

A photograph of a woman with long blonde hair and glasses, wearing a light-colored jacket, standing in a library. She is reaching up to a high shelf to handle a book. The shelves are filled with books, and the scene is bathed in a warm, golden light. The image has a circular pattern overlay.

**Report on the research review of
Pedagogical Sciences and
Educational Sciences
2012 – 2017**

Report on the research review of Pedagogical Sciences and Educational Sciences 2012 – 2017

Maastricht University
University of Amsterdam
Leiden University
University of Groningen
Utrecht University, Faculty of Social and Behavioral Sciences
Utrecht University, Faculty of Science
Open University of the Netherlands
Interuniversity Center for Educational Sciences (ICO)

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Preface

The University of Amsterdam, the University of Groningen, Leiden University, Maastricht University, the Open University of the Netherlands, and Utrecht University as well as the National Research School: Interuniversity Centre for Educational Sciences (ICO) agreed to be assessed concerning their research in pedagogical sciences and educational sciences. This report presents the results of this assessment.

The report follows the Standard Evaluation Protocol (SEP) 2015 - 2021, published under the authority of the Association of Universities in the Netherlands (VSNU), the Netherlands Organisation for Scientific Research (NWO), and the Royal Netherlands Academy of Arts and Sciences (KNAW). The review committee was composed of scholars from various countries and with different academic backgrounds. The work of the committee was supported by De Onderzoekerij.

As chairman of the committee I like to thank the management, staff and PhD students of the institutes for their presentations and the open and honest discussions. Furthermore, I like to thank the members of the committee for their hard but always trustful work. Finally, I like to thank Esther Poort and Meg van Bogaert. Esther Poort coordinated the review; Meg van Bogaert collected the preliminary assessments, served as the secretary of the committee during the site visit in Utrecht, and prepared the report. She did truly great work.

Detlev Leutner
Chair of the Committee



1. The review committee and the review procedures

1.1 Introduction and scope of the review

In accordance with the Standard Evaluation Protocol (SEP) 2015-2021 (Appendix 1) the research in Educational Sciences and Pedagogical Sciences covering the period of 2012–2017, is being reviewed by an external peer review committee. This research review is part of the six-year cycle of evaluation of research in all Dutch universities. Of the fourteen Dutch Universities seven conduct research in Pedagogical Sciences and thirteen in Educational Sciences. Although not all universities decided to participate in this national review, the review committee was given a broad overview of the research in Pedagogical Sciences and Educational Sciences in the Netherlands. The following research institutes participated:

- Research Institute of Child Development & Education, University of Amsterdam;
- Nieuwenhuis Institute for Educational Research, University of Groningen;
- Institute of Education and Child Studies, Leiden University;
- Department of Education & Pedagogy Utrecht University, Faculty of Social and Behavioral Sciences;
- Freudenthal Institute, Utrecht University, Faculty of Sciences;
- Welten Institute, Open University of the Netherlands;
- School of Health Professions Education, Maastricht University.

In addition, the National Research School: Interuniversity Centre for Educational Sciences (ICO) is being reviewed.

In accordance with the SEP the review committee's tasks were to assess the quality of the research conducted by the institutes and their relevance to society as well as their strategic targets and the extent to which they are equipped to achieve them. In addition, the review committee provides qualitative feedback on the PhD programmes, research integrity and diversity aspects of the institutes. The review committee was furthermore invited to write a review on the performance of Dutch Pedagogical Sciences and Educational Sciences from an international perspective and considering international trends. This review is provided in Chapter 2 of this report.

The panel received detailed information consisting of the self-evaluation reports of the institutes under review, including all the information required by SEP (including appendices), key publications for each research institute and general information on Pedagogical Sciences and Educational Sciences in the Netherlands.

1.2 Composition of the review committee

The review committee for the research review in Educational Sciences and Pedagogical Sciences was composed of the following members:

- Professor Detlev Leutner (chair), professor for Instructional Psychology, Faculty of Educational Sciences, University of Duisenbourg-Essen, Germany;
- Professor Ian Grosvenor, professor of Urban Educational History and Head of Education and Social Justice at the University of Birmingham, United Kingdom;
- Professor Hans Gruber, professor in Educational Science at the University of Regensburg, Germany;
- Professor Sanna Järvelä, professor in Learning Sciences and Educational Technology, University of Oulu, Finland;
- Professor Elizabeth Meins, professor in Developmental Psychology, University of York, UK;
- Professor Catherine Snow, professor of Education, Harvard Graduate School of Education, U.S.A;
- Professor Lieven Verschaffel, professor in Educational Psychology at the KU Leuven, Belgium;
- Professor Karine Verschueren, professor and head of the research unit School Psychology and Development in Context at KU Leuven, Belgium.

The committee was supported by dr. Meg van Bogaert who acted as secretary and dr. Esther Poort who coordinated the research review.



1.3 Independence and confidentiality

All members of the review committee signed a statement of independence to safeguard that the committee members could judge without bias, personal preference or personal interest, and that the judgement is made without undue influence from any of the institutes or stakeholders. With his institute being part of ICO, professor Verschaffel did not take part in the review of the national research school. He refrained from comments in the preparation and final report and was not present during the interviews with stakeholders. Any other existing professional relationships between committee members and institutes under review were reported and discussed at the initial meeting. The review committee concluded that there was no risk of bias or undue influence.

1.4 Procedures followed by the review committee

The review committee was invited by the six participating universities to assess the participating institutes and the national research school during a site visit at a central location in the Netherlands (Utrecht). Prior to the site visit, all committee members were requested to read the self-evaluation reports of all seven research institutes as well as that of ICO. Each committee member was furthermore requested to independently formulate a preliminary assessment concerning two research institutes under review, based on the written information that was provided. This way all research institutes were reviewed in-depth by a first and a second reviewer. Nevertheless, all committee members are jointly responsible for the review, scoring and report of all the institutes and ICO.

This report is based on the documentation provided by the research institutes, but it also includes the information gathered during the interviews with management, staff and PhD students of the institutes. The site visit took place from 13 to 17 January 2019 in Utrecht; the programme of the site visit is provided in Appendix 2. Preceding the interviews, the review committee was briefed by the secretary about research reviews according to SEP and was provided with information regarding specifics on Dutch research (e.g., funding, organisation and the position of PhD candidates). In this meeting the review committee also discussed its preliminary findings, decided upon a number of comments and questions, and agreed upon procedural matters and aspects of the review.

After the interviews the review committee discussed its findings, comments and preliminary scores. In the final session, the review committee discussed all preliminary scores and finalised them. Based on the preliminary assessments and notes taken during the interviews, the committee members wrote an assessment of the institute for which they had been appointed as first reviewer. The second reviewer verified and added to this assessment after which the secretary used it for the report. The chair and an additional committee member were requested to write the review on the Dutch Educational Sciences and Pedagogical Sciences. The total draft report was verified and added to by the review committee before being presented to the institutes concerned for factual corrections and comments. The comments were reviewed by the secretary and incorporated in the final report in close consultation with the chair and other committee members. The final report was presented to the Board of the Universities and to the management of the institutes.

This report describes the findings, conclusions and recommendations of this external, peer review of the seven institutes. The review committee aimed to review each institute based on its own objectives and aims and in relation to programmes and institutes worldwide. Although seven Dutch institutes were included in the review, the review committee tried to refrain from a ranking of the seven institutes.

1.5 Application of the SEP scores

The review committee used the criteria and categories of the SEP and would like to make a number of remarks with respect to using of the SEP scores that should be taken into careful consideration when comparing the outcomes of this review with any other research review according to the SEP. The review committee is of the opinion that the scores in this report cannot be compared to the scores in the previous report(s). Furthermore, the review committee agreed that for a score 1 (excellent) the review committee had to be unanimous that the major part of the work in the institute deserved the judgement *One of the few leading institutes worldwide*. As to the other categories, because SEP prescribes only use of whole numbers and no intermediate categories (such as 1.5 or 2.5), it follows that the present category *very good* covers a broad range. In line with this remark the review committee decided to use the score 2 (very good) for research quality, relevance to society and viability rather broadly, meaning that the range of this score encompasses the range from just above 'good' to 'almost excellent'. It should therefore also be interpreted in close connection with the qualitative comments in the text. Finally, according to the current SEP, the units of review are the institutes. Within each research institute often a number of research groups or research lines are combined, each with its own quality, relevance and viability. The review committee combined all results, including the interaction within the institutes, into its findings and scores.

2. Dutch Educational Sciences and Pedagogical Sciences

2.1 Strengths

First, it is important to note that the existence of a regular, rigorous, and impartial review procedure for academic institutes in the Netherlands is a laudable strength of the system. The process is one that requires considerable investment of time and energy from the institutions that participate in the review, and that has financial costs as well. The review committee was deeply impressed by the care that had been taken in preparing institute reports, and the candour with which participants in the process answered questions and responded to the committee's concerns.

The overall picture the review committee formed was one of considerable strength and resilience in these institutes and departments whose work is organised around issues of human development and education. The institutes, considered as a single research community, covered a remarkable breadth of topics and approaches, but all were committed to identifying and addressing the prescribed research priorities, and all showed evidence that they were effectively promoting the learning and the development of predoctoral scholars. ICO is just one of the mechanisms that ensures a strong network of connections among researchers at Dutch universities as well as with those working in universities outside the Netherlands. Structures are in place to facilitate collaboration among researchers at different universities, as well as with university scholars and other educational, municipal, and non-profit agencies, generating rich collaborative networks. Furthermore, all of the institutes reviewed rejected strict disciplinary boundaries in their research and teaching, and several made interdisciplinary work an explicit goal. Furthermore, representatives of all the institutes avowed a commitment to promoting quality over quantity in scholarly production.

Committee members were particularly impressed by the doctoral candidates interviewed. We noted that they were universally enthusiastic, ambitious, confident, and committed to producing high quality and relevant research. They reported feeling well supported, and like members of a community – even the external and parttime candidates. Their high level of satisfaction clearly reflected the quality and intensity of supervision to which they had access. Though the specific arrangements for supervision varied somewhat across the institutes, as did the number of PhD candidates supervised by individual staff members, all the local arrangements were reported to be fully satisfactory. The combination of courses and support from ICO and local graduate schools was much appreciated by students experiencing both.

In addition, the infrastructure of most institutes is very good, and university administrators clearly understood the importance of supporting infrastructure. The infrastructure includes laboratories, but also access to methodological support and to contacts with important community partners and sources of funding. An additional aspect of infrastructure of particular importance to the doctoral candidates was training in research ethics, either through ICO or through a local research training course.

A striking and admirable feature of all the institutes reviewed was their attention to the practical implications of their work (the so-called valorisation dimension), while at the same time they were generally achieving success in meeting or exceeding targets for quality and quantity of scholarly output. The review committee was offered clear evidence of concern among those interviewed that the research being carried out could influence both policy and practice. The presence in many of the groups of parttime PhD students, who were engaged in practice settings while conducting research, creates an additional source of attention to developmental and educational questions drawn from actual practice, and informs the nature of the research designed and carried out.

Many of the academics working in the institutes reviewed have solid international reputations as leaders in their fields. They are active in external committees and agencies, both in the Netherlands and internationally, in ways that both confirm and expand their reputations.

The academic standing and research excellence of the faculty members at the various institutes was enhanced by their exploitation of opportunities to work abroad, to host students and visiting scholars from abroad, and thus to establish productive collaborations with European and Anglo-American scholars working in slightly different traditions. The review committee also noted consistent attention to offering such opportunities for research visits to labs in other countries to junior scholars, PhD candidates, postdoctoral fellows, and not-yet tenured faculty members. In addition, some of the institutes were strategic about attracting and supporting international PhD candidates, some in residence



and others being supported at a distance. These international connections have great potential for broadening the knowledge base of all involved.

Another general strength of the institutes reviewed was their lack of dependence on single sources of funding. Typically, the research activities were supported by national grants, European funding, as well as contract work in some cases. The government schemes of payment to institutes for completed PhDs both provide substantial financial support to some groups and incentivise support to PhD candidates to ensure their timely completion of their dissertations.

In short, the strengths of this collection of institutes were many, most importantly across the entire group of institutes the convergent and complementary research agendas that range from early childhood through professional education and that incorporate attention to many different learning environments and contexts. All the institutes had mechanisms in place for ensuring high-quality research that has the potential to deliver guidance designed to improve practice.

2.2 Areas of concern for the future

The quality of research in institutions of higher education everywhere in the world is threatened by the volatility of the research funding base. The standing and status of social sciences, including pedagogical and educational sciences, forms an additional barrier to securing external funding. These challenges are clearly present for the institutes reviewed in this report and run the risk of undermining their efforts to support junior scholars and to find internal funding that can be invested in ways that raise the likelihood of external funding.

The problem is exacerbated by the decline in numbers of students taking courses and enrolling in bachelor's and master's programmes provided by the institutes reviewed. Since funding to the departments depends to some extent on student numbers, the general shift of student interest to areas other than human development and education is a current and looming threat.

One consequence of the financial insecurity associated with uncertainty around student numbers is the growth in the use of temporary contracts for junior faculty members, and the unwillingness of university administrators to risk extending contracts of even very promising scholars beyond the limit that would require permanent appointments. Promising junior scholars are thus sometimes forced to consider abandoning academia, with the result that the research agendas on which they have been working might be undermined or disrupted.

Another consequence of the financial challenges and lack of trust in the likelihood of an academic future for those with a PhD is the growth in the number of parttime doctoral students and the pressure on them to complete their degrees efficiently. While the review committee noted above that parttime PhD candidates have the advantage of bringing issues from practice more robustly into the academy, at the same time they can bear an excessive burden.

Financial challenges drive researchers into choosing safe questions and familiar research topics – ones for which securing funding is easier. This can result in a reduced focus on the promotion of interdisciplinary research, which is inherently less predictable and may be seen as riskier. Furthermore, the need for institutional financial security can induce administrators to put pressure on staff to increase their workloads, by prioritizing teaching with its direct institutional financial rewards, with negative consequences for engagement in research and for the health and welfare of the faculty members.

In addition to this complex of issues related to financial uncertainties, there is a range of social changes with accompanying opportunities and challenges that we encourage these (and other) institutions of higher education to anticipate and plan for. One is the wide range of ongoing technological developments and their potential impact on the kind of research that is conducted and valued. There is, for example, the potential for expansion of the use of 'big data' in the social sciences; such a shift will require technical and analytic skills that may not be sufficiently focused on in the current research training. At the same time, an understanding of how such shifts in technology and analysis get reflected in higher education and in research policy is crucial; the review committee notes a general decline in integration of history related research within the social science institutes reviewed.

An associated challenge is the lack of a clearly articulated strategy around public engagement. Ultimately, support for research from public money, either within the Netherlands or in Europe more broadly, will depend on public support for and appreciation of the value of the work social scientists engage in. Despite the relatively low esteem of social sciences, including pedagogical and educational sciences, it holds great potential value as a source of input to social policy and the design of learning supports. That value will be best realised if researchers engage in co-design and co-production of knowledge with the affected communities, and if there is open and effective communication about the value of the researcher's input to the enterprise.



Emphasis on the local value of the research being undertaken should not, however, lead to neglect of international and global challenges to which the work of the institutes reviewed here is relevant. Increasingly, local challenges are connected to global events: for example, migration with its consequences for schooling and for social cohesion is related to ethnic/civil conflicts as well as to climate-change-induced food shortages. Local practices to respond to sudden shifts in demographics of a school district are mere band-aids if not related to the larger phenomena that cause such shifts.

Particularly in light of these global phenomena and their influence on the population in Dutch schools, the review committee was disappointed to encounter very little attention in any of the institutes reviewed to issues of diversity. While the staffing reports referred to diversity, this was typically defined predominantly as gender diversity. Indeed, in the fields of human development and education, it is not difficult to achieve a high percentage of female researchers – typically in other countries the challenge is to prevent these fields from becoming exclusively female. In addition to gender diversity, though, the nature of developmental and educational work demands attention to ethnic and language diversity. As asylum seekers and economic refugees continue to migrate to the Netherlands, understanding their situation and accommodating their children in Dutch schools would be easier if members of their ethnic/religious/language groups were represented among researchers and in universities. Given its long history of labour market immigration and its post-colonial relationships, the Netherlands has the benefit of many citizens of Turkish, North African, and Caribbean descent.

While, as noted above, there are procedures in place to ensure that doctoral candidates (and, presumably, employed research staff and faculty members) are made aware of ethical issues related to research (intellectual property rights, plagiarism, authorship rights and responsibilities, human subjects' protections); these issues are becoming ever more complicated and fraught, and international collaborations can introduce additional tensions. Thus, the review committee cautions that the content of research-ethics training courses should be reviewed regularly and expanded and elaborated as needed.

