

**Research Review  
Institute of Psychology  
Erasmus University Rotterdam  
2004 - 2009**

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## Table of Contents

Review Committee and Review Procedures	5
Assessment at Institute Level	7
Assessment at Programme Level	11
Brain and Cognition	11
Experimental Psychopathology	13
Educational and Developmental Psychology	16
Work and Organizational Psychology	18
Appendix A: Curricula Vitae of the Committee Members	23
Appendix B: Explanation of the SEP criteria and scores	25
Appendix C: Time schedule site visit Institute of Psychology/ EUR	26



## **Review Committee and Review Procedures**

### **Scope of the assessment**

The Review Committee has been asked to perform an assessment of the Institute of Psychology Erasmus University Rotterdam. The assessment covers the research in the period 2004-2009.

In accordance with the Standard Evaluation Protocol 2009-2015 for Public Research Organizations, the Committee's tasks were to assess the quality of the institute and the research programmes on the basis of the information provided by the institute and through interviews with the management and the research leaders, and to advise how this quality might be improved.

### **Composition of the Committee**

The composition of the Committee was as follows:

- Prof. Detlev Leutner, Duisburg-Essen University, Germany, chairman of the Committee;
- Prof. Arthur Glenberg, Arizona State University, Tempe, USA, and University of Wisconsin, Madison, USA;
- Prof. Sabine Sonnentag, University of Mannheim, Germany;
- Prof. Cees van der Vleuten, Maastricht University, the Netherlands;
- Prof. Geert Crombez University Ghent, Belgium;

A brief curriculum vitae of the Committee members is included in Appendix A.

Dr. Barbara van Balen of QANU (Quality Assurance Netherlands Universities) was appointed secretary to the Committee.

### **Independence**

All members of the Committee signed a statement of independence to safeguard that they would assess the quality of the Institutes and research programmes in an unbiased and independent way. Any existing personal or professional relationships between Committee members and programmes under review were reported and discussed in the Committee meeting. The Committee concluded that there were no unacceptable relations or dependencies and that there was no specific risk in terms of bias or undue influence.

### **Data provided to the Committee**

The Committee has received detailed documentation consisting of the following parts:

1. Self-evaluation report of the institute, including all information required by the Standard Evaluation Protocol, with appendices.
2. Bibliometric analyses of the research output of the institutes concerned.

### **Remarks about the data provided**

The self-evaluation report contained sufficient information to prepare the Committee members for the site-visit. The bibliometrical analysis provided the Committee with useful information about the impact of the research and publications. The interviews during the site-visits were very helpful to clarify the remaining issues. The site-visits were very informative and necessary to enable the Committee to make an argued judgement on the quality of the research.

### **Procedures followed by the Committee**

The Committee proceeded according to the Standard Evaluation Protocol 2009-2015. Prior to the Committee meeting, each programme was assigned to two reviewers, who independently formulated a preliminary assessment. One of the Committee Members, professor Glenberg, was not able to attend the site visit. Professor Glenberg sent his assessment on basis of the documentation by email, and communication between the Committee Members and professor Glenberg was also maintained by email. The questions of professor Glenberg to the Institute and the programme leaders were during the site visit put forward by the other Committee Members. The final assessments are based on the documentation provided by the Institute, the key publications and the interviews with the management and with the leaders of the programmes during the site-visit. The entire Committee decided on the final judgements for all programmes. The Committee scored the programmes according to the procedures described in the Standard Evaluation Protocol. The final mark per criterion is the weighed performance of the programmes for the sub-criteria.

The site visit took place on 19 and 20 September 2011.

## ASSESSMENT AT THE INSTITUTE LEVEL

### 1. The institute

The Institute of Psychology is part of the Faculty of Social Sciences of the Erasmus University Rotterdam. The Institute was founded in 2001. The first aim was to develop a bachelor and master degree programme. The second aim was to develop research programmes in the areas of the master programme. The general mission of the Institute is to disseminate applicable psychological knowledge in the fields of Brain and Cognition, Clinical Psychology, Educational and Developmental Psychology, and Work and Organizational Psychology. The Institute of Psychology is governed by a three-headed Administration consisting of the Chair of the Institute, the Director of Education and the Director of Research. The Director of Research is responsible for implementing and maintaining standards concerning the quality of research. The director is also responsible for the research budget. The budget is used for the acquisition of equipment, hiring of student-assistants, payment of subjects, faculty and PhD-student travel, and other expenses.

