

International Classroom Pilot Master's in Environmental and Infrastructure Planning (Msc. EIP)

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1. Introduction

The main focus of this pilot is to describe the conditions and needs for 'international-classroom teaching' for the Msc. Environmental and Infrastructure Planning, a master's program at the University of Groningen. The aim is also to provide an example of good practice, and make some generalizations for the university as a whole.

Based on a review of program documents, evaluation data, a series of 12 interviews, and expert consultation, this report provides a review of learning outcomes (including contents), teaching and learning arrangements (including didactics, language and employability arrangements), and assessment practices. The review ends with suggestions for a generic model, which will have to be combined with findings from another pilot project: Bsc. International Medicine. Both pilots should contribute to understanding the added value and clarifying institutional conditions of the International Classroom, in relation to both staff and students.

2. Learning outcomes

The Master's degree programme in Environmental and Infrastructure Planning (EIP), established in 2002, aims to deliver university graduates with the knowledge and skills to design policy solutions and land-use management strategies for issues in the field of environment (e.g. climate change), water (e.g. flooding) and infrastructure (e.g. mobility growth). The programme emphasizes the integration of these fields, as well as internationally comparative learning. Central to the programme is an ability to identify, review and suggest useful strategies from a variety of places by comparing cities, regions and countries worldwide. The main reason for emphasising this ability is that comparative learning will lead to increased international awareness among students. Students would also have richer insight in and a variety of solutions, and, therefore, be able to establish policy innovation.

The programme has been set up to accommodate internationally acknowledged driving forces in the fields of environment, infrastructure, water and spatial planning in general. These driving forces include (e.g. Frank, 2006; Verhage, 2010; Klosterman, 2011; Teitz, 2011; Vigar, 2012; Fischler, 2012; Balassiano, 2011; Schoenwandt et al., 2012):

- Global pressures including urbanization and the potential impacts of climate change. Worldwide, there is a recognized need (for future planners) to develop spatial strategies and measures to cope with the overall impacts of these pressures.
- The increasing need to maintain and create sustainable and resilient regions and cities. Capacities in planning practice to establish appropriate governance arrangements can be seen as a useful response to a society that is in a perpetual state of flux.
- Increasingly pertinent international exposure and scope in the field of spatial planning. The profile of professional planners has changed through ongoing processes such as globalization and European integration. In addition, planner activities increasingly occur in international academic settings and in comparative and cross-boundary planning practice.
- Demand for professionals with theoretically grounded skills to address complex problems in planning practice. Planners require sensitivities to diversity and the skills to argue policy dilemmas, politically contentious situations or planning issues with conflicting interests.
- Intensifying significance of context and place: planners face an increasing need to acknowledge contextual factors (both physical and institutional) for developing policies. The growing importance of context also implies that policy initiatives should be tailor-made (i.e. area-oriented, place-based) and follow thoughtful processes of institutional design.

The EIP Master's degree programme anticipates these developments by offering a programme built around four main objectives: institutional design, comparative learning, linking theory and practice, and place-based understanding. The intention is to practice intercultural skills throughout.

International frames of reference

The intended learning outcomes are in line with general requirements in the international professional planning field and the academic planning discipline. These requirements are reflected in frameworks offered by: the Association of the European Schools of Planning (AESOP), the standards for planning schools of the Association of Collegiate Schools of Planning (USA and Canada), and leading research work from the Journal of Planning Education and Research (JPER, see references).

Another key set of references are the Double Degree Master's arrangements employed by the programme. There are three arrangements: two with the Institut Teknologi Bandung (Indonesia), and one with the Carl von Ossietzky Universität, Oldenburg (Germany). These arrangements imply that two one-year Master's degree programmes are attuned and are based on a common understanding of developments in the field. They are based on both educational and research cooperation (including NWO and KNAW-based research projects). The frames of reference are as follows:

- Double Degree (DD) Master's Degree Programme in Development Planning and Infrastructure Management (with School of Architecture, Planning and Policy Development; Institut Teknologi Bandung). This programme was established in 2003, mainly to ensure international exposure and comparative learning for planning students and policy practitioners in the field of development and infrastructure management. A Memorandum of Understanding (MOU) for this arrangement was established between both universities and the Indonesian Ministry of Planning in 2003. An updated MOU was signed in 2012.
- Double Degree Master's Degree Programme in Transportation Planning and Management (with School of Architecture, Planning and Policy Development; Institut Teknologi Bandung). This programme extends the initial programme on development planning into the field of transportation planning. There is an agreement from 2010 and an MOU from 2012.