Finally, the institutes would do well in the future to collect systematic data in two areas which were acknowledged as important but for which success was not in all cases quantified: the post-doctorate career trajectories of PhD graduates, and the actual use of the many cited contributions to practice. Tracking graduates' career trajectories is a relatively straightforward task, that simply needs to be institutionalised. Tracking the actual utility of the products of research meant to improve practice (e.g., parent guides, curriculum units, reading interventions) requires more methodological innovation, but if the need for tracking is anticipated, it can be accomplished.

2.3 Guidance for future evaluations

The review committee greatly valued the clear structure of the reports submitted, the open and honest conversations that were part of the review process, and the qualitative as well as quantitative evidence provided. The committee also valued the general document that explained the structure and culture of Academia in the Netherlands. The committee noted, though, that the reports were more accessible for committee members who had participated in this process previously, and who thus had some understanding of the historical trajectories of the institutes reviewed. Important information was extracted during the interviews about the culture of each institute. Though the review committee makes no value judgments, it recognised the relevance to understanding the institute reports of dimensions of institutional culture such as collaboration, researcher autonomy, nurturance, top-down versus bottom-up decision making, and prioritisation of teaching. Those preparing future reports are cautioned that an unbiased international review committee may need considerable orienting background information. This is particularly the case for those institutes that are undergoing major restructuring. Evaluating their status can require more information about their history than may typically be provided.



Assessment of the institutes



3. School of Health Professions Education, Maastricht University

3.1 Introduction, strategy and targets

The School of Health Professions Education (SHE) was founded in 2005. However, it was only in 2014 that SHE gained recognition as a graduate school in the Faculty of Health, Medicine and Life Sciences of Maastricht University. Its Master of Health Professions Education programme, however, has a much longer history, of more than 25 years. Until 2015 the research programme was described in two themes, *Learning and Innovative Training Environments* and *Assessment and Evaluation*. As of 2015 SHE developed a more elaborate description of the research programme and renamed it *Task-centred Learning Environments in the Health Professions*. This programme includes four interrelated themes:

- Goals, values and approaches to evaluation;
- Approaches to instruction;
- Approaches to assessment;
- Approaches to implementation.

The mission of SHE is to realise the vision of a world in which all healthcare professionals are very well educated and in the best position to contribute to the quality of care. This is done by a) doing high quality multidisciplinary research on how to best educate health professionals, b) teaching health professionals how to conduct such research and how to make proper use of the findings, and c) applying the findings of this research in valorisation activities.

3.2 Research quality

The mission of SHE and its research programme Research in Education (RiE) to provide research-based models and guidelines for improvement in health professions education, seems to cover a rather narrow area. However, the work comprises both specific approaches and more general basic research. Although the primary focus is on application-oriented educational research, the research is based on very strong and solid educational theories. The strategy relates research, education and valorisation to each other, with the targets defined on each level. Following the advice of a prior review, the two formerly existing themes, Learning and Innovative Learning Environments, and Assessment and Evaluation, have been developed into four interrelated themes. The research strategy, despite the scientific rigor, is flexible and shows that SHE is willing to adapt to societal and scientific changes. Internationalisation, diversity, and ethical considerations are key issues in the strategy.

In research, SHE has been extremely successful as viewed both quantitatively and qualitatively. SHE has a well-deserved international reputation for its work in health professions education and is regarded as one of the top centres in the world in this field. This was confirmed through benchmarking analyses with other well-regarded international units, through bibliometric analyses and through the array of national and international awards received by members of SHE. The world-class level quality of research can be found in all parts, although it is still easier to relate the outcomes to the former themes (Learning and Innovative Learning Environments, and Assessment and Evaluation). The newly defined themes are still to be fully implemented, and the specification of outcomes will take some time. The titles of the themes look more artificial than they are. They reflect a rather formal separation of activities that serves Relevance issues more than Quality issues.

The research strategy has proven itself a deliberate and fruitful policy, which led to a larger number of closely related but nevertheless diverse projects. Focusing on health professions education, SHE is succeeding in establishing an impressive balance between studies that are educational in nature and studies that are more specifically directly oriented towards health education. This balance is based on the strategic composition of the SHE which allows cross-fertilisation in both directions. Accordingly, the research is published in appropriate journals. SHE members have succeeded in publishing in high level educational journals, in journals that focus specifically on health education as well as in general medical journals. The latter attract a wide readership across medical disciplines, not only from research units, but also from the practitioners' fields. Thus, these publications contribute directly to relevance as well.



3.3 Relevance to society

An important way in which SHE contributes to developments in society is by engaging in research that is meaningful to an improved understanding of educational theory that also translates into guidance for improved educational practices in medical fields and, more generally, in health professions. SHE has been undertaking many activities to address issues in health-related professions different from medicine, although medicine remains the most important profession in the field. Addressing other professions (like nursing, para-medicals) is important as many health-related activities are performed in multidisciplinary teams which are mediated by increasingly complex technological environments. Improved educational practices lead to better quality outcomes in the training and education of future health professionals. The two-fold design of the PhD programme contributes to relevance through the close interaction of professionals with a background in education and professionals with a background in health sciences. Relevance of the SHE work is also expressed through its products, which include both long-term and short-term multiple course offerings, technology-based materials, guidelines, etc. Many specific instruments and approaches developed at SHE have immediate impact on practice. Another strong future development of which SHE seems to be aware are radical changes in IT and in digital issues that will impact both the health professions and the research about those professions, e.g., big data, learning analytics. The valorisation activities associated with these products and procedures are highly esteemed and have proved to be marketable to both organisations and individuals.

3.4 Viability

The strategic, non-disputable relevance of scientific rigor is a strong indicator of excellent viability. This attitude obviously yields outcomes in recognition within the University of Maastricht, from funding bodies, and the international attractiveness of SHE. The organisational structure of SHE allows for assigning the right tasks to the right persons. It allows for negotiation and stability. Many activities are regularly performed that facilitate interactions within the organisation.

The research output of SHE, indexed by publications per research FTE, is very high. However, research staff at SHE have basically only 20% research time, whereas at other institutes research time typically amounts to 40%. On the one hand, this practice at SHE raises output indices, but on the other hand it imposes a high workload on staff members.

It is recognizable that SHE benefits from strong leadership and the rigorous scientific and organisational levels of the members of the management. Scientific background and leadership skills contribute to a robust organisation with a productive work climate. SHE seems to be financially sound and well established in the Faculty. It continues to attract promising staff and interesting collaboration partners worldwide. The members of the management group are confident that their own succession will be successful, but this issue is still a major challenge, and future developments are difficult to predict. Strategies on addressing the issue were not communicated during the evaluation.

3.5 PhD training

The PhD programme consists of two branches, a regular PhD programme and an international PhD programme. The PhD programme is well organised, and students can actively participate in its governance. Both branches of the programme, the regular and the international, are doing well. There are clear structures that enrich the educational environment and ensure progression. These include: a PhD writing course as the starting point, coaching by supervisors and promotors, formal discussion of ongoing PhD research through Web-streamed sessions, journal clubs, a biannual four-day conference SHE Academy, and others. While the regular PhD candidates are employees of SHE and normally reside in Maastricht, the international PhD candidates are very heterogeneous both in academic background and in of location. The regular PhD students often work in the context of a project that is run by one of the staff members (and they participate in ICO and other national activities), while the international students often combine their research work with a job in one of the health professions. Their research is frequently self-initiated, which makes mentoring more difficult, but opens many avenues for transfer into professional practice and thus relevance. However, the international PhD students do not feel part of the local PhD community. This represents a challenge, and SHE should continue to look for mechanisms to have them more involved.

3.6 Research integrity policy

With respect to research integrity SHE adopts and enacts the established principles of the Faculty of Health, Medicine and Life Sciences, and of Maastricht University. These are sound and well-established principles. SHE pays much attention to research integrity in its own research and in that of its PhD students.



3.7 Diversity

SHE strives to increase diversity, and there is a reasonable distribution of gender across staff levels. However, the great diversity of parttime PhDs is not fully reflected either in staff or fulltime PhDs.

3.8 Overview of the quantitative assessment of the Institute

For the School of SHE the review committee comes to the following assessments according to SEP

Research quality:	excellent
Relevance to society:	excellent
Viability:	very good



4. Research Institute of Child Development and Education, University of Amsterdam

4.1 Introduction, strategy and targets

The Research Institute of Child Development and Education (RICDE) is one of four research institutes within the Faculty of Social and Behavioural Sciences (FMG) at the University of Amsterdam (UvA). The mission of RICDE is to promote healthy, prosocial development, meaningful learning and educational achievement of children and adolescents, by performing high-quality research on developmental processes and the contexts in which these occur. To achieve this, RICDE combines laboratory research with research in practice. Within the research institute there are two research programmes, both with multiple research lines.

- Child Development (RPCD): the aim of this research programme is to gain knowledge on variations in typical and atypical child development, and on preventive and clinical intervention programmes that can be used to effectively support child development.
- Education (RPEDU): the aim of this research programme is to understand how education contributes to the development of knowledge and (meta-)cognitive and social-emotional skills, and to design and test methods that enhance this development.

In addition to the research that is organised at institute and Faculty level, the UvA has designated Research Priority Areas (RPAs) for multidisciplinary research that is organised across Faculties and institutes. The Interfaculty RPA called 'Yield' conducts multidisciplinary research on the bio-ecology of human development and is managed by RICDE. Both research programmes of RICDE participate in Yield, as do seven other research programmes from three Faculties. RICDE also participates in three other RPAs.

4.2 Research quality

The self-evaluation report of the RICDE presents extensive evidence of the Institute delivering its mission, with considerable progress having been made toward achieving targets set in the previous research evaluation. This progress has been delivered by two vibrant research programmes which are distinct but complementary: RPCD and RPEDU. Two separate narratives of performance are presented and supported by appropriate data.

Staff during the site visit represented the respective programmes but attested to the Institute being one community. There are clear mechanisms in place to foster collaboration across the two programmes (e.g., RPA Yield). Researchers have a high level of autonomy in pursuing projects and in determining how their workload is distributed. This is fully supported by senior management and strongly appreciated by staff. Staff are highly productive, and there has been an increase of refereed articles over the assessment period. Citation data confirm the high impact of the research conducted through both programmes. The Institute's research outputs are very well cited. The collaborative involvement with other disciplines and with organisations that facilitate the application of the Institute's research in non-academic settings is particularly noteworthy and impressive.

The Institute has maintained the balance between direct and research grant funding across the review period, while increasing total research funding. Total annual research expenditure in 2017 was almost €8m compared with €6m in 2012. Staff have secured research funding from highly competitive grant schemes including NWO (including VENI, VIDI and VICI), ZonMw and Ministry of Education. The procedures for research data management and encouraging staff to pre-register their research are both examples of very good practice. The Institute has several very prominent researchers among its staff. The remarkable high quality of the Institute's staff members' reputation is also indicated by the number of international lecture invitations, staff membership of scientific committees, staff holding editorial positions on leading international journals, and extensive transnational networking. The latter has resulted in joint projects and publications, co-supervision of doctoral students, and movement of students between institutions.



4.3 Relevance to society

Societal relevance is a core principle in the RICDE's research programmes, and the self-evaluation report contains a wealth of detail in the appendices which indicates how this core principle is delivered. Collaborative work with family, child and youth agencies is strongly evidenced. The RICDE has a very clear strategy for ensuring that its research achieves impacts beyond academia. It has a formalised collaboration with the Educational Research Lab Amsterdam (ERLA) which brings researchers into direct contact with primary schools, their pupils and teachers, who in turn benefit from this collaboration. The professional development of teachers has also been advanced through RICDE accessing national research grants and fostering teacher research skills around issues relating to diversity. This focus on teachers as researchers has been expanded to include secondary and vocational schools. Collaborations with the Kohnstamm Institute and Sarphati Amsterdam, as well as the Research Priority Area Yield and the UvA Minds initiatives, provide highly effective mechanisms via which the Institute's research can inform interventions with families, treatment for developmental disorders, and practice in residential care facilities. Students can also gain experience through clinical internships with UvA Minds, which has had a particularly impressive impact, having treated over 2000 children and adolescents. The Institute has very well established plans and procedures for ensuring the continued societal relevance of its research. Putting in place mechanisms to collect figures equivalent to those provided for UvA Minds to quantify the actual reach of the impact of the other societal relevance activities would further enhance this aspect of research.

Endowed professors are part of the societal relevance strategy, and the RPEDU and the RPCD each currently has five special chairs supported by societal organisations that specifically connect academia and practice. Researchers are actively publicly engaged and societal impact is achieved through targeted symposia, discussion events, and lectures aimed at different professionals and publics. Disseminating research findings through professional and practice-orientated journals, handbooks, and policy reports is a key driver for the Institute and is indicative of its strategy around maximising the relevance of its research. The societal impact success of the Institute can also be gauged by the range of national and regional civil society advisory bodies on which staff are active.

4.4 Viability

A key strength of the RICDE is the high quality and large extent of its collaborations with other agencies. Collaborations have strengthened the RICDE's infrastructure and helped in part to address the dependence on insecure indirect funding by making the RICDE a more attractive consortium partner. The RICDE hosts the Educational Research Lab on the Social Quality of Education, which operates nationally, and through ERLA has access to 84 schools. RICDE's involvement with Sarphati Amsterdam and its biobank has resulted in the Institute having access to the BBMRI consortium. The commitment of the Amsterdam city council to co-fund existing collaborative structures is particularly important, especially because of the potential spatial extension of the ERLA. Additional funding has come to the RICDE through the RPA Yield. This funding stream has been renewed for a further five years after a positive assessment of RICDE's performance in 2017. A new RPA in Urban Mental Health will offer additional funding to RICDE and further enhance access to infrastructure support. The decision reported in the self-evaluation report to abandon the pursuit of large European grants was based on the costs in resource time set against the chances of success. In discussion during the site visit it became clear that this decision must be qualified, and that RICDE will still apply for large EU grants, but with a strategy focused on being part of consortia; staff will also be encouraged to apply for individual ERC grants. All of these activities indicate that the Institute's management is taking a very clear and proactive role in planning for the future and understands the need to effectively adapt to the changing research funding landscape, in which success in winning national and international funding is increasingly challenging.

However, successful delivery of future objectives is linked to the continuing problem of the institutional workload, as identified in the previous review. As a result of increased research funding staff numbers have increased to 73 research FTEs in 2017 compared with 50 in 2013. The potential for additional funding through the RPA Yield and involvement with the new RPA in Urban Mental Health may increase resource for the RICDE but also would mean an increase in workload. The Faculty has started a promising project to address workload. Given that the staff workload is already deemed high, it is important to ensure the timely completion of PhD students, and working toward this goal should be a major priority for the Institute.

4.5 PhD training

The RICDE closely collaborates with the Graduate School of Child Development and Education in providing a doctoral programme. The PhD candidates' area of research is aligned with the broad areas of study associated with the RPCD or the RPEDU. Project proposals are sometimes co-produced because of being linked to particular programmes (e.g.,



the RPA Yield Graduate programme). Part of the doctoral programme is given over to taking classes and undertaking teaching. A course in the basics of university teaching is available. The proposed programme is worth 36 credits, and doctoral candidates can receive exemptions based on earlier certificates of competence. The Graduate Studies Committee determines whether the proposed programme is appropriate. The PhD candidates' progress is evaluated annually through a performance review and PhD plans are updated every year. Robust systems are in place to ensure mastery of ethical issues and research data management. Two confidential advisors for PhD candidates have been appointed by the RICDE as part of its research integrity policy.

Between 2012 and 2017, 69 fulltime and parttime doctoral candidates received their doctorates, and there are currently 57 doctoral candidates. Within the timeframe there has been a significant increase in parttime candidates. PhD candidates have 2-3 supervisors and usually have weekly meetings with the daily supervisor; all have additional regular email contact. The PhD programme facilitates the development of core academic skills and PhD candidates can create their own special-interest programme. Flexibility is important and considered positive. Candidates the review committee met on the site visit all expected to complete on time, but reported there would be flexibility and options for additional funding and time if needed. Supervisors play a crucial role in meeting deadlines, as well as organising extensions. Most of the PhD candidates who met with the review committee were members of ICO and recognised its value. They all agreed that the internal processes were democratic and that their 'voice' was heard as part of the research community; they appreciated the autonomy they had as candidates. Collaboration between PhD candidates and postdocs is encouraged within the Institute. A period abroad is a common feature for PhD candidates funded via grant proposals, and at university level, arrangements for foreign study can also be made.

Both internal and external PhD completions have increased across the review period. This is in part explained by the impact of the RPA Yield and two new parttime funding schemes. PhD completion times were identified as an issue in the previous assessment, and the Institute acknowledges that this continues to be a problem, despite improved monitoring procedures. Further changes have been put in place (e.g., denying extensions to add content) to attempt to improve the percentage of students completing within four or five years. Career guidance is available for all doctoral candidates, and data are collected on exit destinations. Two-thirds of the RICDE candidates obtain academic research posts, and the remainder secure employment in non-academic research institutes, clinical practices and academic teaching position.