#### *Assessment*

The Committee was impressed by the accomplishments of the Institute in the ten years of its existence. The Institute has developed into a dynamic and internationally acknowledged Institute with a focus on applied psychology and a thorough basis in basic research. The aim to develop research programmes has been achieved in all aspects. The strategy to build an Institute around high potential researchers turned out to be successful.

### 2. Quality and academic reputation

The institute's research policy is aimed at a high quality of performance by means of coherent research programmes with an optimal mass and strong leadership. The CWTS analysis of the research output of the institute indicates that the output has a considerable impact on the field at large, and this impact is distributed across a number of subfields in which the Institute of Psychology is performing particularly well. The overall impact of the research output of the Institute shows a remarkable increase in recent years.

#### *Assessment*

The quality of research and the academic reputation of the Institute increased remarkably in the evaluation period. It seems that this increase is – at least in part – due to effective decisions of the administration, e.g., to introduce a point system for evaluation of faculty members annually with a focus on publications in ISI journals. This system was further developed in 2009, focusing even more on the quality of journal publications. Furthermore, monetary incentives were introduced for articles in top journals. Faculty members are encouraged to write proposals for second stream projects by providing first stream money for proposals that were evaluated with an A but in the end not funded by NWO or ERC. For getting qualified PhD students, a specific and highly selective advanced research program for outstanding master students was introduced. For outstanding researchers a tenure track option was introduced. Thus, the Institute's administration took a number of measures for increasing the quality of research and the academic reputation of the Institute. This strategy proved to be very successful.

### 3. Resources

The Institute of Psychology gets its research funding from three sources:

- 74% first stream or direct funding by the Dutch Ministry of Education.
- 19% second stream funding, this is research mainly funded by the National Research Council (NWO) on basis of competition. This stream has decreased between 2004 and 2007 from 30% to 9% but has increased to 19 % in 2009.
- 8% third stream or contract research, mainly funded by industry.

#### *Assessment*

With 19 % in 2009, the decrease of second stream funding from 30 % in 2004 to 9 % in 2007 seems to be stopped. The incentives of the administration seem to work. During the site visit the Committee learned that the increase of second stream projects persevered in 2010 and 2011. Third stream money has been quite constant in the evaluation period at reasonable 4 to 8 %. The Committee had a round tour along the Lab facilities of the Institute and was deeply impressed by the opportunities the Laboratories provide for the researchers. The researchers are very positive about the facilities and the support offered by the technicians. The facilities could even be improved by the introduction of a fMRI scanner on the Woudenstein campus.

### 4. Productivity

The institute provided the following information about the publication output:

<b>Institute of Psychology</b>	<b>2004</b>	<b>2005</b>	<b>2006</b>	<b>2007</b>	<b>2008</b>	<b>2009</b>
Refereed articles	62	88	95	93	104	130
Articles in volumes/proceedings		5		4	8	2
Books monograph/editorial	1	4		6	5	3
Book chapters	2	6	11	17	38	29
PhD theses		1	3	2	2	3
Conference contributions	1	4	53	58	103	
Professions publications	10	13	34	19	21	11
<b>Total publications</b>	<b>75</b>	<b>118</b>	<b>147</b>	<b>194</b>	<b>236</b>	<b>281</b>

#### *Assessment*

In terms of refereed articles, the Institute increased its productivity from 62 papers in 2004 to 130 papers in 2009. When relating the number of papers to the amount of tenured research staff fte, the figures indicate a remarkable increase from 7 refereed articles per fte in 2004 to 11 in 2009. Looking at faculty members instead of fte, this corresponds to an increase from 2.7 refereed papers per tenured faculty member in 2004 to 4.6 refereed papers per tenured faculty member in 2009. This seems to be a quite good achievement of the Institute.

Furthermore, the Institute increased its visibility on conferences from very small numbers (less than 10 conference contributions) in 2004 and 2005 to more than 130 in 2009. Concerning professional publications, the productivity has been quite constant between 10 and 34 publications per year. However, in the review period, the number of PhD theses is rather small and ranges from 0 in 2004 to 3 in 2009. The Committee learned during the site visit that an increase of PhD students and completed PhD dissertations can be seen in 2010 and 2011. Thus, during the review period, the Institute has been effective in increasing its scientific productivity in terms of refereed journal papers and conference presentations.