- Master's degree programme in Water and Coastal Management (cooperation with the University of Oldenburg). The framework for this programme has been established to combine a focus on sustainability research (an emphasis on environment, ecology and sustainable management) with one on planning and policymaking (EIP Master's degree programme), for a shared coastal zone (northern Netherlands – northern Germany). The complete two-year programme is accredited by ASIIN Germany.

International benchmarking suggests that the EIP Master's degree programme stands out in three specific ways when compared with other planning education programmes in Europe. First, it offers a completely English-taught programme, giving students the option to write their assignment work and Master's thesis work in English, which is not the standard worldwide. Second, the programme emphasizes three focal areas (environment, infrastructure and water). With only a few exceptions (typically in the UK and Scandinavian countries), other European planning programmes tend to focus more on general urban and regional planning issues. The EIP Master's degree programme also follows a comprehensive spatial planning tradition (with its emphasis on public investment and establishing integrated spatial strategies). In this sense it differs substantively from programmes offering planning education on architecture and urban design (as many programmes in central and southern Europe do), land-use management (typical of Britain and the US), or with a focus on regional economics (as in France or various programmes in Germany) or civil engineering (a more technical approach to planning found worldwide).

Objectives

The overall learning objectives are:

- Students will be able to design context-specific policy solutions for spatial issues in the field of environment, water and infrastructure. EIP highlights the institutional design of policies and processes, or policy solutions, for example through the 'Institutional and Policy Design' course units (IPD course units). The focus on institutional design implies that students design institutions for specific places worldwide – regulations, procedures and routines – with the aim of performing typical planning tasks such as organizing and implementing plans or projects, or establishing strategies to influence behaviour. For students entering from the preceding Bachelor's degree programme in Environmental and Infrastructure Planning ('Technische Planologie' in Dutch), the emphasis on institutional design marks a shift away from matters of physical design during their Bachelor's period, thus making EIP an independent Master's degree programme.
- International comparative learning. This learning outcome implies that students develop the ability to identify and convincingly suggest useful strategies from various places internationally as the basis for institutional design. The practice of comparing cities, regions and countries is a central element in defining course units such as 'Comparative Research and Planning Practice'. An additional consideration is that students understand global drivers behind planning problems, including environmental pressures. Within the programme, comparative learning implies that students understand international diversity, assess the possibilities for learning from international planning practice work and conduct comparative inquiry into environmental, infrastructure and water issues. The practice of comparing is thought to generate an international awareness, particularly in the context of diversity in the classroom itself.

- Creating associations between theory and practice. The idea behind this outcome is that student excellence will result from their ability to link generic and specific insights. The programme therefore offers theoretical course units through both overview lectures ('Planning Theory') and interactive arrangements ('Interactive Workshop'), thereby establishing theoretically grounded skills to address complex problems in planning practice issues during other course work. The balance between theory and practice is inherent in the programme as all course units are underpinned by both theoretical concepts and practical application. The 'Transitions in Water Management' course unit, for example, combines the theoretical notion of transitions with identifying current changes in water management and discussing dilemmas in the attempts to manage these water transitions.
- Students will be contextually sensitive in their actions. The programme emphasizes planning and policymaking as processes of place-dependent choices. The international focus of the programme adds to the importance of designing context-sensitive spatial interventions. This implies student sensitivity to the physical, institutional, geographical and societal context. The programme provides students with different insights to deal with complex environments, including in the course units on water, environment and infrastructure.

A full description of the learning outcomes of the EIP Master's degree programme is presented in the appendix.

Further needs and improvement

Interview and evaluation results suggest the following key substantive needs for the future regarding EIP learning outcomes:

Diversity as a resource. Learning outcomes are international, in terms of emphasising context, but still fail to make explicit the importance of using student and staff diversity as a resource in improving teaching outcomes. The diversity of students in class makes it possible to practice and improve intercultural skills. Intercultural learning would include more specific goals on the exchange of ideas and experiences of students with varying backgrounds. It should be acknowledged that diversity helps to generate a richer variety of solutions (for cities, for regions, for policy making), and tends to raise intercultural sensitiveness. Another important point here is that diversity increases the quality of argumentation. Learning outcomes focusing on stimulating the use of examples from home countries can also generate a higher satisfaction with lectures and include non-Dutch and non-western examples.