4.6 Research integrity policy

The RICDE is committed to openness and transparency in research and operates a robust Code of Conduct regarding research integrity. All RICDE researchers commit to and follow the regulations outlined in VSNU Code of Conduct. The principles of the VNSU are embedded in the Institute's own Code of Conduct. Research integrity is discussed in research meetings and addressed in the bachelor and master's programmes. A separate course of research integrity for the PhD programme is currently under development. In addition, the RICDE also has two Research Integrity Officers. The Faculty Ethics Board safeguards the rights of research participants and prior to any data collection, reviews all proposals. Data management is governed by UvA policy.

4.7 Diversity

Diversity and inclusion closely connect with the RICDE's research agenda, and together with the University, the Institute recognises the need to recruit a diverse population of staff and students. This is evident from the 2016 University report Let's Do Diversity and its recommendations. Currently, the self-evaluation report data show that the vast majority of PhD, postdoc and assistant and associate professor positions are held by women, but only 40% of full professors are women. Some funding has been found to address this gender gap, and the expectation is that more women will hold senior positions in the near future. Data are provided for nationality but not ethnicity or disability. No data were presented relating to nationality or ethnicity of PhD candidates, although the percentage of non-Dutch PhD students was mentioned to be 25%. Legal issues block the collection of ethnic data, and therefore changing the ethnic make-up of the workforce and the student body will be dependent on inclusive recruitment strategies. This is an area for a proactive discussion with the Faculty's Diversity Officer alongside broadening the monitoring of diversity.



4.8 Overview of the quantitative assessment of the Institute

For the RICDE institute the review committee comes to the following assessments according to SEP:

Research quality:	excellent
Relevance to society:	excellent
Viability:	excellent



5. Institute of Education and Child Studies, Leiden University

5.1 Introduction, strategy and targets

The Institute of Education and Child Studies at Leiden University is one of five institutes of the Faculty of Social and Behavioural Sciences. Until 2016 the research in the Institute was divided into three programmes that were conducted under the responsibility of one Scientific Director. In 2016–2017 the Institute underwent an important revision of the organisational structure, with specific focus on institutional cohesion, collegial relations and transparency. Furthermore, the three previously separate research programmes were merged.

The research mission of the Institute as stated in the self-evaluation report is to 1) conduct innovative, high-quality research that provides insight into major issues concerning socialisation, education, and child development; 2) contribute to evidence-based practice, interventions, guidelines and policies; 3) raise public awareness about issues related to increasing child well-being across settings and based on state-of-the-art research. All of these elements is interconnected and mutually informative. The research agenda of the Institute is determined through both top-down and bottom-up processes. The former is set in motion by the Executive Board in strategic decisions in response to salient thematic developments, for example in the national and international research agenda. Bottom-up mechanisms include those where the scholarly expertise of academic staff leads to the identification of valuable substantive research directions that strengthen the research programme. The three main strategies to achieving the mission are research excellence, translational research and public outreach.

The review committee recognises that the timing of this research review presented the Institute in Leiden with particularly difficult challenges. It is clear that the Institute is still in considerable flux due to the widescale changes that have been put in place to deal with the difficult working practices that had become entrenched prior to the assessment period and were still in effect at its beginning. The appointment of a new Research Director was one strategy to ensure change; it was thus unfortunate that she could not attend the meeting due to acute medical reasons.

5.2 Research quality

The Institute has an international very high reputation for research on child development. Productivity and the high quality of research output have been undoubted strengths of the Institute during the assessment period. Its staff have produced journal articles that are highly cited, with particular strength in the field of developmental psychology. There were notable successes in winning external funding, including four NWO grants, an ERC consolidator grant and a FP-7 ICT grant. These aspects of the Institute's research are clearly excellent. However, it would be wise to monitor various areas that are critical to achieving excellence in research quality. Research income appeared somewhat weaker than research output. Taking into account the research FTE, total annual research expenditure showed very little change across the assessment period compared with other institutes, and the average annual research income seems modest by international standards for a research Institute with 43 scientific staff. In shaping the future direction of the Institute, it is important for its leaders to show ambition in setting funding targets in order to help the Institute maintain its research reputation.

The review committee considered the Institute's research mission statement to be substantive, but rather generic, in that it is applicable to almost any group undertaking child development research. The management team could have provided more compelling arguments in the self-evaluation report for what makes the Leiden Institute and its research unique.

The review committee fully supports the reorganisation of the Institute and the management's efforts to inculcate an open, collaborative and supportive working environment. Non-tenured staff members attested to the relative success of these efforts, even in these early stages, in changing the working atmosphere and increasing their sense of agency. It is understandable that the management team does not want to impose new, top-down strategies on staff in this period of restructuring, preferring instead to stimulate bottom-up initiatives.



5.3 Relevance to society

The review committee recognises that Relevance is a fairly new assessment criterion and that strategies for achieving societal impact of academic research are likely to be in development. The Institute clearly produces research that has societal relevance, and the self-evaluation document showcased the collaboration with clinicians via the TRIXY Expertise Center, as well as the development of intervention materials for promoting positive parenting and supporting children's reading. Although more examples were provided, including a number on dissemination to the public, the description of many examples of societal relevance was focused primarily on the underpinning research (e.g., randomised controlled trials), and more information on the ways in which this research has informed professional practice would have enhanced this section of the document. While addressing societal relevance is established in some of the Institute's research areas, mechanisms for capitalising on the potential real-world impact of research need to be fully embedded within all research areas. The Institute would thus benefit from establishing clear procedures for (a) exploiting the impact of its research beyond academia, (b) quantifying societal impact, and (c) considering how its research can be used to influence policy.

5.4 Viability

The Institute has successfully transcended a difficult period, demonstrating its capacity to reorganise itself after the departure of notable and highly productive colleagues. The review committee fully supports the management's goal of focusing less on h-index and appointing new staff on the basis of how well they will fit into the newly developed research areas. This strategy could build the foundation for a much stronger Institute in the long run. The major short-term challenge will be to maintain productivity and research quality while honouring this goal.

There are a few worrying signs. A decrease in student numbers and direct funding is predicted in the self-evaluation report, but this does not appear to be regarded as problematic, despite the fact that the percentage of the Institute's funding that comes from direct sources has risen dramatically over the assessment period (from 38% in 2012 to 68% in 2017), although it was mentioned by the institute that part of this results from spending savings on PhD positions. The view that "research productivity can be maintained through efforts to obtain external funding" (self-evaluation report, page 12) needs to be evaluated in light of the increasingly competitive funding environment. While the mechanisms described for increasing funding (informing staff about funding opportunities, seed money for writing applications) are solid, it is not clear whether they are aggressive enough to increase success in capturing external funding. In order for the Institute's new research culture to be successful, clear procedures will need to be in place to encourage and help every member of staff to apply regularly for research funding. In the absence from the management team of the new (current) Research Director during the interview, the management team were not able to elaborate further on the Institute's future research strategies.

Staff raised concerns about workload and the low percentage of time allocated to research. These issues were not mentioned in the self-evaluation report, but will clearly need to be addressed in an equitable fashion to support and nurture early career researchers. The research methods and statistics area appears important for the Institute's future research success, and opportunities to collaborate with methodologists were mentioned by researchers as a strength of the restructured Institute. However, members of the methodology group voiced concerns about their ability to support all requests for involvement in collaborative projects. As a major short-term priority, the Institute should ensure that proper resources are provided for this research area.

The review committee recognises that the new management board members have been in post for a very short period of time and that planning is thus at an early stage; nonetheless, a board consisting of only two people is a vulnerability, and somewhat at odds with the Institute's goal of fostering greater staff involvement and collaboration.

Despite these many challenges, some real strengths are present that led the evaluation committee to considerable optimism about the ultimate viability of the Institute. These strengths include: the presence in the Institute of senior and highly productive researchers, who have demonstrated their capacity to be productive in research, to compete successfully for funding, and to collaborate with research leaders from abroad; the commitment of ongoing support and opportunities for new appointments from the Dean; the palpable sense among the staff that a new culture of collaboration and mutual support has been initiated. These three factors suggest that the Institute, with careful management, could emerge from its difficult period with significant strengths, and that at the review its viability will be assured. However, it is critically important that the management team has a viable strategy which it can communicate successfully to the Institute's researchers. To this end, more attention needs to be given to the actual processes and procedures that the Institute can put in place in order to achieve its goals. According to the committee the Institute is working hard on moving forward and important steps are taken.



5.5 PhD training

PhD candidates appear to be well supervised, and the numbers of PhD candidates supervised by individual members of staff are appropriate. However, completion rates for fulltime PhD candidates within 5 years are low (47% across the assessment period), and the Institute should seek to improve this rate over the next 6 years.

PhD candidates feel that they have a voice and consider themselves important members of the Institute. The review committee approves of the new strategy for giving all PhD candidates similar budgets and opportunities for research visits and conference attendance. The PhD candidates would value more information and guidance on career planning and recommended that career planning should be formally incorporated into the yearly evaluation interviews and discussions with supervisors.

The PhD candidates reported that they did not yet feel part of a single community and would welcome more integration with PhD candidates across the research areas. The group of PhD candidates who attended the meeting with the review committee lacked diversity in degree structure (parttime, external, etc.), gender, or ethnicity, and the majority were Leiden master's graduates.

5.6 Research integrity policy

The Institute has clear integrity policies that are distributed to all new scientific staff members, including the VSNU code of conduct, amendments by Leiden University in its Regulations on Academic Integrity and the APA ethics code. Research integrity is an explicit part of PhD training, both in course format and in regular supervision, group discussions and thematic meetings. This training includes data management and storage.

5.7 Diversity

The Institute recognises that there is a lack of gender and ethnic diversity in both its students and staff. The Institute's national campaign targeting adolescents and parents from more diverse cultural backgrounds is a very positive step toward increasing student diversity in the coming years. The review committee recommends making similarly strategic decisions to attract a more diverse pool of applicants for Faculty posts.

5.8 Overview of the quantitative assessment of the Institute

For the Institute of Education and Child Studies the review committee comes to the following assessments according to SEP:

Research quality:	excellent
Relevance to society:	very good
Viability:	good

6. Nieuwenhuis Institute for Educational Research, University of Groningen

6.1 Introduction, strategy and targets

The Nieuwenhuis Institute for Educational Research (NI) encompasses all research of the Department of Pedagogy and Educational Sciences and the Department of Teacher Education. Researchers within the NI study a wide variety of subjects within pedagogical and educational sciences and are members of one of four expertise groups:

- Education in Culture;
- Special Needs Education, Youth Care and Youth Studies;
- Educational Effectiveness;
- Pedagogy and Effectiveness of Teacher Learning.

Multidisciplinary and collaborative research is stimulated, e.g., by way of collaboration grants from the Faculty. The long-term strategy consists of four interrelated objectives: 1) increasing the evidence base of education, 2) contributing to the prevention and solution of problems within educational practice, and informing and training (future) professionals, 3) evaluating and informing educational policy making, and 4) informing the general public about the outcomes and implications of the research. The research of the NI is both theory-related and practice-based.

6.2 Research quality

The NI brings together all the research of two departments within the Faculty of Behavioural and Social Sciences (FBSS). Within the NI researchers are members of one of four expert groups, each led by a professor with an international reputation. Research staff collaborate across research groups, as well as with researchers from other departments within the FBSS, other faculties, and other universities, both nationally and internationally. This structure is a result of considered internal strategic discussions. The research institute conducts quantitative and qualitative research on educational processes, practices and policies, and has a long-lasting, very valued expertise regarding research on specific target groups, such as people with profound intellectual and multiple disabilities, children in out-of-home-care, etc. The main research objectives are closely intertwined with objectives to improve educational policy and practice.

The earning capacity is very good. Both direct funding and national research grants have been at a steady level. The total research funding has increased considerably in the period under review. NI researchers have been particularly successful in acquiring grants for contract, policy-based research. The recent acquisition of large-scale research grants in highly competitive European and National programmes (ERC, Norface, NWO) is promising. This can be linked to intensified collaborations with other research institutes and faculties and the employment of a funding officer at the faculty.

Research staff in the review period have increased considerably, whereas the research output however, number of articles in high impact scientific journals and professional publications has remained steady in the review period. Several high-impact scientific papers have been published. Overall, journal impact factors fall around the mean of their respective fields. Staff members are highly involved as (co)editors of leading international journals in their field and are regularly invited for keynotes and invited lectures. The use of research products by peers, as indicated by citation data, is good.

The self-evaluation report evidences through the identification of individual research outputs that the NI has a reputation for producing research which has increased the knowledge base of education, identified practice strategies associated with addressing educational problems, and helped to shape the training of future professionals. Academic reputation is similarly demonstrated in the self-evaluation report through the presentation of short case studies of funded NI research projects. Whereas the main research objectives clearly indicate NI's orientation to improving educational policy and practice through empirical research, it is less clearly elaborated which key substantive scientific questions are addressed and how the research objectives align with recent international research trends. The unique contribution of the Institute's research to the field could be highlighted more. Also, the selected scientific highlights could be described in a more integrated way, demonstrating the programmatic nature of the research conducted. Relatedly, the NI invests a lot of resources in contract research, which is positive, but may also pose some threats to creating opportunities and supports for conducting programmatic, curiosity-driven basic research.



6.3 Relevance to society

A central driver of NI research is its high strategic commitment to generating evidence-based findings that can be translated into policy and practice, related to educational measurement and testing, assessment and interventions for vulnerable children and families. NI researchers are also very good connected to two university focal areas (Sustainable Society and Healthy Aging) and support three new FBSS research priority areas: Deficits, distress, and disorders; Sustainability in a changing society; and Lifespan development and socialisation. All these areas are directly concerned with the improvement of contemporary society.

The self-evaluation report evidences the societal relevance of NI research through the use as exemplars of five short case studies and ten selected professional publications/ publications for the general public. such exemplars are: a youth research collaboration between the Institute, municipal child care and child welfare professionals and stakeholders, and another university; an R&D project run jointly by the NI, three school boards, the municipality of Groningen and Hanze Applied University, designed to improve the language development of children from socially disadvantaged families. Such cross-sector collaborations highly benefit all involved, and central to the NI strategy is the importance of ensuring through outreach that new knowledge is disseminated.

The very high societal success of the NI can also be gauged by the spread of national and regional advisory bodies on which members of the Institute are active. The NI has invested a lot in collaborations and contacts with non-academic partners and stakeholders, such as governments, schools, municipalities, child welfare organisations, etc. They have a strong network in the Northern provinces of the Netherlands. This resulted in very high success rates in obtaining external funding, from and with these partners. The NI has also been highly successful in obtaining four chairs, appointing professors with specific expertise in practice- or policy-oriented research (funded by the Groningen University Fund, the Dutch Youth Institute, Nidos, and Success for All).

NI's practice-oriented and policy-oriented research approach has resulted in several PhDs and international peer-reviewed publications, attesting to the intertwining of scientific and societal impact goals, and aligning with the aim of improving the evidence base for education. Overall, management, staff and PhD candidates all evidenced a very strong conviction that scientific research should be used to improve practice/policy and that good practice/policy needs a strong evidence base.

6.4 Viability

Strategically the NI has managed the delivery of research through targeting the development of content (maximizing expertise, responding to university research priority areas) and putting in place the 'necessary conditions' to deliver content targets (recruitment of new staff; promoting collaborative working arrangements). Following up on previous reviews, the Institute has intensified collaborations between its expertise groups, as well as with other research institutes and faculties. Also, at the level of the faculty a funding officer has been hired. Support for grant writing is provided as part of an active talent development policy. An extensive tenure track system has additionally been implemented to offer career perspectives to excellent young researchers. All these measures have strengthened the viability of the groups and contributed to the recent acquisition of a number of prestigious research grants.

Infrastructure is provided by the FBSS. Direct government funding is directed to the NI via the FBSS and covers 40-50% research time and the operational costs of the Institute. The level of FBSS funding is determined by student enrolments, student graduations and PhD completion rates. Researchers bid for national external funding from the NWO/NRO and the ZonMw, EU funding (ERC), and in the period under review both direct funding and national research grants have been at a steady level. In total, research funding has increased considerably in the period under review. Given the strong collaborations with a large number of societal partners and stakeholders and the proven track record, the Institute is well equipped for acquiring external (contract) funding in the future.