## 5. Societal Relevance

The Institute has an intensive collaboration with the local school system in Rotterdam, in which researchers and teachers are engaged in collaborative activities to improve primary education. There are extensive interactions with local mental health facilities and with profit and non-profit organizations, for example in the form of student internships. Each year large numbers of students go out to mental health facilities, schools, and the world of profit- and non-profit organizations to conduct research, share their knowledge, and help enhance the functioning of these societal entities. The Job-Demand Resources monitor of the Work and Organizational Psychology Group is used by more than 200 organizations.

Members of the Institute regularly appear in the local and national media to disseminate their findings to a broader audience. Several institute members have written and are engaged in writing books and articles intended for a wider readership.

### *Assessment*

The Institute seems to have societal impact concerning local activities. However, the self-report does not provide concrete information about the quantity and the quality of local activities. The only exception is on the “Job-Demand Resources” monitor of the Work and Organizational Psychology Group, which is used by more than 200 organizations. During the site visit the research director gave additional information on the strategy to increase the visibility of the societal relevance of the research. The national policy is that 2,5 % of the budget of universities should be spent on valorisation. The Institute is developing strategies to reach that goal. The Institute has, e.g., an internal newsletter once a month in which colleagues are asked to talk about valorisation. The Committee is convinced that the strategy of the Institute will be successful and that the visibility of the societal relevance of the research will increase in the next years.

## 6. Strategy for the future

The main goal for the near future is to build on the strengths developed in the past years. The new system for assessing research performance as well as the university-wide implemented tenure-track system will enhance the quality and quantity of research output among junior faculty. The Institute furthermore expects that the impact of the scientific output will increase. A key factor is that efforts will be made to retain high-performing faculty and employ the highest standards in recruiting new faculty and PhD-students. An important goal is also to increase the level of external funding. The Institute sees chances resulting from the changed funding climate, which is now more oriented to research with societal impact.

### *Assessment*

The Institute seems to be on a good way to increase the scientific output. However, balancing basic research on the one hand and research with societal impact on the other is a challenge. The research director has explained the measures the Institute has developed to stimulate second stream projects:

- Develop more international (cross Atlantic) networks.
- Include the number of proposals submitted in the staff evaluation system.
- Give junior researchers feedback on their proposals.
- Stimulate co-operation between research areas.

These measures are welcomed by the Committee. In addition, the Committee recommends that the strategy of the Institute to improve the level and the number of high level publications should include a focus on more innovative research.

## **7. PhD Training**

The institute has a 100% success rate for PhD students. Starting PhD students are evaluated after the first year and can only proceed when this evaluation is positive. Internal PhD students usually have at least one daily supervisor (the co-promotor who is an assistant or associate professor) and one supervisor (the promotor).

PhD students are expected to present at one international conference each year, for which they receive financial support, and are required to be member of one of the well-known national research schools in Psychology. Each school offers courses for which the PhD students receive a certificate.

### *Assessment*

The Institute's PhD training seems to be state-of-the-art of Dutch universities. Internal PhD students are coached by a supervisor and a daily supervisor, and they are required to participate in one of the national graduate schools, in which several faculty members of the Institute play a major role. Zero percent dropout indicates very good achievement. The number of completed PhD dissertations, however, is rather low per year and has to be increased in the future. The Committee received additional information concerning the number of PhD students per full professor from the date of appointment. On basis of this information the Committee concludes that the numbers are reasonable when related to the number of full time professors and it can be expected that the numbers of completed dissertations will soon rise.

The PhD students the Committee met were all very happy with their position and with the supervision and the training they get. The Institute is a very good nursing home for young talents to develop their research skills and their academic performance and level.

## ASSESSMENT AT THE PROGRAMME LEVEL

Programme: **Brain and Cognition**  
Programme coordinator: Prof. dr. Rolf A. Zwaan  
Research staff 2009: 9.06 fte

Assessments:                      Quality:        4.5  
   Productivity: 4  
   Relevance:    3  
   Viability:     4

The goal of this programme is to investigate the role of perception and action in higher cognitive processes, such as language, autobiographical memory, and concepts and categories. The basic idea is that it is not possible to explain all of cognition in terms of the manipulation of abstract symbols according to a limited set of abstract rules. Rather, cognitive processes are grounded in perception and action. The group addresses questions as the role of motor processes and representations in language and memory and the role of approach and avoidance in social cognition. A recent goal of the research group is to expand the capabilities including neuroimaging (fMRI), in collaboration with colleagues at the Erasmus Medical Centre and balance and motion tracking, making use of the technical and programming expertise assembled in the Erasmus Behavioural Laboratory (EBL). A new line of research is to examine the role of embodiment, particularly vision and action, in learning language, concepts and mathematics.

