoring and control of learning and executive functioning; and socio-emotional and behavioural outcomes, such as those related to peer relations and general adjustment to school.

Capita Selecta (5 EC): This course aims at deepening the students' understanding of available research evidence on an educational topic of his/her choice. The course requires the student to conduct a scientific literature review on an educational topic, which can be either at a macro, meso or micro educational level. The literature review can also cover methodological topics that relate to the issue of evidence-informed education. Students will be guided in the identification of a literature review research question, the procedures related to the search and appraisal of relevant literature, and the systematic synthesis of research evidence. Beyond deepening students' understanding on the chosen topic, the course methodology promotes the acquisition of relevant skills for the implementation of evidence-informed educational initiatives, such as locating relevant evidence, judging its quality and synthesizing results.

### **3. How are the aims assessed?**

#### Courses

Each course will have its own assessment criteria and methods, which will comply with the Dublin descriptors for the second cycle. Lecturers will define the specific goals for each course and the assessment methods that best reflect the accomplishment of those goals. Within this autonomy, lecturers will be requested to comply with the general goals defined for the master track. Therefore, all courses within the track will have a common thread that connects specific contents with the general track goals.

#### Tutor-group, traineeship and Master thesis

The setup and assessment of tutor-group, traineeship and Master thesis will be the same as in the other existing tracks. These are described in separate documents.