As indicated in the SWOT analysis, there is still room for improvement of the publication output quality and thus the research impact. The self-evaluation report refers to plans to lower the teaching load, making it comparable with other departments. This may give more room for investment in high-impact research and related publications. Moreover, prioritisation of activities and coherence in the choice of grant applications and related research topics will be important to build a stronger programmatic approach. If too many opportunities are pursued at without a long-term vision guided by research priorities, the Institute could become too heterogeneous. The present Institute research director is relatively new and still working on a new strategy for the coming period. The ideas he presented to the review committee are worth further exploration (e.g., how the structure can be optimised to support collaboration and coherence). The review committee has no preference regarding the future structure, but recommends that the Institute articulate clearly its

main research objectives and structures its activities accordingly. Finally, as staff experience increasing demands on their time at different levels (research, teaching, and administration), monitoring staff research time will be essential.

6.5 PhD training

The number of PhD candidates has increased considerably during the review period, both for fulltime and parttime students. PhD candidates are closely supervised, meeting weekly with their daily supervisors and once a month with the research team including the full professor. There is enough room for PhD candidates to provide their own suggestions and input. When there is a delay, they are supported by co-developing a personal plan to finalise the project. Initiatives of the PhD council are welcomed, such as the recent development of a booklet describing requirements, criteria, courses, etc. Support for career opportunities is given in the yearly evaluation meetings and through the provision of courses. Candidates also appreciate the added value of ICO, both in training and network opportunities, and the close connection with policy and practice, which is an enriching experience for them. The duration of the PhD trajectories is longer than desired, but several actions have been taken to reduce this delay, including feasibility checks and training sessions for (starting) supervisors. More attention could be given to the timely communication of training/workshop possibilities and to the organisation of (more) joint meetings of PhD candidates.

6.6 Research integrity policy

The Ethics committee, which operates at the level of the Faculty, adheres to national and European ethics codes. PhD candidates are encouraged to submit an ethics proposal; and all follow an obligatory course on research integrity in their first year. Ethical dilemmas can also be discussed in regular meetings with the supervising team. Before obtaining their degree, PhD candidates must confirm that they will apply the Dutch code of conduct for scientific practice during their research career. The Institute has recently implemented a data-management protocol, indicating how data have to be stored and who has access.

6.7 Diversity

Diversity is rather limited: About 20% of the staff and 8% of the PhDs and postdocs are internationally recruited. PhD candidates would have appreciated a more international staff. The NI and Faculty will continue their policy measures to attract more international staff and PhDs. Age diversity of the full professors is rather limited; more than half are above 60; the youngest is 44. The percentage of female full professors is 30; at the level of the assistant and associate professors females are overrepresented (but in line with the distribution in the master programmes).

6.8 Overview of the quantitative assessment of the Institute

For the Nieuwenhuis Institute the review committee comes to the following assessments according to SEP:

Research quality:	very good
Relevance to society:	excellent
Viability:	very good



7. Department of Education & Pedagogy, Utrecht University

7.1 Introduction, strategy and targets

The research at the Faculty of Social and Behavioural Sciences (FSBS) is clustered in five research priority areas. The research programme *Raising Future Generations* comprises research within two priority areas of FSSB, namely Child and Adolescent Studies (CAS) and Education and Learning (EL), conducted at the Department of Education and Pedagogy and one section of the Department of Interdisciplinary Social Science. In line with this, there are two central research themes: (1) identifying pathways of resilience and risk, and (2) development and education of knowledge and skills. The research is coherently organised around these themes, addressing important scientific and societal issues (e.g., monitoring and understanding youth health and wellbeing, preventing socioeconomic disparities by providing early education and family support). The programme is strongly linked to and supported by the Utrecht University strategic themes and research focus areas. Staff members participate in the four interdisciplinary university strategic themes, most notably In Dynamics of Youth. Also, staff members coordinate the interdisciplinary research focus area Education for Learning Societies.

The mission of the programme is to contribute to scientific expertise on the development, socialisation and education of children, youth and adults, including the learning and development of professionals in care and education, and to apply this scientific expertise to urgent societal challenges.

7.2 Research quality

The research programme is highly impressive; it is built on systematic and longitudinal basic research (e.g., seen in publications) in the areas of development, socialisation, and education of children, youth, and adults, and thus, has a very solid scientific backbone. It was the only research unit in the review that gave systematic feedback on earlier results in its self-evaluation report. The strategy is to closely follow the changes in children's and adults' learning and living environments (reports and policy papers) aiming to find answers to the global research challenges.

The excellent scientific quality of the research is evidenced in a number of ways. The number of publications is very high, and many are in JCR journals. Also, the median impact factors of the journals in which the staff publishes is very high, well above the median impact factors in the respective fields; the full (and associate) professors are highly cited by their peers. External research funding is strong; several highly prestigious personal grants (e.g., 5 VENI, 2 VIDI, 1 ERC starting grant and 1 ERC consolidator grant) and National and European project grants (e.g., NWO, FP7, Horizon 2020) were obtained. Even though international funding is highly successful, it is only 8% of the total budget. In discussions, the Institute management agrees that it should improve the rate of EU funding. Recognition of excellent scientific quality was further attested by many awards, invited keynotes, and editorial positions in leading journals in the field. One of the Institute's clear strengths is its international connections and collaborations, which are highly systemic and effectively planned (international connections stimulated by the Dean, hiring more international staff, focussing on international visitors, as well as supporting bottom-up initiatives based on personal connections of research staff).

Major efforts have been made for a shift from monodisciplinary to interdisciplinary research in the current research areas, although it is not in all aspects clear and visible to the review committee what the results of the efforts are and what kind of activities have been offered to support crossing borders between different disciplines. Bottom-up collaborations between disciplines are increasing; the methodology and statistics department specifically sees the effects.

The research programme stands out in revealing a climate in which collaboration and team work are key. Researchers' contribution to and compatibility with the team are decisive factors in the hiring process. The master's programmes have a very good reputation and provide a possibility to recruit and train talented PhD candidates. Furthermore, the coherence of the programme is continuously monitored and managed at different levels (i.e., individual interviews, meetings at the section level). These strategic measures all contribute to the excellent success of the Institute.

In conclusion, the atmosphere is very good, and research quality and level of productivity are excellent. The programme is well aware of what makes it strong. This could have been communicated more explicitly in the self-evaluation report



(e.g., more explicit reference to statistical and infrastructural support for interdisciplinary research). The conclusion of the review committee is that the UU Department of Education and Pedagogy represents a cohesion-oriented model, which contributes to excellent scientific results. The working culture is supportive and participatory, and is a powerful aspect of the success in Utrecht.

7.3 Relevance to society

Societal relevance is highly visible in the programme's global strategy, and it is systematically documented using policy documents, reviews and reports pointing out highly effective evidence-based knowledge utilisation at different levels of policy and practice. The very high quality of the societal relevance strategy can be evidenced in a number of (large-scale) studies with a strategic function for and impact on policy development and practice innovation at the national and international level. The strong focus on societal relevance is also seen in many collaborative networks with centres of expertise and key societal partners. A number of the Utrecht scholars have made highly visible and very productive contributions in many policy decisions, serving on advisory committees to the national government in the areas of youth and education policy. The research programme has yielded many innovative, scientifically sound products for practice and policy, such as interventions, assessment tools, clinical guidelines, etc. The high importance of the work has been recognised by the societal partners, as evidenced by a number of awards and distinctions.

Researchers are stimulated to make clear the relevance of their work, and to prioritise relevance appropriately. The Institute thus succeeds in innovating practice and impacting policy, in ways that align with its fundamental research objectives. The Committee concluded, from the department's self-evaluation and from the examples provided in the interview, that relevance is a high strategic focus point and that the university is aiming for high impact by adopting a youth-focused strategy.

7.4 Viability

The strategic planning and stability of the programme can be considered excellent. Current and future trends have been anticipated and resources are available for monitoring progress. The faculty and university provide a lot of research facilities (e.g., lab facilities, support staff, research support office), there are excellent research staff in different career phases, and a number of recently acquired large grants secure financial resources to support the research programme in the coming years. Because of the high-quality scientific research and very strong reputation of the programme leaders, future research collaborations, networks and funding can be expected to be successful. Visibility and attractiveness are very strong.

As the Institute states that key factors in their success are the staff and hiring good researchers that fit in the team, there may be some risk of centripetal forces leading to hiring their own graduates, although procedures for professorships are always promoted internationally. Plans to strengthen internal collaboration are being executed, e.g., by hiring new staff at the intersection of the two research themes. The UU focus areas and strategic themes reinforce collaboration across research themes and Faculties but may be also create a risk for internal competition.

Some of the full professors will retire in the upcoming review period. The Faculty has already appointed younger professors in different groups. They had some replacements in the past period, which went well, and a similar approach is considered for the upcoming period. The Institute is aware of the generational shift and has attracted young talent with enough time to get to the next level in the upcoming period.

7.5 PhD training

PhD training is provided under the responsibility of the Graduate School of Social and Behavioural Sciences (GSSBS) and is linked to two research master's programmes. The PhD training consists of two parts: a general part offered by the GSSBS with emphasis on general academic skills and methods, and two specialised programmes related to the two themes of the current research programme. Many PhD candidates are encouraged to participate in ICO and clearly see the added value of the in-depth courses and networking ICO provides. Pedagogics PhD candidates are part of the local graduate school.

The review committee concludes that UU has a well scripted and strict schedule in PhD supervision. PhD candidates communicated that they feel valued and part of the department, although the international PhD candidates would have appreciated more support on arrival. The buddy system that is currently being implemented might be a solution for this issue. An open door policy, a collegial and encouraging attitude, as well as excellent early career scientist role



models, create a productive PhD training culture. PhD candidates have yearly progress meetings in which their progress is explicitly discussed. In case of a delay due to illness or maternity care/leave, there are opportunities for extension.

7.6 Research integrity policy

To monitor and improve research integrity, several initiatives have been taken by the FSSB, such as issuing a protocol on the processing and storage of data, the installation of a faculty Ethics Review Board, etc. Of note, adherence to the protocol is monitored by a committee on academic integrity that performs a bi-annual faculty-wide audit of a random sample of published papers. Academic integrity, ethics and data management are an essential part of the research master and PhD programme.

7.7 Diversity

In terms of age, the research programme shows high age diversity, with about 16% of the staff being younger than 35, 59% between 35 and 55, and 25% older than 55 years in 2017. Gender diversity is reasonable at the level of the full and associate professors. At the level of the assistant professor, postdocs and PhD candidates, males are underrepresented (reflecting underrepresentation of male students in the bachelor and master programmes). The Institute is working on diversity plans to address dimensions beyond gender and age, with a focus on increasing ethnic-culture diversity. Accordingly, the Institute and Faculty have taken several initiatives to promote international collaboration and attract international staff.

7.8 Overview of the quantitative assessment of the Institute

For the Department of Education and Pedagogy the review committee comes to the following assessments according to SEP.

Research quality:	excellent
Relevance to society:	excellent
Viability:	excellent



8. Freudenthal Institute, Utrecht University

8.1 Introduction, strategy and targets

Until 2014, the Freudenthal Institute for Science and Mathematics Education (Flsme) and the Institute for History and Philosophy of Science (HPS) operated as separate research programmes. After the merger in 2014 the Freudenthal Institute (FI) is mainly concerned with understanding of and education in science and mathematics within a diverse range of contexts: formal and informal education, the general public and the scientific community itself. Since 2014, the management team of the FI and its members have worked on an integrated strategic plan and research plan, uniting the Institute under a single theme and title, namely “Scientific and Mathematical Literacy for Life”. The goal and mission of the research programme is to study how scientific and mathematical literacy can be promoted in formal and informal education as well as through the study of the history and philosophy of science.

The FI is part of the Department of Mathematics, which in turn is part of the Faculty of Science of Utrecht University. During the review period FI has participated in the strategic theme Dynamics of Youth (DoY) of Utrecht University and in three focus areas as defined in the Strategic Plan of the Faculty of Science.

8.2 Research quality

Given that the merger of the two previous programmes was imposed and involved two groups with very different scientific cultures and scopes, the process of merging was difficult and time-consuming, and is clearly not finished yet. Still, the merger has enabled the Institute to formulate a coherent and challenging mission and set of goals, providing opportunities for creative and fruitful interdisciplinary collaboration. First promising signs of cooperation are emerging, as joint PhD projects and research projects are starting. The depth and breadth of the scientific cooperation still need work.

The embedding of the FI in the Faculty of Science creates interesting opportunities for interaction and cooperation within the Faculty, but also creates some opacity and tensions, for instance with respect to the promotion possibilities of its research staff. At the same time, FI staff members are cooperating closely with the Department of Pedagogy and Educational Sciences of the Faculty of Social and Behavioural Sciences and are strongly involved in the interfaculty Descartes Centre for the History and Philosophy of the Sciences and the Humanities.

The newly formulated programme raises very pertinent and fundamental questions about the “why” and “what” of mathematics and science education and about the relation between the two. The great attention to informal learning settings and to the role of ICT and of the teacher are other very strong features of the programme. In terms of methodology, the programme applies a multi-method perspective to analysing data, with a strong emphasis on theoretical and qualitative empirical approaches, especially design-based research. The recently created *Teaching and Learning Lab* may become an important factor promoting internal integration and collaboration with others, but is not yet being used to its full potential.

The programme has an atypical profile of science output, given that its members publish primarily in domain-specific scientific journals (with relatively low impact factors, if any), conference proceedings, and books. As a result, the proportion of peer-refereed journal papers in the FI's total scientific output is relatively small. Moreover, there seems to be some difference in the amount of research output between the mathematics and the science part of the programme, and this output tends to be somewhat unstable over the years. Still, the programme performs very well on measures of scientific productivity, not only when considering its scientific output in general but even peer-reviewed journal papers exclusively. Remarkably, not only do the FI researchers publish regularly in the best journals for mathematics and science education, but their work also finds its way into general psychological and educational journals.

For a small institute, the size of which has stayed constant at around 16–20 scientific staff across the review period, there has been impressive growth in external research grant capture. Close examination of the FI's external funding channels makes clear that it realises its external funding mainly via a lot of smaller, more applied projects and that it uses part of that funding to realise its (basic) scientific ambitions. While this strategy seems to have been quite successful, it leaves the institute very vulnerable and one that is very demanding for the FI staff.

Other signs of quality are strong. Several members of the senior staff are very well known and recognised in their domain, as evidenced by their editorship of leading journals in the field, invited lectures at international conferences,



and scientific awards. Again, this seems to apply somewhat more for the (former) math education part of the FI. On the other hand, it is noteworthy that the History and Philosophy of Science Group has attracted several researchers with personal grants (VENI) wishing to conduct their funded research at the Institute. The fact that the FI also attracts a remarkably high number of international visiting scholars is another sign of its high scientific reputation.

8.3 Relevance to society

In line with the longstanding and highly important role that the FI has played in the practice and policy of (mathematics) education in the Netherlands and abroad, and with the strongly societally oriented aims and scope of the current research programme, the societal relevance of the programme is excellent. Clearly, relevance to society is at the core of the FI's activities.

There are varied and well-established, and highly effective mechanisms via which its research is used to inform, impact and improve educational practice and policy. The U-Talent network, involving a large number of schools in the Utrecht region, for instance, is an innovative and very effective way of enhancing the educational impact of the Institute's research. Other examples of societally relevant projects and initiatives are the recurrent organisation of teacher conferences and student competitions, the Institute's very prominent role in the national beta4all projects, the development of various kinds of (digital) teaching materials for teachers, etc. Particularly for the group involved in mathematics education, the societal relevance goes beyond the national frontiers. Still, it would be worthwhile exploiting these and other possibilities for international expansion even more. Furthermore, the FI acts as the home for a large number of PhD candidates combining their PhD work with a teaching position, who also play an interesting bridging role between the FI's research and educational practice. This group constitutes a very substantial part of the group of PhD candidates. Finally, the FI has realised an impressively large number of professional publications as well as publications for a general public over the past six years, especially if one considers the small number of (scientific) research staff.

One single target area that might need more attention is actively influencing mathematics and science programmes in schools and playing a clearer role within the dynamics that form the national curricula that are related to the FI's programme.

8.4 Viability

There are several reasons to be optimistic about the recently merged FI's viability. Even though the reorganisation and merger were very difficult, the Institute succeeded in developing a quite coherent research strategy and programme that has the potential to exploit the unique combination of available expertise. The FI hosts two unique master programmes that are highly rated and attract an increasing number of students. Nationally, the FI is the largest and most influential institute of its kind, and, particularly in the field of mathematics education, it still is one of the most famous institutes in the (research) community of mathematics educators worldwide. The Institute is well embedded in the Faculty and has close links to other institutes at Utrecht University. The FI recruits its PhD candidates to a large extent from among secondary and tertiary school teachers as well as internationally, and it has a great attractiveness as a hosting institute for scholars from abroad. Even though its societal relevance for Dutch educational practice and policy is its major strength, it has also succeeded very well in being scientifically productive, including in areas beyond the subject-matter domains of mathematics and science. Finally, the Institute appears to be well managed by a strong and committed team of programme directors.