The research of this group can be described in six themes:

- emotion and cognition,
- language processing,
- memory,
- autobiographical memory,
- abstract concepts,
- stress, meditation and cognition.

### *Quality*

The overall quality of the Brain and Cognition group is very strong. The group produces strong and original research. There is a good prospect that the research can advance to the point where a rating of 5 (excellent) is appropriate. The programme leader is an internationally recognized leader in the area of embodied cognition. The themes of the research (e.g., emotion and cognition, language processing, memory, autobiographical memory, abstract concepts, meditation and cognition) are productive and on the cutting edge of research in this area, and at the same time offer a good degree of coherence. The processes in place (e.g., bi-weekly research meetings, yearly retreat) seem to be effective.

There is variability amongst the group members in the strength of the academic reputation that is reasonable given the diversity of experience and areas of expertise. One recommendation is to encourage all members of the group to have a strong presence on editorial boards. The impact of the research according to the bibliometric analyses is quite impressive. In general, the group shows an increase over years in citations per paper for both the average citations of the journals in which the papers have appeared and the average number of citations in the field. If these numbers can be maintained, there is little doubt that the group's academic reputation will increase substantially.

### *Productivity*

The bibliometric analysis reveals important, positive trends. Almost certainly, those trends reflect the hiring of key people as well as an emphasis on the quality of scientific output as reflected in recent changes in the point system. The productivity of the group is very good to excellent, the rating for this criterion is, however, diminished by the fact that there was only one PhD student graduated in the review period. This low number of PhD graduations can be explained by the fact that the programme did not have a full professor until 2007. The committee therefore expects – and has already seen the initial results - that the productivity will increase in the review period 2010-2015.

### *Relevance*

The Brain and Cognition group is primarily engaged in basic research, and hence its contributions should not be expected to have direct societal relevance. Nonetheless, it should be noted that several collaborative relations exist between members of the Brain and Cognition group and other groups (Educational Psychology and Clinical Psychology) that potentially may have strong societal relevance. The Committee heard some first ideas and recognized first cooperative projects that might display their effects during the next review.

### *Viability*

Components of the programme that support this rating include a) a focused but flexible research area (embodied cognition) that is becoming both mature and productive, b) collaboration both within the group and across groups and international boundaries, c) plans for growth and increased funding, d) a focus on quality of research, and e) plans for infrastructure improvement. The programme leader is very strategic, seeking alliances. The group has a strong concept, and cross-fertilizes other research programmes.

The further international success of the group depends on improving the infrastructure (e.g., reducing overcrowding at EBL, acquisition of technology) and continued funding to attract and maintain the best students and faculty.

### *Conclusion*

The conclusions of the Committee are substantially in line with those provided in the SWOT, “Prospects for the programme are very good.” This conclusion reflects a currently strong programme based on mid-career, creative researchers with a focus on an important set of problems, as well as the strong possibilities of a) increased international visibility, b) increased collaboration within and across fields, c) improvements in infrastructure and funding, and d) continued success in the recruitment, training, and placement of students.

Programme:	<b>Experimental Psychopathology</b>	
Programme coordinators:	Prof. dr. Peter E.H.M. Muris Prof. dr. Ingmar H.A. Franken	
Research staff 2009:	10.46 fte	
Assessments:	Quality:	4
	Productivity:	4
	Relevance:	3.5
	Viability:	4

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The goal of the Experimental Psychopathology programme is to add to the knowledge about the role of various etiological factors to psychopathological conditions in humans and their underlying biological processes. Specific attention is devoted to factors and processes involved in addiction and anxiety. The programme has three sub programmes:

### **Psychopathology and the brain's reward system**

This sub programme focuses on the clinical neuroscience of psychopathology that is associated with the brain's reward system, with special focus on addiction, anhedonia, eating disorders, and impulsive behaviours in general. The group makes use of techniques as ERPs, fMRI, and psychopharmacological challenges to elucidate abnormal neurobiological, cognitive, motivational, and affective processes involved in these disorders.

### **The developmental psychopathology of anxiety and stress**

The focus of this sub programme is on gaining better understanding of the pathways by which childhood anxiety disorders develop, persist and remit. A recent line of research focuses on the origins of the repressive coping style and its health consequences.

### **Cognitive processes in psychopathology**

This sub programme examines cognitive processes in emotional disorders. The research done in this group is two-fold:

- a) fundamental research into the basic cognitive mechanisms underlying psychopathology, intended to advance theories of the aetiology and maintenance of psychopathology and
- b) clinical intervention studies to develop new ways of treating emotional disorders.