Balancing theory and practice. It is suggested here that there is a need at Master's level for a strong emphasis on exposing students to real-life (planning) problems. The EIP programme contains a mixture of theoretical and practical course units. As already pointed out, theoretical concepts (such as adaptive capacity or institutional transformation) have been used to guide EIP course units. In recent years, specific efforts have been made to give greater emphasis in the programme to issues from planning practice. Some course units are taught by highly qualified practitioners and also include guest lectures, for example in 'Planning Methods and Evaluation' and 'Dilemmas in Infrastructure Planning'. Here, students typically focus on case studies and examples. The aim should be to explore the use of case studies for teaching purposes within the programme in order to 1) strengthen further the link between theory and practice (i.e. clarifying theoretical notions to analyse

real-life planning issues), 2) involve students in policy-oriented research, 3) transfer methodological knowledge and research skills into case study research itself, and 4) increase the use of case studies as examples for lesson-drawing. It will be important to make sure case studies are selected to reflect global practice, and fit, or emerge from students themselves.

The importance of illustrating employability and career options (in planning practice) also requires attention. A further issue is the importance of ‘double valorization’, from both professional practices and the domain of science (Salet & Finka, 2010). However, there is limited involvement by practitioners and alumni in the valorization of the EIP Master’s degree programme and intended learning outcomes. The aim should be to carry out broader curriculum evaluations among a wider circle of practitioners and alumni.

3. Teaching-learning environment

The EIP Master’s degree programme is a one-year programme of 60 ECTS points. In its double degree arrangements, EIP covers the second year of a total of two years, or approximately 120 ECTS points. The program consists of three thematic course units, two theoretical course units, a principal course unit on comparative research, and more applied course units on policy design and optional course units. Table 1 shows a more detailed overview of the study programme. An important course is ‘Interactive Workshop’ as it serves as a meeting and exchange platform for all participants.

Table 1 Overview of the study programme 2012-2013

Block 1a	
Dilemmas in Infrastructure Planning (5 ECTS credit points)	Introduction to EIP, general perspectives on infrastructure and transportation issues
Planning Theory (5 ECTS)	Decision-making models, planning paradigms and their history
EIP Interactive Workshop (5 ECTS)	Tutorial discussing influential classic texts and relevant examples on urban-rural relationships, institutional design, environmental politics, mobility, megaprojects and ecology
Block 1b	
Choice between a course unit on institutional and policy design (IPD), or other elective:	
IPD 1: Planning Methods and Evaluation (5 ECTS)	Insight and application of planning methods at different stages of policymaking, including problem structuring, policy design, evaluation and implementation
Other optional course unit	Other optional course units may be selected, such as GIS, social impact assessment, or spatial economics.
Master’s thesis (10 ECTS)	Establishing a relevant angle of research, in relation to ongoing research, completing a research proposal and methodology
Block 2a	
Comparative Research and Planning Practice (5 ECTS)	International planning practice work, case studies, policy comparison and transfer

Transitions in Water Management (5 ECTS)	Transitions and strategies in various aspects of water and coastal management, and implementation strategies (including resilience) in planning practice
Reinventing Environmental Planning (5 ECTS)	Expose linkages between environmental planning (such as energy, water, nature, health, urban development) and their geographies
Block 2b	
Choice between two course units on institutional and policy design (IPD):	
IPD 4: Coalition Planning (5 ECTS)	Coordination, coalition building, collaboration in spatial planning
IPD 5: Adaptive Governance (5 ECTS)	Risk management, societal hazards (food, disease, climate, social cohesion), adaptive policy-making
Other optional course unit	Other optional course units may be selected, including infrastructure, economy and space or population policies
Master's thesis (10 ECTS)	Completing an individual research project

Teaching arrangements

The teaching arrangements for EIP are based on three guiding principles:

- The degree programme facilitates community building among students and between staff and students. Community building has grown in importance for several reasons. First, the programme's emphasis is on international comparative learning and being contextually sensitive in spatial interventions. The international composition of the EIP Master's student group is used to enrich international debate, cultural learning and the exchange of knowledge and ideas, for example during the interactive workshop (in September). Second, community building is important because of the increasing number of students and their highly diverse backgrounds. It is a way to get to know fellow students and to feel at home at the Faculty. In 2012, the programme featured a system of intake interviews, an informal 'kick off' to the academic year (an excursion) and systematic monitoring of student progress. There is also an important set of additional community-building activities. In particular, structured interaction is sought with student members from the Programme Committee, also outside formal gatherings. Other activities organized by staff members and with a focus on community building include the Master's Thesis Conference (in May-June) and the 'Planning Lecture' series (every three months), featuring lectures by prominent scholars, senior policymakers and politicians.