The programme has its weaknesses too, however. First, the integration of the programme is still a "work in progress" and convincing examples of successful merging are still rare. Second, the permanent research capacity is relatively small. This means that the many teaching activities and societal projects, together with the necessity to continuously search for new funding opportunities and to simultaneously initiate and coordinate various small-scale projects, make it very hard for the staff to engage deeply in the FI's (basic) scientific agenda. Furthermore, even though the new *Teaching and Learning Lab* may offer opportunities for the internal merger and for the Institute's visibility and attractiveness as a partner in cooperative research, a clear and strong strategic vision of its role in realising these ambitions seems to be missing. Also, the ambition of further strengthening the FI's international orientation seems light on details; more elaboration and explanation are needed. A final challenge, emphasised by the FI itself, is the Institute's weak research base in science communication, which it hopes to resolve by means of a new professorship. A new professorship in this domain might support the development of a strong research portfolio. The committee points out that in addition existing research strengths could be further developed. The committee advises the FI to do some further reflection on the title and the scope of this professorship. For the same reason, the articulated new goal to expand into research involving higher education should be carefully evaluated too.



8.5 PhD training

Given the small scientific research staff, there is a relatively high number of PhD candidates and of successfully finalised PhDs. As stated above, a major characteristic of the programme is to work with parttime PhD candidates, combining their PhD work with a parttime teaching position at a secondary school or institute for higher education. Given the aims and scope of the FI's research programme, this is an excellent kind of PhD candidate. In addition, the number of international PhD students is also remarkably high.

FI has a strong training strategy for PhD candidates. The "PhD class", in which various theoretical and methodological issues and different aspects of the PhD trajectory are discussed, is considered worthwhile and is likely to foster a strong sense of community among the Institute's PhD candidates. The large diversity in available expertise is considered an added value by the PhD candidates. Where applicable, PhD candidates participate in the national doctoral schools. Graduation efficiency of fulltime PhD candidates is good, with 65% graduating within 5 years.

The PhD candidates of the FI, who represent the wide diversity and multidisciplinary of the FI research programme, are very positive about the organisation of the supervisory structure and about the availability and dedication of their supervisors. PhD candidates feel part of the FI's research community and are part of participatory structures organised at the Faculty level, although this applies to a lesser extent to the international PhD candidates. The directors are very accessible and supportive. PhD candidates are also supported well financially. Independent of their financing source, all have a similar budget for their scientific work.

8.6 Research integrity policy

As part of the Faculty of Science, the FI is playing a very important role in the establishment of a systematic strategy towards research integrity. In the recent past, several staff members of the FI have been asked to play a pivotal role in the establishment of an Ethics Review Board, the appointment of a contact person for scrupulous academic practice and integrity, and to embed academic integrity and ethics in the educational programmes. Meanwhile, this active involvement of FI members has broadened towards the university level.

8.7 Diversity

The FI's policy towards diversity is part of the policy at the level of the Faculty of Science, where a diversity committee has been created. The Faculty has set specific targets for increasing the percentage of female scientific staff and has taken several other initiatives in order to increase gender diversity, including a special fellowship programme, a prominent role for the diversity committee in recruiting and hiring new staff, and provision of extra assistance for female scientific staff after a maternal leave. However, at the moment, tenured staff are predominantly male (15 male vs. 2 female and no female professors), but at the level of PhD candidates 71% are female. Because few vacancies are anticipated for the coming years, improvement in gender diversity is expected to develop slowly. As far as other aspects of diversity are concerned, the FI is doing well in the intercultural composition of its cohort of PhD candidates, but generally speaking diversity in nationality is rather small.

8.8 Overview of the quantitative assessment of the Institute

For the Freudenthal Institute the review committee comes to the following assessments according to SEP:

Research quality:	very good
Relevance to society:	excellent
Viability:	very good

9. Welten Institute, Open University of the Netherlands

9.1 Introduction, strategy and targets

The current composition of the Welten Institute (WI) is the result of a complicated merger externally imposed in 2013, between the Centre for Learning Sciences and Technologies (CELSTEC), the Scientific Institute for Teacher Research (LOOK) and the research activities of the Open University Teachers' University (Lerarenuniversiteit) – three units with very different histories, cultures and scopes. In that same year, the WI became part of the new Faculty of Psychology and Educational Sciences. WI's research is now performed by three research groups: 1) Fostering Effective, Efficient and Enjoyable Learning (FEEEL), 2) Technology-Enhanced Learning Innovations for Teaching and Learning (TELI), and 3) Teaching and Teacher Professionalisation (T2), which are reminiscent of the three units involved in the 2013 merge. From 2014 onwards, the WI organised itself under a new common research programme entitled "Learning and teaching in technology-enhanced environments", thereby focusing on "the ecology of education". However, each of the three above-mentioned research groups (continues to) focus on one element of the ecology, respectively the learner (FEEEL), the educator (T2), or technology (TELI).

The general mission of WI is to integrate perspectives in carrying out scientific research of complex, practice-relevant issues in the ecology of education. Its research delivers ecologically valid and high-quality results through an integrated approach to issues that draw upon theories of learning and cognition, technology, new media, networking, and educators' practices and behaviour.

9.2 Research quality

During the past years, the WI management has put a lot of effort in the re-establishment on a good working climate and realising effective forms of exchange and cooperation among the three groups. It has made a lot of progress in this respect, for which it should be applauded. On the other hand, the integration and alignment of the three different groups around a concrete and coherent scientific programme is not accomplished yet. It seems that the WI management has not yet developed a clear and strong view about how the institute could have an ambitious re-start and in what direction the new research programme should go.

Before the merger, the research-oriented units had very good research infrastructure and support. After the merger, however, these facilities and support had to be spread out among many more staff, with a resultant increase in level of demand. Also, the research capacity (FTE) decreased drastically between 2012 and 2017, as a result of restructuring and the loss of transformation funding.

In absolute terms, scientific output in peer-reviewed journal articles and other scientific publications is high. Notwithstanding the serious drop in scientific staff capacity, the reduction of scientific publications has been kept minimal over the review period, and for the subcategory of JRC-articles this level has remained stable. During the site visit the review committee was confronted with a serious obscurity concerning the determination of the research capacity (the number of FTEs devoted to research). According to the self-evaluation report "on average, 80% of scientific staff time is allocated to research (including valorisation)" whereas "the remaining 20% of their time is allocated to education". This was also the basis for the FTEs available for research in the tables. However, when confronted with the comparatively low productivity outcomes of scientific publications, if computed on the basis of those research FTE measures, the WI management commented that this percentage of 80% for research (including valorisation) is inaccurate as the teaching in the Master programme Educational Sciences takes significantly more than 20%.

Still, when using the favourable FTE data provided in the self-evaluation report, the WI's scientific productivity over the six-year period is – at best – good. Moreover, the contribution of individual scientific staff members to the quality and productivity of the WI's scientific publication output is very unbalanced. During the past six years, the WI hosted some researchers with a very strong scientific productivity and impact, some of whom are now retired or have left the institute. The WI has produced many high-quality publications in high impact journals. Several of these publications have received best publication awards or other signs of recognition. With a total of about 50 PhD theses, the Institute has also delivered a quite large number of PhDs over the past six years. However, when considering the available research FTE at the WI, PhD productivity is modest.

In overall and absolute terms, the WI has been very active and successful in external funding, but, again, compared to total scientific staff capacity this external fund-raising capacity is comparatively not so high. There has been a small increase in percentage of external grants over the years, but the percentage of external vs. direct funds remains relatively low. Most of the recently started projects are Erasmus+ projects, and, to a lesser extent, NRO, H2020, FP7, and NWO, pointing to the OU's strong capacities for national and international networking and collaboration, and for interdisciplinary and applied research funding. At the same time, the WI has not been successful in obtaining prestigious and important grants for (basic) research. The management has developed a grant acquisition strategy and some kinds of support are available for scientific staff who plans to apply for grants, but a more intensified and systematic approach is recommended.

Other signs of academic quality are present but not evenly distributed of the staff. Scholars at the Institute are active on the international scene and well embedded in national and international networks on instructional design and technology. They have received awards and participate in international scientific committees and editorial (advisory) boards of leading journals, programme committees of scientific meetings, etc. However, only a relatively small part of the scientific staff is responsible for the majority of these signs of scientific prominence, and, moreover, many of these signs have been awarded to staff members who meanwhile are no longer part of the Institute's staff.

9.3 Relevance to society

As a direct result of the WI's structural embedding within the OU and of some major features of its longstanding research strategy, that focus on questions that are directly relevant to the improvement of learning and teaching and on cooperation with educational practitioners, societal relevance has always been a very important for the WI.

Examination of the accomplishments and indicators of societal relevance documented and illustrated in the self-evaluation report, as well as the information elicited in the interviews with the various representatives of the WI, leads the committee to evaluate the societal relevance as excellent.

Prominent and convincing highlights are a large number of demand-driven and design-based research projects with schools and other third parties about how to design education and foster learning with the use of technology; direct output in the form of professional publications, participation in professional conferences, books for the general public, and, more recently, MOOCs; several books (co)produced by staff members that are being used in higher education settings; very good media coverage by means of interviews for television, radio, newsletters, etc.

The WI management has developed a very effective strategy for the stimulation, realisation and valorisation of the societal relevance and impact of its research, e.g., by also explicitly including valorisation in the 80% FTE reserved for research by staff (the involvement of practitioners is required in every phase of the research cycle), and by developing an internal system for the documentation and assessment of the societal relevance of staff members' work has been developed. The fact that many master's students and (external) PhD candidates are primarily adults working in various educational settings further contributes to the societal relevance and impact of the WI's research. The WI is also in a unique position for valorising its research in the domain of active on-line learning and teaching for the improvement of the education at the Open University itself. However, the Institute could pay more attention to the impact of its research for the OU's educational strategy in general and for specific courses in particular.

9.4 Viability

In prior international evaluations, the predecessors of the WI have repeatedly been recognized as a very strong European and even world player in the field of instructional design and instructional technology. This prominence in the international research field of learning and teaching involving state-of-the art technology integration is at least partially sustained in the WI today. Another positive aspect is that the WI has been successful in maintaining a high level of scientific research output in JCR journals and other scientific publications and in acquiring external grants (especially for practice and policy-oriented research, both at the national and international level), notwithstanding the serious reduction in research capacity. Furthermore, the WI has continued to do very well in building strong national and international networks and in establishing strong ties with educational practice and in valorising its research in various other ways. Also, the Institute possesses good research infrastructure allowing for sophisticated and interdisciplinary research, and it has developed a successful model for practice-oriented master's and PhD projects carried out by parttime students who continue working, thus maintaining their strong professional and societal roots in teaching and education, and who provide access to specific research target groups and open unique networks that can be very relevant for research.



There are, however, also several serious threats to the Institute's viability, which led the review committee to evaluate it overall as good. First, and most importantly, the WI has undergone a very drastic and painful restructuring and merging process, from which it has, four years later, still not fully recovered. The management has worked very hard, and successfully, on improving the interpersonal aspects of integration after the merger, on re-establishing a good working climate, on setting up various kinds of structures and initiatives for scientific interaction and cooperation, and on defining strategic targets for research output. However, this is only half of the job to be done. The current organisation of the research into three different groups is still not productive enough. The Institute – which presents itself as a research institute – needs an integrated and ambitious research programme that optimally exploits the complementary and multidisciplinary expertise available in the WI, a clear strategy for realizing that programme, and convincing first signs of its renewed success.

Second, simultaneously with, and not totally independently from, the restructuring and merging process, the WI's past international scientific prominence seems to have suffered not only from the natural outflow of very strong senior staff but also from the departure of talented junior staff. The current management and scientific staff seem to have difficulties in filling the gap created by the loss of key figures who contributed importantly to the Institute's scientific productivity and prestige. Surely, this problem can be partly resolved by setting up and exploiting close and productive collaborations with researchers and research teams outside the WI, at which the WI is very good. However, the WI's future viability clearly requires strong academic leadership within the Institute as well.

Third, there is the worrying tension between the WI's positive self-assessment of being academically very productive in scientific publications, research funding, and numbers of PhD during the past six years' period, while on the other hand the actual productivity data are less impressive when taking the available research FTE's into account. This tension requires some serious reflection by the management.

Finally, in view of its viability, striving for prestigious and competitive grants for (basic) research, while maintaining the high success rate of more practically oriented grant acquisition, should be a priority goal for the future of the WI as a research institute. The realisation of this goal will depend strongly on its success in handling the other viability issues. In short, the important task for the Institute is to design a research agenda and strategy for the near future that maximally exploits WI's strengths and addresses the challenges.

9.5 PhD training

Typical for the WI is the large number of external PhD candidates, who are mostly working individuals with strong professional and societal roots in teaching and education. As stated above, this is a strong aspect of the WI's PhD policy, with great possibilities both for research quality and societal relevance.

The PhD candidates consider the multidisciplinary composition of the WI to be a great attraction of their academic biotope. For several of them, this multidisciplinaryity was a major reason to choose the WI. They are well aware that the WI involves various groups, each with their own academic history, cultures and practices, and they accept this results in different expectations and requirements for the PhD. Interestingly, an increasing number of PhD candidates are being supervised by scientific staff members coming from different groups within the WI – which is a positive indication that the merging process is making progress. These PhD projects are laying the seeds for a potential successful merge.

The PhD candidates are happy with the intensive and complementary scientific training they get in the local Graduate School and the national doctoral schools (ICO and SIKS). They are also pleased with the courses they get at the WI, although they recommend improving the availability of information about courses as well as the academic level of some courses. They have regular and intensive contact with their supervisors, who introduce them to their international networks and stimulate and support them to finalise their PhD thesis in a timely manner. The actual PhD duration and success rates for the evaluation period are good (55% graduate after 5 years). The PhD candidates greatly enjoy the social atmosphere and productive interactions among themselves, and also the external and international candidates feel well integrated and supported.

9.6 Research integrity policy

At the WI, there is much attention to research integrity, research ethics and data management. This attention is well embedded within or aligned with initiatives and regulations at the Faculty and University level. This attention is reflected in various ways, including the provision of ample information and documentation about the code of conduct concerning research integrity, the obligation to sign a contract and swear an official oath concerning research integrity, the evaluation of all research projects on research integrity, and the development of a protocol for data management.



9.7 Diversity

With respect to gender, the OU as a whole scores very well on the Female Professor Monitor Ranking. This positive score is also reflected in the gender composition of the WI, where about half of the total staff are female. Moreover, this gender equity is reflected at all levels. Furthermore, the ethnicity of the scientific staff is very heterogeneous too, with 27 out of 62 staff being from different nationalities (mainly Asian and European).

9.8 Overview of the quantitative assessment of the Institute

For the Welten Institute the review committee comes to the following assessments according to SEP:

Research quality:	very good
Relevance to society:	excellent
Viability:	good

10. National Research School: Interuniversity Centre for Educational Sciences (ICO)

10.1 Introduction

The Interuniversity Centre for Educational Sciences (ICO) unites all research in the domain of educational sciences in the Netherlands and a substantial and increasing part of the research domain in Belgium. ICO educates the educational researchers of tomorrow by bringing PhD candidates in contact with other junior researchers and senior researchers from universities and research institutes in the Netherlands, Belgium and abroad. ICO offers coursework, provides networking opportunities, and safeguards the quality of supervision.

The general mission of ICO is to organise postgraduate training in a strong research-based environment. PhD candidates learn to advance scientific theories for understanding process and systems of learning and instruction. ICO has three main objectives: first, promoting the quality of postgraduate education for PhD candidates doing scientific research in the educational sciences; secondly, organising courses, lectures, seminars, symposia, colloquia, and joint publications, and thirdly, stimulating internationalisation and international collaboration within the research area.

10.2 Quality of ICO and of guidance, supervision, and training of PhD candidates

The ICO is a multi-institutional undertaking designed to support doctoral studies in the area of learning and pedagogy in The Netherlands and Belgium, by providing courses, summer schools, research guidance, and opportunities for students to network with each other and with scholars from abroad. Thus, ICO supports not only the students who participate in its programmes, but also the universities from which those students come, by supplementing the university-based courses and research training.

The quality of the ICO offerings is maintained by virtue of the rigorous criteria that have to be met if institutions and individual PhD candidates are to be accepted as members. Because ICO can call upon faculty from all the various members, the range of research issues addressed is much broader and more diverse than an individual graduate programme could provide. This must be considered a strength; although the depth of work in any particular area is likely to be less than in individual organisations, students can usefully combine their ICO experiences with additional courses and activities in their home institutions.