### *Quality*

The research group has accomplished a lot in its young history. Research is internationally competitive, is creative and makes significant contributions to the field, especially related to the topics of addiction and childhood anxiety. Overall, the group performs on world average in its discipline. There is, however, room for improvement. The current quality is due to a number of highly productive researchers. Researchers with a strong research profile remain publishing as 1<sup>st</sup> author, which is recommended to be continued. There is large variability amongst the group members in the strength of their academic reputation. The research profile of some members is very good, but the international visibility of some is moderate to weak. As one of the strongholders of the research programme has recently left the Institute, the current research programme (except for the addiction theme) is in a stage of transition. Currently, some research projects do not easily fit within the research mission, programme and structure. Recently, the new programme coordinator has taken steps to put the broad research topics in a clear structure.

Increasing the quality will be facilitated by recruitment of academic staff in strategic areas by increasing the number of researchers (PhDs), by the acquisition of sophisticated research tools

and by structural collaboration with health care centres for the recruitment of patients. The lab infrastructure is impressive, but may be insufficient for the increase of the researchers over the last years.

Recommendations to increase international reputation/visibility may be to encourage members to have a presence in editorial boards and scientific committees of conferences/congresses and to organize conferences/expert meetings on dedicated and strategic topics. The balance between direct and indirect funding of staff is better in comparison with the other research programmes, but can still be improved. Second stream funding should increase, but occurs in a highly competitive national context with limited resources. The research programme has an adequate strategy and policy to look beyond the national context. As indicated, building interdisciplinary networks may provide the basis for European funding.

#### *Productivity*

The publication strategy of the Institute resulted first in an increase of the quantity of publications and second in an increase of high-quality publications. For the Clinical Psychology programme, the quantity of publications is very high. The number of publications has doubled over the 5 year period. Future priority should be on an increase of high-quality and high-impact publications. Recommendations may be to publish reviews in the areas of expertise and publications in top-tier journals. It is noticed that this is currently taking place (beyond the review period). As indicated more structural and stable contacts/networking with local health care settings facilitating recruitment of patients may be critical to increase chances for publication in top-tier journals. The number of PhD's graduated in the review period is, however, limited.

#### *Relevance*

It is clear that the research programme Clinical Psychology has invested in its primary objective: to build a strong foundational basis for experimental psychopathology. With a few exceptions, societal relevance is largely conceptual and theoretical and in standard ways for dissemination. As research with clinical samples is the next priority, opportunities for clinical implications and societal relevance will increase. There is a huge potential for the research programme, which is now not fully exploited yet. Implications may relate to diagnosis/assessment, processes of therapeutic change, and/or treatment efficacy and efficiency.

#### *Vitality and feasibility*

The mission and structure of the research groups allows for dynamic flexibility as a function of changing contextual demands. Collaboration within and between research (sub)programmes and disciplines is a strength. As the research programme is in transition, the recruitment strategy for further academic staff will be of importance to further guide and structure the research programme. This is an opportunity to further build on strengths and to invest in future objectives.

The research group is well aware of its strengths, weaknesses, opportunities and threats. The strategies and measures proposed are adequate and in large feasible.

#### *Conclusion*

The Committee concurs with the conclusion of the self-evaluation report. The clinical research programme is relatively young. Initially the programme focused upon education, which brings along an important teaching load, but is gradually developing a strong focus on research largely based upon experimental psychopathology. The structure of the research programme is dynamic and collaborative, but does not integrate all research topics. The strength of the research group is largely concentrated in a relatively small number of high-impact researchers. The research

programme is in transition as one of the strongholders has left. Investments for further academic positions are necessary to create stability and continuity in the research programme. This also creates opportunities to further optimize the coherence of the research programme. The research group is productive and may further focus upon increasing the quality and impact of their research. Key factors will be to increase the number of PhD students, to increase external funding, and to build a structural collaboration with mental health care settings. The research programme has the potential for delivering outputs that can be fundamental in nature and that can contribute to societal challenges in mental health care.

Programme:	<b>Educational and Developmental Psychology</b>	
Programme coordinator:	Prof. dr. Remy M.J.P. Rikers	
Research staff 2009:	6.22 fte	
Assessments:	Quality:	4.5
	Productivity:	5
	Relevance:	4
	Viability:	4.5

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The research within the programme Educational and Developmental Psychology has a primarily educational character with a clear orientation towards use-inspired basic research. It focuses on three topics:

- Domain-specific expertise development and its implications for instructional design for complex learning.
- Learner guidance and support mechanisms in individual and collaborative learning environments based on rich learning tasks.
- Problem-based learning together with Skills training within the Rotterdam psychology curriculum.