- Interactive learning is an important part of the degree programme to enhance performance in designing policy solutions. Interactive learning is also a way to facilitate community building. The number of course units that apply interactive teaching methods has increased over the past five years. Interactive teaching methods within the EIP programme are: tutorials, group assignments and joint papers; group presentations; peer review and workshops. Interactive learning is also the basis for the ‘EIP interactive workshop’.
- The degree programme helps students to establish and enhance their own interest agendas (in assignments, presentations and thesis – essential for Double Degree students). Most course units offer students the option of choosing assignment topics that relate to their own research topic of interest. This means, for example, that students interested in transportation planning may write their ‘Reinventing Environmental Planning’ assignment on a transportation topic. Choices should remain within the boundaries of the expertise of planning department staff. While it is essential that students have considerable freedom to choose and to specialize in a direction relevant to their policy agenda and future employment, they should at the same time be encouraged to select a topic within staff members’ research fields.

The EIP Master’s degree programme covers a variety of teaching arrangements. Table 2 provides an overview of the teaching methods per course unit and clearly demonstrates the variety of methods used. Particular efforts are made to synchronize these methods, both in terms of exposure and timing over the semester blocks. Provisions are also in place with regard to study load and the number of assignments across the course units.

Table 2 Overview of teaching methods in the EIP Master’s degree programme

	Lecture	Workshop	Excursion	Individual work	Group meetings	Presentation
Dilemmas in infrastructure planning	x			2x		
EIP: Interactive workshop		x		4x	1x	1x
Planning theory	x					
Transitions in water management	x	x	x		3x	
Reinventing environmental planning	x	x			3x	
Comparative research and planning practice	x	x			1x	
IPD1 Planning methods & evaluation	x	x		1x		1x
IPD5 Adaptive governance	x	x		1x		1x
IPD4 Coalition planning	x	x			1x	
Master’s thesis	x			1x		1x

Research in education

The EIP Master’s degree programme follows a research agenda from the Department of Spatial Planning and Environment. This research agenda concentrates on the relationships between

institutional innovation (improved policymaking) and spatial transformation (changing cities and regions). Most EIP lecturers are directly involved in more fundamental research questions and tend to raise similar questions in their teaching.

In addition to the attention paid to research within course units, research and education are also directly linked through the Master's thesis work. A common method in the programme involves the 'call for proposals/thesis opportunities', in which students actually participate in or contribute to larger (mostly international) research projects. The key idea is that students have their own research interest, which they then develop further within the context of these themes.

Study guidance

In general, students in the programme can make use of the services of the coordinator, Faculty study advisor and the broader services for international students at the university. Students are introduced to these and other facilities separately during the introduction to the university and to the EIP Master's degree programme (early September). In addition, university support offices and partners abroad assist with student guidance.

The coordinator pursues an open-door policy for all students and is responsive to all questions. Active guidance is also offered during intake interviews and regular appointments.

Additional international arrangements

As may be clear, the teaching environment for the programme is largely international. Classes typically involve students from a range of countries, with about 20 students from the Netherlands, about 12 from other parts of Europe and about 18 from Asia. The international classroom and the double degree linkages require specific organizational arrangements. The most important arrangements for the programme are:

- A systematic method for handling international admissions. About 100 requests for international admission are received each year for the programme. All these requests are handled by the international desk and the admission committee. Typically, about 45 candidates are accepted, about 30 of whom enter the programme. The admission criteria are listed in the Appendix.
- Attention to intercultural skills among staff. The Department's hiring and assessment policy is also focused on international affiliation and English language skills.
- Additional instruction for international students on issues of grading, examination and student-staff interaction.
- The organization of the Double Degree programmes is based on a system of dual coordinators at the Faculty of Spatial Sciences (Prof. Johan Woltjer) and partners at ITB Bandung (Dr Wilmar Salim and Dr Heru Purboyo – about 15 students each year) and Uni Oldenburg (Prof. Ingo Mose – about eight students each year). The DD arrangements also involve collaborative supervision of thesis work, alignment of programme and regulations, and graduation ceremonies.
- Administrative issues. The Faculty's international office manager (Stiny Tiggelaar) is highly experienced in issues of administration, insurance, documentation, housing, etc.
- Satisfactory collaboration and consultation with international partners in the field of scholarship provision (including Nuffic Neso, World Bank, educational partners at ministries).
- Satisfactory arrangements for shorter-stay international exchange. Each year, about eight students take advantage of exchange arrangements to do optional course units or thesis work at

foreign partners. These arrangements include NEURUS and ERASMUS networks (European and American partners), as well as strategic partnership arrangements such as those with the University of Beijing (China) for academic project work.