The general principle of involving PhD candidates in a broader research/training consortium is an outstanding feature of the Dutch Educational Science institutions, which could usefully serve as a model for universities in other settings where such arrangements do not exist. The broad support for the programme, and thus the involvement of important researchers, is high. The workshops offered at ICO conferences provide both excellent learning opportunities and unique networking opportunities. The academic reputation of the leaders is high, and the international visibility is good. Doctoral candidate participants in the ICO were universally enthusiastic and positive about its value – not just the doctoral candidates brought to the review committee by ICO itself, but also those from other institutions being reviewed. They noted that the ICO activities offer a safe space for them to try out ideas on how to function as junior researchers, and that ICO support for finishing the thesis work is very helpful. Furthermore, they noted that ICO offers help in thinking about careers, including opportunities outside academia.

One area in which the quality of the ICO programme could perhaps be strengthened is the selection – and continuous participation – of international partners. The partners seem to have been selected rather incidentally, rather than strategically chosen to complement the strengths of the core members or to respond to the emergent needs of students.

Another area of weakness shared by ICO and all the other institutions reviewed was lack of attention to, or at least of success at, ensuring the PhD candidates served and the faculty involved represent the full diversity of the larger society, in particular of the schoolchildren who will be affected by the research being carried out. Diversity is an issue of quality because research that ignores a significant proportion of the students being educated in Dutch and Belgian schools fails to acknowledge the full range of developmental trajectories or learning and teaching challenges.

It would be unproductive to compare the quality of the ICO to the other institutes reviewed, since its mission, organisation, and criteria for success are so unique, and because its quality to some extent reflects theirs. The key dimension of



evidence for ICO's quality is that it fulfils a crucial role within doctoral education in the Dutch-speaking world. In other words, if the ICO didn't exist it would have to be invented. So then the agenda becomes one of considering how it might be better rather than whether it is good enough.

Given its unique function, it is appropriate to evaluate the ICO in particular on the quality of its guidance, supervision, and training of doctoral candidates. The committee received ample evidence that ICO was contributing in substantive and responsible ways to the guidance, supervision, and training of PhD candidates who had the opportunity to participate in its programmes. This evidence came, not just from the PhD candidates interviewed as part of the ICO presentation to the committee, but also from PhD candidates who were interviewed about their experiences as part of the evaluations of the six university departments of pedagogical and educational sciences.

The full range of PhD candidates interviewed noted a number of features that contributed to their very positive evaluation of the ICO programme, including:

- the complementarity of the ICO programme with the resources available from their home universities
- the opportunities for networking across disciplinary and institutional boundaries offered by the ICO programmes
- the responsiveness of the ICO education programming to needs and desires expressed by the PhD candidates

In short, it seems clear that the ICO makes a strong contribution to the professionalization of developmental and educational scholars in The Netherlands, by providing resources that would stretch the budget and capabilities of any of the individual universities.

10.3 Relevance to society

Maximizing relevance in doctoral training requires paying explicit attention to mechanisms by which educational/developmental research can be connected to practice. In other words, the training itself should incorporate attention to a range of models of research practice relationships. While the ICO could provide more explicit focus on this topic in its training, nonetheless the presence in its ranks of increasing numbers of PhD candidates drawn directly from practice offers rich opportunities to integrate problems of practice with doctoral training. In addition, the ICO offers support to PhD candidates interested in writing for a practice-based audience.

Bringing together PhD candidates from a wide range of universities does contribute to the awareness among the young researchers of issues of societal relevance, as they observe and participate in many activities which are clearly beyond their own dissertation work. In addition, they and the course leaders acquire new understanding and encounter new topics that can then be introduced to their home institutions.

The relevance of the ICO activities to the PhD candidate participants is optimised by a process of open, democratic exchange with the educational committee. Candidates reported that their requests for specific courses were acknowledged and taken seriously, though they could not always be responded to, and that their interest in a variety of possible career trajectories is welcomed and supported within the ICO trainings. Thus, ICO contributes to the development of junior researchers who have the opportunity to learn about societal impact and who are aware of different strategies of valorisation.

10.4 Viability

The viability of the ICO derives in part from the crucial role it plays in doctoral training in the Netherlands and Flanders. In addition, the current leadership has recruited a robust array of participating institutions, thus ensuring a broad base of support within the academy and has developed an evidently practical and effective leadership mechanism and succession plan. The institution, despite its size, geographic and disciplinary distribution, and administrative unwieldiness, is well organised and well directed. The PhD candidate participants reinforced the importance of ICO to their scholarly development, while at the same time expressing a desire for more differentiation between introductory and advanced courses, and more use of blended and on-line learning options.

The strengths of ICO are simultaneously its potential threats: ICO is a robust network of many strong partners and thus quite viable by nature, because losing one or two institutions would not seriously affect ICO's existence and its qualities. On the other side, ICO's viability depends on the willingness of the participating higher education institutions to continue their participation and to urge their students to participate. These institutions, however, are increasingly involved in a competition which is ruled by economic, management, and policy forces rather than by research issues. This could affect future willingness to contribute to ICO, and it is already visible in the quite limited resources available to the



ICO. Nonetheless, ICO has achieved a size that its directors consider appropriate, and opportunities for further growth are available. From an international point of view, the value-added of such a network to the breadth and depth of research training, and its cost-effectiveness for the participating institutions are both substantial strengths that should be maintained and extended.

Because the ICO does not have the institutional stability of a traditional university department, it is valuable to comment on its administrative rigor. The administrative rigor of the ICO relies in part on the willingness of the participating universities to contribute fiscal and human resources to its functioning. The committee saw no hesitation among the various university representatives that were interviewed to continuing the current level of support and participation, recognizing as they do both the value-added of the ICO to their own training programmes and the extra burden each of them would have to bear if the ICO resources were not available.

Furthermore, as noted in the report, the ICO is functioning effectively as an independent organizational unit, located at Maastricht but with its own budget and administrative structure. Maastricht University and the administrative leadership of ICO are to be commended for being willing to invest in the guidance and maintenance of the ICO structure.



Appendix 1: SEP scores

Category	Meaning	Research quality	Relevance to society	Viability
1	World leading/ excellent	The research unit has been shown to be one of the few most influential research groups in the world in its particular field	The research unit makes an outstanding contribution to society	The research unit is excellently equipped for the future
2	Very good	The research unit conducts very good, internationally recognised research	The research unit makes a very good contribution to society	The research unit is very well equipped for the future
3	Good	The research unit conducts good research	The research unit makes a good contribution to society	The research unit makes responsible strategic decisions and is therefore well equipped for the future
4	Unsatisfactory	The research unit does not achieve satisfactory results in its field	The research unit does not make a satisfactory contribution to society	The research unit is not adequately equipped for the future

Appendix 2: Programme of the site visit

Sunday 13 January – preparatory meeting	
17.00	Preparatory meeting of the review committee in the hotel
19.30	Dinner
MONDAY 14 JANUARY – ICO NATIONAL RESEARCH SCHOOL	
8.30	Preparatory meeting
9:00	Management <ul style="list-style-type: none"> – Prof. dr. Diana Dolmans, Scientific Director of ICO, Maastricht University – Prof. dr. Liesbeth Kester, Educational Director of ICO, Utrecht University – Prof. dr. Pauline Meijer, Chair of the ICO Board, Radboud University Nijmegen – Prof. dr. Douwe Beijaard: member of ICOs Scientific committee and Examinations committee, member of the ICO Board, Eindhoven University of Technology – Rob Kickert MSc, ICO PhD member, Chair of the Educational Committee, Erasmus University Rotterdam – Drs. Caroline Vonk, Executive Secretary of ICO, Maastricht University, Utrecht University
9:45	PhD candidates <ul style="list-style-type: none"> – Eva Janssen MSc, Utrecht University – Marieke Veltman MA: Part time PhD candidate, Windesheim University of Applied Sciences/University of Amsterdam – Loes de Jong MSc, Leiden University – Anne de Bruijn MSc, University of Groningen – Daury Jansen MSc, University of Amsterdam
10:30	Reflections and preparatory next meetings
MONDAY 14 JANUARY – MAASTRICHT UNIVERSITY SCHOOL OF HEALTH PROFESSIONS EDUCATION	
11:00	Management <ul style="list-style-type: none"> – Prof. dr. Jeroen van Merriënboer, Professor of Learning and Instruction Research Director SHE – Prof. dr. Diana Dolmans Professor of Innovative Learning Arrangements, Representative of staff – Dr. Anique de Bruin PhD coordinator – Jolien Pieters, MSc representative of PhD candidates – Prof. dr. Cees van der Vleuten Professor of Education Scientific Director of the Graduate School of Health Professions Education.
11:45	Staff <ul style="list-style-type: none"> – Prof. dr. Pim Teunissen, Professor of Work-based Learning in Health Care – Dr. Pascal van Gerven, Associate Professor, Coordinator PhD Research Proposal Writing Course – Dr. Karen Könings, Associate professor, member Ethical Committee. – Dr. Janneke Frambach, Assistant professor, support Qualitative Research – Dr. Renée Stalmeijer, Assistant professor, support Qualitative Research – Dr. Maryam Asoodar, Assistant professor, instructional design and e-learning
12:30	Lunch
13:00	PhD candidates <ul style="list-style-type: none"> – Lorette Stammen, MSc – Serge Mordang, MSc – Stephanie Meeuwissen, MSc – Carolin Sehlbach, MSc – Alexandra Kölm, MSc, International PhD candidate (via Skype) – Joey Nicholson, MSc, International PhD candidate (via Skype) – Adam Szulewski, MSc, International PhD candidate (via Skype) – Ikuo Shimizu, MSc International PhD candidate (via Skype)
13:30	Reflections + preparing questions management
14:00	Management
14:30	Reflections + preparing next meetings
MONDAY 14 JANUARY – UNIVERSITY OF AMSTERDAM: RESEARCH INSTITUTE OF CHILD DEVELOPMENT & EDUCATION	
15:00	Management <ul style="list-style-type: none"> – Prof. dr. Agneta Fischer, Dean Faculty of Social and Behavioural Sciences (Prof. Social Psychology on Emotions and Affective Processes) – Prof. dr. Frans Oort, Director of the Research Institute of Child Development and Education (Professor of Methods and Statistics) – Dr. Patty Leijten, Director of the PhD Programme of Child Development and Education (Assistant Professor in Research Programme of Child Development)

15:45	Staff
	<ul style="list-style-type: none"> – Prof. dr. Carla van Boxtel (RPEDU), Professor of Domain Specific Learning, Teaching and learning of history – Dr. Elise de Bree (RPEDU), Assistant professor of Developmental Disorders and Special Education, Psycholinguistics and dyslexia – Dr. Lisa Gaikhorst (RPEDU), Assistant professor of Educational Sciences, Professional development of urban teachers – Prof. dr. Henny Bos (RPCD) Professor of Preventive Youth Care, Sexual and gender diversity in families and youth – Prof. dr. Geertjan Overbeek (RPCD) Professor of Preventive Youth Care, Parenting interventions – Prof. dr. Geert-Jan Stams (RPCD) Professor of Forensic Child and Youth Care, Forensic pedagogy
16:30	Break
16:45	PhD candidates
	<ul style="list-style-type: none"> – Ceren Abacioglu, MSc (RPEDU), PhD candidate of Educational Sciences – Hanne Duindam, MSc (RPCD), PhD candidate of Forensic Child and Youth Care – Sevinc Göksen-Zayim, MSc (RPEDU), PhD candidate of Domain Specific Learning – Daury Jansen, MSc (RPEDU) PhD candidate of Educational Sciences – Brechtje de Mooij, MSc (RPCD) PhD candidate Preventive Youth Care
17:15	Reflections + preparing questions management
17:45	Management
18:15	Reflection institutes day 1
TUESDAY 15 JANUARY – LEIDEN UNIVERSITY: INSTITUTE OF EDUCATION AND CHILD STUDIES	
8.30	Preparatory meeting
9.00	Management
	<ul style="list-style-type: none"> – Prof. dr. Paul Wouters, Dean of the Faculty of Social and Behavioural Sciences – Prof. dr. Judi Mesman Scientific Director of Education and Child Studies from January 2013– June 2016 Professor of the interdisciplinary study of societal challenges – Prof. dr. Lenneke Alink, Scientific Director Professor of Forensic Family Studies – Dr. Mariëtte Linting, Director of Studies Associate Professor of Research Methods and Statistics
9.45	Staff
	<ul style="list-style-type: none"> – Prof. dr. Paul van den Broek, Professor of Cognitive and Neuro-biological Foundations of Learning and Teaching, Educational Sciences – Prof. dr. Hanna Swaab Professor of Clinical Neurodevelopmental Sciences – Dr. Marga Sikkema-de Jong, Associate Professor of Learning and Behaviour Problems in Education – Dr. Ralph Rippe, Assistant Professor of Research Methods and Statistics – Dr. Shelley van der Veek, Assistant Professor of Parenting, Child Care and Development
10.30	Break
10.45	PhD candidates
	<ul style="list-style-type: none"> – Nienke Bouw, MSc, PhD candidate Clinical Neurodevelopmental Sciences – Renate Buisman, MSc, PhD candidate Forensic Family and Youth Care Studies – Merel van Vliet, MSc, PhD candidate Parenting, Child Care and Development – Amy de Bruïne, MSc, PhD candidate Educational Sciences – Elise Swart, MSc, PhD candidate Learning and Behaviour Problems in Education
11.15	Reflections + preparing questions management
11.45	Management
12.15	Reflection and lunch
TUESDAY 15 JANUARY – UNIVERSITY OF GRONINGEN: NIEUWENHUIS INSTITUTE FOR EDUCATIONAL RESEARCH	
13.30	Management
	<ul style="list-style-type: none"> – Prof. dr. Kees Aarts, Dean – Prof. dr. Hans Grietens, Director of Research Institute
14.15	Staff
	<ul style="list-style-type: none"> – Prof. dr. Klaas van Veen, Pedagogy and Effectiveness of Teacher Learning (Chair) – Prof. dr. Roel Bosker, Educational Effectiveness (Chair) – Prof. dr. Alexander Minnaert, Special Needs Education, Youth Care and Youth Studies – Prof. dr. Greetje Timmerman, Special Needs Education, Youth Care and Youth Studies – Dr. Nelleke Bakker (associate professor), Education in Culture
15.00	Break
15.15	PhD candidates
	<ul style="list-style-type: none"> – Renske de Leeuw, MSc, Special Needs Education, Youth Care and Youth Studies – Mariëlle Osinga, MSc, Special Needs Education, Youth Care and Youth Studies – Pieter van Rees, MSc, Education in Culture – Marij Veldman, MSc, Educational Effectiveness – Irene Poort, MSc, Pedagogy and Effectiveness of Teacher Learning

15.45	Reflections + preparing questions management
16.15	Management
16.45	Reflection institutes day 2
WEDNESDAY 16 JANUARY – UTRECHT UNIVERSITY: DEPARTMENT OF EDUCATION & PEDAGOGY	
8.30	Preparatory meeting
9.00	Management
	<ul style="list-style-type: none"> – Prof. dr. Marcel van Aken, Professor of Developmental Psychology, Dean of the Faculty of Social and Behavioural Sciences – Prof. dr. Maja Dekovic, Professor of Special Education, Vice-Dean (graduate education) of the Faculty of Social and Behavioural Sciences – Prof. dr. Jan van Tartwijk, Professor of Applied Educational Sciences, Chair of the Department of Education & Pedagogy
9.45	Staff
	<ul style="list-style-type: none"> – Prof. dr. Susan Branje, Professor of Adolescent Development and Socialization, Head of the section Youth & Family, Dept. Education & Pedagogy – Prof. dr. Maja Dekovic, Professor of Clinical Child and Family Studies, Head of section Clinical Child & Family Studies, Dept. Education & Pedagogy – Prof. dr. Catrin Finkenauer, Professor of Youth Studies, Head of section Interdisciplinary Social Sciences: Cultural Diversity & Youth, Dept. Social Sciences – Prof. dr. Paul Leseman, Professor of Special Education, Head of section Special Education: Cognitive and Motor Disabilities, Dept. Education & Pedagogy – Prof. dr. Tamara van Gog, Professor of Educational Sciences, Head of research, section Education, Dept. Education & Pedagogy
10.30	Break
10.45	PhD candidates
	<ul style="list-style-type: none"> – Monika Donker, MSc, Member of the PhD Council of the Faculty of Social and Behavioural Sciences PhD candidate section Education – Lydia Laninga-Wijnen, MSc, PhD candidate section Interdisciplinary Social Sciences: Cultural Diversity & Youth – Stefanos Mastrotheodoros, PhD, PhD candidate section Youth & Family – Marije Stolte, MSc, PhD candidate section Special Education: Cognitive & Motor Disabilities – Rianne van Dijk, MSc, PhD candidate section Clinical Child & Family Studies – Mare van Hooijdonk, MSc, PhD candidate section Education
11.15	Reflections + preparing questions management
11.45	Management
12.15	Reflection and lunch
WEDNESDAY 16 JANUARY – UTRECHT UNIVERSITY FREUDENTHAL INSTITUTE	
13.30	Management
	<ul style="list-style-type: none"> – Prof. dr. Isabel Arends, dean – Prof. dr. Sjeff Smeekens, Vice-dean research, – Prof. dr. Guther Cornelissen, previous head department Mathematics – Prof. dr. Toine Pieters, Head Freudenthal Instituut – Prof. dr. Wouter van Joolingen, scientific director
14.15	Staff
	<ul style="list-style-type: none"> – Prof. dr. Paul Drijvers, professor of Mathematics Education – Prof. dr. Bert Theunissen, professor of History and Philosophy of Science – Dr. Arthur Bakker, associate professor Mathematics Education – Dr. Christine Knippels, assistant professor of didactics of biology – Dr. Hieke Huistra, assistant professor of history of science and medicine – Dr. Ralph Meulenbroeks, assistant professor of didactics of physics
15.00	Break
15.15	PhD candidates
	<ul style="list-style-type: none"> – Rosa Alberto, MSc – Melde Gilissen, MSc – Sietske Tacoma, MSc – Berrie van der Molen, MA – Anne van Veen, MA – Luhuan Huang, MSc
15.45	Reflections + preparing questions management
16.15	Management
16.45	Reflection institutes day 3