The group aims at establishing a comprehensive theory of human development that integrates cognitive science with instructional science in order to provide a foundation for integrating lifelong learning with the accumulation of expertise. It is based on two research traditions and theoretical pillars: Cognitive Load Theory (CLT) and a theoretical framework for expert performance and associated research on deliberate practice.

These two different research streams converge around ideas from research on the design of training for complex cognitive skill acquisition, emphasis on motivation and self regulation.

#### *Quality*

Overall quality is very good to excellent. The Committee has seen an applied programme that is flourishing thanks to a very successful recruitment of a group of high potential researchers. The Committee expects this group to sustain or even increase its level in the next years.

The output and the impact of the research are impressive. This is particularly true in light of the short history of the research group. The group has publications in top journals of the field. Some individuals clearly belong to the world top. Citation indices are impressive and show an increasing trend over the years. The integration with developmental psychology requires attention. The collaboration with other research groups within the institute is commendable and can be further tightened.

#### *Productivity*

The numerical productivity is excellent. The number of articles per fte tenured staff is very high. External funding is strongly rising and looks promising. The group has been able to show remarkable productivity in various areas. In the review period a substantial number of dissertations are established and the number of PhD students will further increase in the near future.

#### *Relevance*

The societal relevance of the research is very good. The group shows a strong use of educational theories to drive the empirical work. The research done by this group provides a very natural



opportunity for impacting educational practice. There is a natural flow between theory and practice. The group has a great potential impact on the environment. The Committee still sees so room for improvement in this aspect, in particular in regard to strategy. The group could be more reflective on its capacity to have a high impact on educational practice.

#### *Viability*

The recruitment of high potentials has clearly worked. The challenge will be to sustain and extend the capacity. Recruiting successful PhDs for academic positions and Advanced Research Master students provides good opportunities for sustainable academic capacity.

#### *Conclusion*

This is a highly productive research group that performs on a very high level. It has a lot of potential and a bright future. The group has aspirations to improve its position as one of the top research groups in the world. Considering the potential and the achievements of this group these aspirations are realistic according to the Committee.

Programme: **Work and Organizational Psychology**  
Programme coordinator: Prof. dr. Arnold B.H. Bakker  
Research staff 2009: 7.00 fte

**Assessments:** Quality: 4.5  
Productivity: 4.5  
Relevance: 5  
Viability: 3.5

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Goal of the Work and Organizational Psychology Programme is investigating well-being and performance at work using work engagement as overarching principle. A central model to the programme is Bakker's Job-Demands-Resources model.

Aspects of this model are studied in the following sub themes of the research group: work-related well-being, burnout, workaholism, happiness at work, flow, job performance, job search behaviour, applicant reactions, work-family balance, crossover, self-control, organizational citizenship behaviour, job design, job crafting and personnel selection (serious games, webcam tests). Other important research areas concern the development and validation of new instruments for personnel selection. Apart from the use of classical methods of data collection, the programme has specialized in diary studies in which participants are followed over the course of a series of workdays or workweeks and fill in short diary questionnaires using paper-and-pencil booklets, or via the internet.

#### *Quality*

The research group has a strong research profile by focussing on work engagement and the Job-Demands-Resources model. In addition, the group does research in the broader area of personnel selection. The group is dedicated to the use of state-of-the art methods of data collection and analysis. Members of the group have a strong reputation. Particularly the contribution of the programme leader is extremely good. Some of the other team members have few publications during the evaluation period, although a positive trend in the subsequent years is notable. The programme leader is the core player in the team. He has the potential to shape the group and has achieved a lot since he was recruited.

The group as a whole has very good publication records, with publications in the field's top journals (e.g., Journal of Applied Psychology, Personnel Psychology). According to the CWTS report, the research group has a substantial number of "frequently cited publications", particularly in the categories between top 10% and top 1%. The research group attracted substantial funding, both from the second and the third stream – in a highly competitive context.

#### *Productivity*

The output in terms of publications is very good, both with respect to quantity and quality. Part of the strategy seems to be to maintain strong collaborations within the Netherlands and abroad. Also in terms of numbers of publications, the research group is doing very well.

The number of completed PhD projects is rather limited. The number of PhD candidates increased in recent years, but still is small in relation to the number of (tenured) staff members.

#### *Relevance*

Research done by this group has an important societal relevance. The research group has an impact on the professional field, as becomes obvious in frequent publications for a broad

audience, consultancy within organizations, and work in several committees focussing on personnel section and other topic relevant for organizations.

#### *Viability*

Work engagement is a timely topic, and it seems that the research group is aware that this topic must be framed in a broad way so that it remains viable should the momentary international interest in this topic fade away. It is an excellent idea to aim at an integration of research on work engagement and research on individual differences. This will allow subgroups within the research group to become even better integrated. Similarly, cooperation with other program groups within the Institute could be intensified. Attracting future funding and highly qualified applicants for PhD positions remains a challenge.

The strength of the group is its highly profiled programme leader, which makes the group at the same time vulnerable. The last two years the Committee has seen good developments with new staff members being hired after the end of the evaluation period, but the seniority in the group is still somewhat unbalanced, partly due to the promotion of two of the professors into management positions. It is important that some of the team members develop into a middle seniority position.

The group seems to have a good mental representation of its strengths, weaknesses, opportunities and threats and a good feeling for high profile research topics.

#### *Conclusion:*

The Work and Organizational Psychology group has an applied orientation, with a strong focus on a timely topic. It is a very successful group with a highly profiled leader. It has a successful theory orientation that drives both research and practice impressively.



## APPENDICES



## Appendix A: Curricula Vitae of Members of the Committee

**Geert Crombez** came to Ghent University (Belgium) in 1998, and was appointed Professor of Health Psychology in 2002 at the Faculty of Psychology and Educational Sciences; He is currently head of Department Experimental-Clinical and Health Psychology, and director of the research group “Health Psychology”. His area of expertise is within clinical health psychology and experimental psychopathology. He has over two hundred publications in internationally peer-reviewed journals relating to chronic illness, anxiety and fear, obesity and psychopathology. He has been promotor of several PhDs on these topics. He is associate editor of several international journals, and has frequently served as an international consultant on research and education committees.

**Arthur Glenberg** is a Professor of Psychology at Arizona State University, an ASU Learning Sciences Institute Senior Scientist, and Professor Emeritus at the University of Wisconsin-Madison. He earned his bachelor’s degree in Psychology from Miami University (the real one in Oxford, Ohio) in 1970 and his PhD from the University of Michigan in 1974. Glenberg’s research has focused on memory and language comprehension. Beginning in the middle 1990s, he began to develop the embodied approach to cognition. Within that framework, his research has focused on language, reading comprehension interventions (Moved by Reading), and mirror neurons. His Harzing H-index is 40 with 18 papers with 100 or more citations. Glenberg was an associate editor of the *Journal of Experimental Psychology: Human, Learning, and Memory*, the author of an elementary statistics textbook, *Learning From Data*, and the co-editor of *Symbols, Embodiment and Meaning*. Currently, he serves on the editorial boards of five journals, and he is an elected fellow of the Association of Psychological Science, Society for Text & Discourse, and Society of Experimental Psychologists.

### **Detlev Leutner**

Detlev Leutner is Professor of Instructional Psychology at Duisburg-Essen University (Germany). He received his master degree in psychology and his PhD in education, psychology and philosophy from RWTH Aachen University of Technology. He is member of the Senate of the German Research Foundation (DFG). He was editor of the “German Journal of Educational Psychology” and of “*Diagnostica*”. He chaired the EARLI-SIG “Individual Differences in Learning and Instruction” and the division “Empirical Educational Research” of the German Educational Research Association (DGfE). Currently he is one of the speakers of the DFG Priority Program on “Models of competencies for the assessment of individual learning outcomes and the evaluation of educational processes”. His main research interests are self-regulated learning, learning with multimedia, and educational measurement.

**Sabine Sonnentag** is a full professor of Work and Organizational Psychology at the University of Mannheim (Germany). Before she came to Mannheim she held positions as full professor at the University of Konstanz and the Technical University of Braunschweig. Her research centres around the question how individuals can be productive at work and stay healthy at the same time. She has published in the top journals of Work and Organizational Psychology. She was the editor in chief of *Applied Psychology: An International Review* from 2006 to 2011, and serves at the psychology review board („Fachkollegium Psychologie“) of the German Research Council since 2004.