THURSDAY 17 JANUARY – OPEN UNIVERSITY: WELTEN INSTITUTE	
8.30	Preparatory meeting
9.00	Management <ul style="list-style-type: none"> – Prof. dr. Saskia Brand-Gruwel, Dean – Prof. dr. Marcus Specht, Chair research group TELI – Prof. dr. Renate de Groot, Chair research group FEEEL – Prof. dr. Rob Martens, Chair research group T2 – Prof. dr. Marjan Vermeulen, Educational Director – Dr. Jeroen Winkels, Academic Affairs OU
9.45 –	Staff <ul style="list-style-type: none"> – Prof. dr. Hendrik Drachsler, HL (TELI) – Dr. Jose Janssen, associate professor (TELI) – Dr. Kim Dirx, assistant professor (FEEEL) – Dr. Jerome Gijsselaers, assistant professor (FEEEL) – Dr. Karel Kreijns, associate professor (T2) – Dr. Gino Camps, associate professor (T2)
10.30	Break
10.45	PhD candidates <ul style="list-style-type: none"> – Kevin Akkermans, PhD-student (TELI) – Alessandra Antonaci, PhD-student (TELI) – Sharisse van Driel, PhD-student (FEEEL) – Laurie Delnoij, PhD-student (T2) – Zyxcban Wolfs, External PhD student
11.15	Reflections + preparing questions management
11.45	Management
12.15	Reflection and lunch
13.00	Overall reflection
15:00	Presentation of first conclusions



Appendix 3A: Quantitative data – School of Health Professions Education, Maastricht University

Table 1 Publications Maastricht University

	2012	2013	2014	2015	2016	2017	Average	Total
Articles (refereed)	137	138	116	112	124	141	128	768
Articles (non-refereed)								0
Books	4	1	0	0	0	1	1	6
Book chapters	17	15	10	9	3	16	12	70
Subtotal	158	154	126	121	127	158	140.7	844
PhD theses	11	8	11	8	9	9	9	56
Other research output scientific	5	11	8	10	20	10	11	64
Conference proceedings	17	6	18	23	21	6	15	91
Total	180	171	152	154	168	174	167	999

Table 2 Funding Maastricht University

	2012	2013	2014	2015	2016	2017	Average	Total
	fte	fte	fte	fte	fte	fte	fte %	fte
Direct funding	17.4	14.1	13	16.5	20.1	25.8	17.8 69%	124.7
Research grants								
National	2.5	2.4	1.8	1.5	2.9	3.6	2.5 10%	17.2
European	0	0	0.4	1	1.8	2.8	1.0 3%	7.0
Contract research	3.3	2.2	1.7	1.5	2	3.1	2.3 9%	16.1
Other	0.5	1.6	2.5	2.6	2.9	3.7	2.3 9%	16.1
Total research funding	23.7	20.3	19.4	23.1	29.7	39	25.9	181.1
Expenditure in k€								
Personnel	1285	1265	1312	1556	1954	2572	1657.3 109%	11601
Other costs	234	201	189	217	490	830	360.2 16%	2521.2
Total expenditure	1519	1466	1501	1773	2444	3402	2018	14122

Table 3 Staff Maastricht University

	2012		2013		2014		2015		2016		2017		Average	
	n	fte	n	fte	n	fte	n	fte	n	fte	n	fte	n	fte
Scientific staff	31	7.9	31	7.8	31	7.6	32	7.9	43	9.1	47	11.1	36	8.6
Postdocs	0	0	1	0.6	1	1	2	1.2	5	3.8	7	4.2	3	1.8
PhD candidates	12	9.3	13	7.6	12	7.5	14	10.4	17	12.1	23	17.5	15	10.7
Parttime PhD candidates	52	1.6	58	0.5	65	0.3	69	0	77	0.7	75	1.4	66	0.8
Total research staff	95	18.8	103	16.5	109	16.4	117	19.5	142	25.7	152	34.2	120	21.9
Support staff	9	4.9	9	3.9	9	2.9	12	3.6	17	3.9	43	4.7	17	4.0
Visiting fellows	1		2		1		3		3		0		2	0.0
Total staff	105	23.7	114	20.4	119	19.3	132	23.1	162	29.6	195	38.9	138	25.8

Table 4 PhD duration and success rate, fulltime, Maastricht University

	Enrolment			Graduated in 4 yrs		Graduated in 5 yrs		Graduated in 6 yrs		Graduated in >= 7 yrs		Not yet finished		Discontinued	
	M	F	tot	#	%	#	%	#	%	#	%	#	%	#	%
Fulltime															
2008	1	3	4	1	25%	4	100%	4	100%	4	100%	0	0%	0	0%
2009	0	3	3	1	33%	3	100%	3	100%	3	100%	0	0%	0	0%
2010	0	1	1	0	0%	0	0%	1	100%	1	100%	0	0%	0	0%
2011	1	2	3	1	33%	0	0%	3	100%	3	100%	0	0%	0	0%
2012	0	0	0	0											
2013	1	3	4	0	0%	3	75%					1	25%	0	0%
2014	0	1	1	0	0%							1	100%	0	0%
Total	3	13	16	3	19%	10	67%	11	100%	11	100%	2	13%	0	0%

Table 5 PhD duration and success rate, parttime, Maastricht University

	Enrolment			Graduated in 4 yrs		Graduated in 5 yrs		Graduated in 6 yrs		Graduated in >= 7 yrs		Not yet finished		Discontinued	
	M	F	tot	#	%	#	%	#	%	#	%	#	%	#	%
Parttime															
2008	4	4	8	3	38%	5	63%	6	75%	8	100%	0	0%	0	0%
2009	2	6	8	1	13%	3	38%	4	50%	5	63%	0	0%	3	38%
2010	2	1	3	1	33%	1	33%	1	33%	2	67%	1	33%	0	
2011	2	8	10	2	20%	5	50%	6	60%	7	70%	1	10%	2	20%
2012	5	5	10	5	50%	7	70%	8	80%			2	20%	0	
2013	7	8	15	2	13%	2	13%					8	53%	5	33%
2014	9	4	13	3	23%							10	77%	0	0%
Total	31	36	67	17	25%	23	43%	25	64%	22	76%	22	33%	10	15%

Appendix 3B: Quantitative data – Research Institute of Child Development and Education, University of Amsterdam

Table 1 Publications University of Amsterdam

	2012	2013	2014	2015	2016	2017	Average	Total
Articles (refereed)	149	139	166	200	180	202	173	1036
Articles (non-refereed)	2	6	3	0	0	1	2	12
Books	1	1	0	0	0	0	0	2
Book chapters	49	22	26	28	29	20	29	174
Subtotal	201	168	195	228	209	223	204	1224
PhD theses	12	9	8	8	14	18	12	69
Internal	12	6	4	5	11	10	8	48
External	0	3	4	3	3	8	4	21
Other research output scientific	106	108	101	122	95	108	107	640
Policy reports	13	17	17	17	20	14	16	98
Professional publications and lectures	184	196	195	242	160	138	186	1115
Publications aimed at general public	43	31	39	80	70	54	53	317
Total	559	529	555	697	568	555	578	3463

Table 2 Funding University of Amsterdam

	2012	2013	2014	2015	2016	2017	Average	
	fte	fte	fte	fte	fte	fte	fte	%
Direct funding	25.28	17.99	22.29	29.35	36.4	36.95	28.0	45%
Research grants	18.61	20.07	22.26	24.26	22.81	26.21	22.4	36%
National	16.83	19.24	22.2	24.19	21.37	24.55	21.4	35%
European	1.78	0.83	0.06	0.07	1.44	1.67	1.0	2%
Contract research	7.09	9.53	10.62	9.56	8.38	7.38	8.8	15%
Other	2.4	2.23	2.13	3.07	2.77	2.58	2.5	4%
Total research funding	53.38	49.82	57.3	66.24	70.36	73.13	61.7	
Expenditure in k€								
Personnel	3.558	3.301	3.732	4.417	4.721	5.127	4.1	68%
Other costs	2.52	2.416	2.523	2.871	3.086	2.849	2.7	40%
Total expenditure	6.078	5.717	6.255	7.288	7.807	7.976	6.9	

Table 3 Staff University of Amsterdam

	2012		2013		2014		2015		2016		2017		Average	
	n	fte	n	fte	n	fte	n	fte	n	fte	n	fte	n	fte
Scientific staff	47	15.9	49	14.5	47	14.6	46	14.9	52	15.9	55	19.1	49	15.8
Postdocs	20	7.9	20	6.0	27	11.1	33	17.2	36	16.5	39	15.3	29	12.4
PhD candidates	35	18.3	29	15.7	37	21.6	38	19.1	43	20.2	38	22.2	37	19.5
Parttime PhD candidates	8	2.73	10	2.78	17	4.78	21	4.03	21	2.43	17	0.29	16	2.8
Total research staff	110	44.9	108	39.0	128	52.1	138	55.2	152	55.0	149	56.9	131	50.5
Support staff	4	2.4	4	1.3	4	1.4	4	1.3	4	1.2	4	1.1	4	1.4
Visiting fellows	2	0	1	0	2	0	1	0	1	0	0	0	1	0.0
Total staff	116	47.3	113	40.2	134	53.5	143	56.6	157	56.2	153	58.0	136	52.0

Table 4 PhD duration and success rate, fulltime, University of Amsterdam

	Enrolment			Graduated in 4 yrs		Graduated in 5 yrs		Graduated in 6 yrs		Graduated in >= 7 yrs		Not yet finished		Discontinued	
	M	F	tot	#	%	#	%	#	%	#	%	#	%	#	%
2008	1	8	9	1	11%	6	67%	7	78%	8	89%	1	11%		0%
2009	1	7	8	3	38%	4	50%	5	63%	7	88%	1	13%		0%
2010	1	6	7	2	29%	3	43%	5	71%	6	86%	1	14%		0%
2011	1	4	5	0	0%	2	40%	3	60%	3	60%	1	20%	1	20%
2012	0	3	3	0	0%	1	33%	1	33%	(1)		1	33%	1	33%
2013	2	4	6	1	17%	3	50%	(3)		(3)		3	50%		0%
2014	2	11	13	4	31%	(4)		(4)		(4)		8	62%	1	8%
Total	8	43	51	11	22%	23	61%	28	66%	32	83%	16	31%	3	6%

Table 5 PhD duration and success rate, parttime, University of Amsterdam

	Enrolment			Graduated in 4 yrs		Graduated in 5 yrs		Graduated in 6 yrs		Graduated in >= 7 yrs		Not yet finished		Discontinued	
	M	F	tot	#	%	#	%	#	%	#	%	#	%	#	%
2008	0	1	1	0	0%	1	100%	1	100%	1	100%	0	0%		0%
2009	0	2	2	0	0%	0	0%	0	0%	2	100%	0	0%		0%
2010															
2011	2	3	5	0	0%	2	40%	4	80%	5	100%	0	0%		0%
2012															
2013	0	3	3	0	0%	0	0%					3	100%		0%
2014	5	4	9	2	22%	(2)		(2)		(2)		4	44%	3	33%
Total	7	13	20	2	10%	5	45%	7	63%	10	100%	7	35%	3	15%

Appendix 3C: Quantitative data – Institute of Education and Child Studies, Leiden University

Table 1 Publications Leiden University

	2012	2013	2014	2015	2016	2017	Average	Total
Articles (refereed)	85	81	100	108	110	107	99	591
Articles (non-refereed)	10	15	11	7	0	3	8	46
Books	0	1	3	1	5	3	2	13
Book chapters	16	25	16	19	19	14	18	109
Subtotal	111	122	130	135	134	127	126.5	759
PhD theses								
Internal	8	9	10	12	6	11	9	56
Total	119	131	140	147	140	138	136	815

Table 2 Funding Leiden University

	2012	2013	2014	2015	2016	2017	Average	
	fte	fte	fte	fte	fte	fte	fte	%
Direct funding	16.09	21.78	25.58	28.46	36.22	30.32	26.4	53%
Research grants								
National	13.53	13.37	14.48	18.7	10.15	8.22	13.1	26%
European	6.99	7.42	5.02	2.19	2.54	3.38	4.6	10%
Contract research	5.52	5.67	8.33	7.36	3.84	2.83	5.6	11%
Other								
Total research funding	42.13	48.24	53.41	56.71	52.75	44.75	49.7	
Expenditure in k€								
Personnel	2280	2709	2955	3174	3071	2732	2820.2	92%
Other costs	777	1054	865	449	385	892	737.0	21%
Total expenditure	3057	3763	3820	3623	3456	3624	3557.2	

Table 3 Staff Leiden University

	2012		2013		2014		2015		2016		2017		Average	
	n	fte	n	fte	n	fte	n	fte	n	fte	n	fte	n	fte
Scientific staff	37	9.4	41	10.8	47	12.0	45	11.9	44	10.7	43	10.4	43	10.9
Postdocs	8	3.8	8	3.7	7	3.4	12	6.0	13	7.5	10	6.7	10	5.2
PhD candidates	23	19.7	31	26.4	31	27.0	30	26.4	29	25.2	26	23.3	28	24.7
Parttime PhD candidates	22	9.5	25	9.1	28	10.8	30	11.4	24	10.7	18	6.6	25	9.7
Total research staff	90	42.4	105	49.9	113	53.2	117	55.6	110	54.0	97	47.0	105	50.4

Table 4 PhD duration and success rate, fulltime, Leiden University

	Enrolment			Graduated in 4 yrs		Graduated in 5 yrs		Graduated in 6 yrs		Graduated in >= 7 yrs		Not yet finished		Discontinued	
	M	F	tot	#	%	#	%	#	%	#	%	#	%	#	%
2009	0	9	9	2	22%	5	56%	7	78%	7	78%	0	0%	2	22%
2010	0	9	9	2	22%	3	33%	6	67%	8	89%	1	11%	0	0%
2011	0	8	8	2	25%	3	38%	5	63%	8	100%	0	0%	0	0%
2012	1	12	13	5	38%	7	54%	9	69%	(9)		4	31%	0	0%
2013	0	8	8	1	13%	4	50%	(4)		(4)		3	38%	1	13%
2014	0	11	11	0	0%							10	91%	1	9%
Total	1	57	58	12	21%	22	47%	31	69%	36	88%	18	31%	4	7%

Table 5 PhD duration and success rate, parttime, Leiden University

	Enrolment			Graduated in 4 yrs		Graduated in 5 yrs		Graduated in 6 yrs		Graduated in >= 7 yrs		Not yet finished		Discontinued	
	M	F	tot	#	%	#	%	#	%	#	%	#	%	#	%
2009	0	1	1	0	0%	1	100%	1	100%	1	100%	0	0%	0	0%
2010	0	0	0	0											
2011	0	0	0	0											
2012	0	0	0	0											
2013	0	1	1	0	0%	0	0%					1	100%	0	0%
2014	0	2	2	0	0%	1	50%	(1)		(1)		1	50%	0	0%
Total	0	4	4	0	0%	2	50%	2	100%	2	100%	2	50%	0	0%

Appendix 3D: Quantitative data – Nieuwenhuis Institute for Educational Research, University of Groningen

Table 1 Publications University of Groningen

	2012	2013	2014	2015	2016	2017	Average	Total
Articles (refereed)	118	86	134	135	138	102	119	713
Articles (non-refereed)	1	10	3	3	2	0	3	19
Books	15	2	10	5	4	3	7	39
Book chapters	33	11	35	26	21	35	27	161
Subtotal	167	109	182	169	165	140	155.3	932
PhD theses	12	5	11	20	15	7	12	70
Other research output scientific	1	6	9	2	4	3	4	25
Policy reports	28	22	18	16	17	21	20	122
Professional publications and lectures	36	47	38	38	37	32	38	228
Publications aimed at the general public	2	5	4	7	6	3	5	27
Total	234	189	251	232	229	199	222	1334