**Cees van der Vleuten** came to the University of Maastricht in 1982. He was appointed as a Professor of Education in 1996 at the Faculty of Health, Medicine and Life Sciences and Chair of the Department of Educational Development and Research. In 2005 he was appointed as the

Scientific Director of the School of Health Professions Education ([www.maastrichtuniversity.nl/she](http://www.maastrichtuniversity.nl/she)). His area of expertise lies in evaluation and assessment. He has several hundreds of papers on these topics, holds numerous academic awards for his work, including several career awards. He has frequently served as a consultant internationally. He is a mentor for many researchers in medical education and has completed about 50 doctoral graduate students in the past. In 2010 he received a royal decoration for the societal impact of his work. A full curriculum vitae can be found at: <http://www.fdg.unimaas.nl/educ/cees/CV/>.



## Appendix B: Explanation of the SEP criteria and scores

The **four main criteria** for assessment are: Quality, Productivity, Relevance, and Vitality & Feasibility. The assessment on the institute level primarily focuses on strategy and organization, whereas the assessment on the level of the research group or programme primarily focuses on performance and activities of researchers and the results of their work (output and outcome).

<b>Quality</b>	The level or degree of excellence of the research, compared to accepted (international) standards in that field.  The scope of the term ‘research’ is not limited to the research results. Research management, research policy, research facilities, PhD training and the societal relevance of research are considered integrated parts of the quality of work in an institute and its programmes.
<b>Productivity</b>	The relationship between input and output, judged in relation to the mission and resources of the institute.
<b>Relevance</b>	Social, economic and cultural relevance. Aspects to be considered are: <ul style="list-style-type: none"> <li>• <i>Social quality</i>: efforts of the institute or group to interact in a productive way with stakeholders in society</li> <li>• <i>Social impact</i>: how research affects specific stakeholders or procedures in society</li> <li>• <i>Valorisation</i>: activities aimed at making research results available and suitable for application in products, processes and services.</li> </ul> Committee members can also comment on relevance for the academic community, but the assessment should focus on societal relevance.
<b>Vitality &amp; feasibility</b>	The ability to react adequately to important changes in the environment. Also a vision on the future is considered.

The **scores** on a five-point scale are:

<b>5 Excellent</b>	Research is world-leading. Researchers are working at the forefront of their field internationally and their research has an important and substantial impact in the field.
<b>4 Very Good</b>	Research is considered nationally leading. Research is internationally competitive and makes a significant contribution to the field.
<b>3 Good</b>	Research is considered internationally visible. Work is competitive on the national level and makes a valuable contribution in the international field.
<b>2 Satisfactory</b>	Research is nationally visible. Work adds to our understanding and is solid, but not exciting.
<b>1 Unsatisfactory</b>	Work is neither solid nor exciting, flawed in the scientific and/or technical approach, repetitions of other work, etc.

## APPENDIX C: Time schedule site visit Institute of Psychology

18 September	Activity	Participants
16.00-19.00	Arrival committee members in Rotterdam	Leutner, van Vleuten, Sonnentag, Crombez, van Balen
19.30- 21.00	Dinner, informal internal meeting committee members	Leutner, van Vleuten, Crombez, van Balen

19 September		
10.00-10.30	Welcome by institute management	Committee, Management of the institute: Marise Born, Guus Smeets, Rolf Zwaan
10.30-13.00	Internal meeting committee	Committee
13.00-14.00	Lunch	
14.00-15.00	Interview with management institute	Management of the institute (chair and research director) Marise Born & Rolf Zwaan
15.00-16.00	Programme 1: Work and organisational psychology	Arnold Bakker, Janneke Oostrom, Dimitri van der Linden
16.00- 16.30	Break	Committee
16.30-17.30	Programme 2: Brain and Cognition	Rolf Zwaan, Katinka Dijkstra, Diane Pecher
17.30-18.30	Drinks	Management institute/ researchers involved
19.00-21.00	Dinner	Committee members

20 September		
9.00-10.00	Programme 3: Clinical Psychology	Ingmar Franken, Elke Geraerts, Jorg Huijding
10.00-11.00	Programme 4: Educational and Developmental Psychology	Fred Paas, Sofie Loyens, Peter Verkoeijen, Tamara van Gog
11.00-11.45	Round tour, lab visit	Committee
11.45-12.45	Meeting with PhD students	
12.45-13.30	Lunch	Committee
13.30-14.00	2nd meeting with management institute	Rector university Henk Schmidt, Dean Faculty Henk van der Molen, management institute
14.00-15.30	Internal meeting committee	Committee
15.30-16.00	Presentation by the chair	Dean, director, all participants, researchers