Table 2 Funding University of Groningen

	2012	2013	2014	2015	2016	2017	Average	
Direct funding	2942.9	3047	3201.6	3195.1	3317	3155.3	3143.2	53%
Research grants								
National	244.8	1380.3	709.5	1445.4	952.7	1150.1	980.5	15%
European		160	160			40.9	120.3	1%
Contract research	308	1100.5	3184.9	2661.4	2674.5	1545.8	1912.5	28%
Other	128.5	4.7	224.8	336.6	187.1	166.8	174.8	3%
Total research funding	3624.2	5692.5	7480.8	7638.5	7131.3	6058.9	6331.2	
Expenditure in k€								
Personnel	4349.7	4796	4810.7	5716.2	7303.5	6611.8	5598.0	122%
Other costs	221.7	284.9	306.8	261.5	390.3	470.2	322.6	5%
Total expenditure	4571.4	5080.9	5117.5	5977.7	7693.8	7082	5920.6	

Table 3 Staff University of Groningen

	2012		2013		2014		2015		2016		2017		Average	
	n	fte	n	fte	n	fte	n	fte	n	fte	n	fte	n	fte
Scientific staff	41	13.4	48	17.5	44	15.8	43	16.2	53	18.5	50	19	47	16.7
Postdocs	29	17.1	34	16.8	58	19.9	65	28	45	22.8	47	17	46	20.3
PhD candidates	38	25.6	42	29.2	39	25.8	45	29.4	51	34.8	52	35	45	30.0
Parttime PhD candidates	20	8	27	10.8	32	12.8	36	14.4	43	17.2	39	15.6	33	13.1
Total research staff	128	64.1	151	74.3	173	74.3	189	88	192	93.3	188	86.6	170	80

Table 4 PhD duration success rate, fulltime, University of Groningen

	Enrolment			Graduated in 4 yrs		Graduated in 5 yrs		Graduated in 6 yrs		Graduated in >= 7 yrs		Not yet finished		Discontinued	
	M	F	tot	#	%	#	%	#	%	#	%	#	%	#	%
Fulltime															
2008	1	6	7	0	0%	3	43%	3	43%	6	86%	0	0%	1	14%
2009	3	7	10	0	0%	1	10%	8	80%	8	80%	0	0%	2	20%
2010	1	7	8	1	13%	3	38%	6	75%	6	75%	1	13%	1	13%
2011	1	2	3	0	0%	0	0%	1	33%	2	67%	1	33%	0	0%
2012	1	3	4	0	0%	1	25%	2	50%	(2)		1	25%	1	25%
2013	1	5	6	1	17%	3	50%	(3)		(3)		3	50%	0	0%
2014	2	9	11	1	9%	(1)		(1)		(1)		8	73%	2	18%
Total	10	39	49	3	6%	12	29%	24	63%	28	79%	14	29%	7	14%

Table 5 PhD duration success rate, parttime, University of Groningen

	Enrolment			Graduated in 4 yrs		Graduated in 5 yrs		Graduated in 6 yrs		Graduated in >= 7 yrs		Not yet finished		Discontinued	
	M	F	tot	#	%	#	%	#	%	#	%	#	%	#	%
Parttime															
2008	2	7	9	1	11%	3	33%	5	56%	6	67%	2	22%	1	11%
2009	0	4	4	0	0%	2	50%	3	75%	4	100%	0	0%	0	0%
2010	3	6	9	1	11%	3	33%	5	56%	6	67%	1	11%	2	
2011	1	4	5	0	0%	2	3%	3	60%	3	60%	2	40%	0	0%
2012	3	7	10	1	10%	3	30%	3	30%	(3)		6	60%	1	
2013	3	4	7	1	14%	1	14%	(1)		(1)		4	57%	2	29%
2014	3	10	13	1	8%	(1)		(1)		(1)		11	85%	1	8%
Total	15	42	57	5	9%	15	32%	21	51%	24	70%	26	46%	7	12%

Appendix 3E: Quantitative data – Department of Education & Pedagogy, Utrecht University

Table 1 Publications Department of Education & Pedagogy, Utrecht University

Publications	2012	2013	2014	2015	2016	2017	Average	Total
Articles (refereed)	218	215	233	267	279	254	244	1466
Articles (non-refereed)	1	0	0	0	3	0	1	4
Books	9	6	8	13	6	9	9	51
Book chapters	51	41	48	49	22	26	40	237
Subtotal	279	262	289	329	310	289	293	1758
PhD theses	9	15	20	11	9	11	13	75
Other research output scientific	4	6	6	8	9	2	6	35
Policy reports	9	18	5	8	11	17	11	68
Professional publications and lectures	44	53	57	54	47	34	48	289
Publications aimed at the general public	2	4	6	14	9	12	8	47
Total	338	343	363	413	386	354	366	2197

Table 2 Funding Department of Education & Pedagogy, Utrecht University

	2012	2013	2014	2015	2016	2017	Average	
Direct funding	28.17	31.02	28.28	30.5	38.85	41.8	78.9	53%
Research grants								
National	28.14	30.26	27.84	32.13	30.5	26.42	29.2	35%
European	0.92	1.23	1.71	2.54	3.4	3.3	2.2	3%
Contract research	4.36	10.16	10.74	7.86	3.72	3.33	6.7	8%
Other	0	0.87	1.85	1.72	1.06	1.52	1.2	1%
Total research funding	61.59	73.54	70.42	349.25	77.53	76.37	118.1	
Expenditure in k€								
Personnel	4066	4958	5064	5652	5725	5894	5226.5	100%
Other costs	1164	1089	1020	1139	1369	1333	1185.7	19%
Total expenditure	5230	6047	6084	6791	7094	7227	6412.2	

Table 3 Staff Department of Education & Pedagogy, Utrecht University

	2012		2013		2014		2015		2016		2017		Average	
	n	fte	n	fte	n	fte	n	fte	n	fte	n	fte	n	fte
Scientific staff	50	20.2	47	19.2	45	19.7	65	25.6	66	25.2	66	26.2	57	22.7
Postdocs	22	11.3	20	10.7	31	15.4	35	16.7	33	15.2	26	13.8	28	13.9
PhD candidates	43	28.9	45	28.6	31	20.7	29	18.0	34	22.2	30	20.4	35	23.1
parttime PhD candidates	23	8.5	31	10.4	28	11.5	38	14.5	36	15.7	41	15.6	33	12.7
Total research staff	138	69.0	143	68.8	135	67.3	167	74.8	169	78.2	163	76.0	154	72.4
Support staff	1	0.5	1	0.2	1	0.8	3	0.6	4	2.7	4	2.2	2	1.2
Visiting fellows	0		3		1		2		4		3		2	
Total staff	139	69.5	147	69.0	137	68.1	172	75.3	177	80.9	170	78.2	157	73.5

Table 4 PhD duration success rate, fulltime, Department of Education & Pedagogy, Utrecht University

	Enrolment			Graduated in 4 yrs		Graduated in 5 yrs		Graduated in 6 yrs		Graduated in >= 7 yrs		Not yet finished		Discontinued	
	M	F	tot	#	%	#	%	#	%	#	%	#	%	#	%
Fulltime															
2008	1	10	11	3	27%	9	82%	11	100%	11	100%	0	0%	0	0%
2009	1	11	12	3	25%	10	83%	11	92%	11	92%	0	0%	1	8%
2010	3	9	12	2	17%	7	58%	9	75%	10	83%	1	8%	1	8%
2011	3	7	10	3	30%	6	60%	7	70%	7	70%	3	30%	0	0%
2012	1	3	4	0	0%	2	50%	2	50%	(2)		1	25%	1	25%
2013	0	5	5	3	60%	3	60%	(3)		(3)		1	20%	1	
2014	1	3	4	0	0%							4	100%	0	0%
Total	10	48	58	14	24%	37	69%	43	82%	44	87%	10	17%	4	7%

Table 5 PhD duration success rate, fulltime, Department of Education & Pedagogy, Utrecht University

	Enrolment			Graduated in 4 yrs		Graduated in 5 yrs		Graduated in 6 yrs		Graduated in >= 7 yrs		Not yet finished		Discontinued	
	M	F	tot	#	%	#	%	#	%	#	%	#	%	#	%
Parttime															
2008	3	4	7	2	29%	3	43%	7	100%	7	100%	0	0%	0	0%
2009	1	6	7	0	0%	1	14%	3	43%	4	57%	1	14%	2	29%
2010	0	6	6	1	17%	1	17%	3	50%	4	67%	2	33%	0	0%
2011	1	6	7	0	0%	2	29%	2	29%	2	29%	3	43%	2	29%
2012	2	3	5	1	20%	2	40%	2	40%	(2)		3	60%	0	0%
2013	2	2	4	1	25%	1	25%	(1)		(1)		3	75%	0	0%
2014	1	4	5	1	20%	(1)		(1)		(1)		4	80%	0	0%
Total	10	31	41	6	15%	11	28%	19	53%	21	63%	16	39%	4	10%

Appendix 3F: Quantitative data – Freudenthal Institute, Utrecht University

Table 1 Publications Freudenthal Institute, Utrecht University

	2012	2013	2014	2015	2016	2017	Average	Total
Articles (refereed)	26	26	44	38	35	22	32	191
Articles (non-refereed)	1	0	4	0	0	4	2	9
Books	1	0	2	3	1	2	2	9
Book chapters	3	17	15	15	20	17	15	87
Subtotal	31	43	65	56	56	45	49.3	296
PhD theses	1	8	7	5	1	5	5	27
Other research output scientific	11	14	19	24	15	16	17	99
Conference papers	10	8	20	14	8	7	11	67
Total	52	65	104	94	79	68	77	462

Table 2 Funding Freudenthal Institute, Utrecht University

	2012	2013	2014	2015	2016	2017	Average	
Direct funding	4.97	4.98	6.6	4.78	6.6	8.02	6.0	43%
Research grants	0.6	0.15	3.94	7.6	7.1	6.92	4.4	28%
Contract research	4.14	4.56	6.87	2.69	2	2.3	3.8	29%
Other								
Total research funding	9.71	9.69	17.41	15.07	15.7	17.24	14.1	
Expenditure in k€								
Personnel	719	743	1094	962	1049	1149	952.7	115%
Other costs	108	111	164	144	157	172	142.7	13%
Total expenditure	827	854	1258	1106	1206	1321	1095	

Table 3 Staff Freudenthal Institute, Utrecht University

Staff FI	2012		2013		2014		2015		2016		2017		Average	
	n	fte	n	fte	n	fte	n	fte	n	fte	n	fte	n	fte
Scientific staff	16	4.9	20	6.0	23	6.2	16	2.6	21	4.1	16	3.4	19	4.5
Postdocs	1	0.7	2	1.3	2	1.2	3	1.8	5	3.1	6	3.1	3	1.9
PhD candidates	7	5.6	7	5.6	13	9.9	10	6.6	9	6.2	7	5.7	9	6.6
Parttime PhD candidates	5	3.3	5	1.7	8	2.6	1	0.2	4	1.1	7	3.1	5	2.0
Total research staff	29	14.4	34	14.5	46	20.0	30	11.1	39	14.4	36	15.4	35.7	15.0
Support staff	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Visiting fellows	4	6	2	1	6	6	4	4	6	6	4	4	4	4
Total staff	33	14.4	40	14.5	48	20.0	31	11.1	45	14.4	42	15.4	39.8	15.0

Table 4 PhD duration and success rate, fulltime, Freudenthal Institute, Utrecht University

	Enrolment			Graduated in 4 yrs		Graduated in 5 yrs		Graduated in 6 yrs		Graduated in >= 7 yrs		Not yet finished		Discontinued	
	M	F	tot	#	%	#	%	#	%	#	%	#	%	#	%
Fulltime															
2008		3	3	1	33%	2	67%	2	67%	2	67%			1	33%
2009		3	3	0	0%	1	33%	2	67%	2	67%			1	33%
2010		1	1	1	100%	1	100%	1	100%	1	100%				
2011	4		4	4	100%	4	100%	4	100%	4	100%				
2012	3	1	4	2	50%	3	75%	3	75%	(3)		1	25%		
2013			0												
2014	4	1	5	1	20%	(1)		(1)		(1)		3	60%	1	20%
Total	11	9	20	10	50%	12	73%	13	80%	13	82%	4	20%	3	15%

Table 5 PhD duration and success rate, parttime, Freudenthal Institute, Utrecht University

	Enrolment			Graduated in 4 yrs		Graduated in 5 yrs		Graduated in 6 yrs		Graduated in >= 7 yrs		Not yet finished		Discontinued	
	M	F	tot	#	%	#	%	#	%	#	%	#	%	#	%
Parttime															
2008	1	1	2	1	50%	1	50%	1	50%	1	50%			1	50%
2009	1		1	1	100%	1	100%	1	100%	1	100%				
2010															
2011															
2012	1		1	0	0%	1	100%	1	100%	1	100%				
2013	1	1	2	0	0%	0	0%					1	50%	1	50%
2014															
Total	4	2	6	2	33%	3	50%	3	75%	3	75%	1	17%	2	33%

Appendix 3G: Quantitative data – Welten Institute, Open University of the Netherlands

Table 1 Publications Open University of the Netherlands

	2012	2013	2014	2015	2016	2017	Average	Total
Articles (refereed)	89	63	89	64	72	69	74	446
Articles (non-refereed)								
Books	10	11	12	8	4	4	8	49
Book chapters	12	56	24	23	10	18	24	143
Subtotal	111	130	125	95	86	91	106	638
PhD theses	9	9	4	14	8	6	8	50
Other research output scientific	43	30	32	28	29	35	33	197
Reports incl. technical reports	47	22	39	16	18	24	28	166
Professional publications and lectures	73	122	50	43	38	29	59	355
Masterclasses MOOCS	22	23	12	5	6	3	12	71
Total	296	327	258	187	177	182	238	1427

Table 2 Funding Open University of the Netherlands

	2012	2013	2014	2015	2016	2017	Average	
Direct funding	94.4	92.4	44.8	42.5	36.7	34.9	57.6	69%
Research grants	27.8	27.3	17.2	17.5	19.7	19.8	21.6	28%
National			2.9	3.8	5.3	5.1	4.3	5%
European			14.3	13.7	14.4	14.7	14.3	16%
Contract research	5.5	1.8	2.2	1.7	1.9	2.2	2.6	3%
Total research funding	127.7	121.5	64.2	61.7	58.3	56.9	78.7	
Expenditure in k€								
Personnel	4117	5865	4588	4486	4588	4596	4706.7	82%
Other costs	1458	688	517	777	517	666	770.5	14%
Total expenditure	5575	6553	5105	5263	5105	5262	5477	

Table 3 Staff Open University of the Netherlands

Staff OU	2012		2013		2014		2015		2016		2017		Average	
	n	fte	n	fte	n	fte	n	fte	n	fte	n	fte	n	fte
Scientific staff	78	24.7	72	23.2	46	16.0	44	15.4	42	14.4	36	12.2	53	17.6
Postdocs	7	2.6	6	2.1	4	1.4	5	1.8	5	1.8	5	1.8	5	1.9
PhD candidates	26	9.8	25	9.5	22	8.3	20	7.5	17	6.7	20	7.8	22	8.3
Total research staff	111	37	103	34.8	72	25.7	69	24.7	64	22.9	61	21.8	80	27.8
Support staff	45	14.1	45	13.9	0	0	0	0	1	0.4	1	0.4	15	4.8
Visiting fellows														
Total staff	156	51.1	148	48.7	72	25.7	69	24.7	65	23.3	62	22.2	95	32.6

Table 4 PhD duration and success rate, fulltime, Open University of the Netherlands

	Enrolment			Graduated in 4 yrs		Graduated in 5 yrs		Graduated in 6 yrs		Graduated in >= 7 yrs		Not yet finished		Discontinued	
	M	F	tot	#	%	#	%	#	%	#	%	#	%	#	%
2007	1	1	2		0%	1	50%	1	50%	2	100%	0	0%	0	0%
2008	4	4	8	1	13%	5	63%	8	100%	8	100%	0	0%	0	0%
2009	2	3	5	1	20%	2	40%	2	40%	4	80%	0	0%	1	20%
2010	3	4	7	1	14%	4	57%	5	71%	5	71%	0	0%	2	29%
2011	4	5	9	1	11%	5	56%	6	67%	7	78%	1	11%	1	11%
2012	2	1	3	1	33%	2	67%	2	67%	(2)			0%	1	33%
2013	3	3	6	2	33%	3	50%	(3)		(3)		3	50%		0%
Total	19	21	40	7	18%	22	55%	27	71%	31	84%	4	10%	5	13%