Staff

All the principal course units in the Master's degree programme are taught by scholars actively involved in current research at faculty, university and international level. Staff is diverse in terms of age (20s, 30s, 40s, and 50s), gender (senior staff with 6 women and 8 men), and nationality (mostly Dutch, but also British, Chilean, Chinese, German, and Indonesian).

Students

The EIP Master's degree programme has shown a gradual rise in student numbers (from about 35 to more than 60), with a consistent group 'from outside' (i.e. international students – about 20 each year). The programme has a mixed international student group with a wide variety of backgrounds and cultural differences, as illustrated in Table 4.

Table 4. Composition of EIP student group

EIP programme 2011-2012	EIP programme 2012-2013	EIP programme 2013-2014
Netherlands, 24	Netherlands, 23	Netherlands, 30
Indonesia, 20	Indonesia, 19	Indonesia, 20
Spain, 2	Germany, 4	Germany, 4
Nicaragua, 1	Romania, 2	Greece, 2
Costa Rica, 1	Greece, 1	Ghana, 1
Russia, 1	Vietnam, 1	Slovakia, 1
Greece, 1	Mexico, 1	USA, 1
	Bulgaria, 1	Bulgaria, 1
	Spain, 1	Kenya, 1
		India, 1
		Bangladesh, 1
		Argentina, 1

A striking fact is that students from abroad generally finish their Master's programme much sooner than Dutch students. The average length of study for foreign students is just above one year. The main reason is that scholarships typically end after one year. Also the more expensive scholarship fees for non-EU students (€ 11,000 rather than € 1,900) make it that these students are keen to finalise their program in one year time. Dutch students, on the other hand, are enrolled for a much longer period. An in-depth review showed that a major cause of delay in Dutch student enrolments has been that many students accepted a substantial job (often full-time) prior to finalizing their Master's thesis work, thereby postponing completion.

Further needs and improvement

There is a variety of areas for improving and further reviewing the EIP teaching-learning environment. These areas involve a further consolidation of the international classroom.

Information support on Dutch university culture. An important challenge facing the Master's degree programme involves stronger, well-considered information provision on Dutch, or Groningen, arrangements on teaching and regulations. In general, students and staff are satisfied with current teaching arrangements. From an international perspective, these arrangements are seen as strict, perhaps even rigid. It does take some time and effort to get used to them. More information support and adjustment time is required, also already during the pre-enrolment phase. There is a need for excellent information at introductory meetings as a lot of services and facilities remain unknown (including study advisors, courses, exam and enrolment regulations). More hand outs, contact points, reception committees or further mentoring programs would help.

Move to international teaching standards and language. Staff and students generally call for further steps into following international teaching standards, including grading and examination. Students want higher grades and freedom to decide on examination forms. As for language, staff and students are relatively satisfied.

Facilitate informal interaction. The findings suggest the overwhelming importance of a facilitating approach to interaction among students. The student group tends to be much more varied than may be assumed. A distinction based on nationality only is inadequate. Factors like age, religion and experience play an equally important role. Facilitating interaction and community building (not prescribing or regulating it) are crucial. Informal and voluntary activities, therefore, are seen as essential. 'Out of class activities' like trips and excursions can increase group identification (but not necessarily). There is also a broader call for a shared meeting room at the faculty for all stakeholders of a program, thereby enabling informal and formal exchange, and much needed time for adjustment.

4. Assessment practices

As with other Faculty programmes, all course units in the EIP Master's degree programme entail assessment, examination and grading. Overall, the assessment of student progress is systematic and is structurally embedded in registration and monitoring work at the Faculty. Assessment results and student evaluations are discussed by both an Exam and a Programme Committee. For the EIP programme, international students are also part (e.g. through membership) of the assessment system through the Programme Committee. Students may evaluate every course unit by completing an evaluation form, and frequently do so. Also, lecturers are individually held accountable for following up evaluation results. There is an increasing effort to understand progression.

Assessment modes for courses

In addition to general evaluation practices, obviously, the program involves assessments of students on the extent to which they reach learning outcomes. The assessment instruments in the EIP Master's degree programme are in line with the learning objectives of the programme and the individual course units. A key principle is that the programme should offer a range of different instruments to test both knowledge and skills. Table 5 shows that most course units apply two or more assessment

instruments. This variety guarantees a balanced assessment of knowledge and skills such as academic writing, presentation and debating.

Table 5. Overview of assessment instruments in the EIP Master's degree programme

	Individual work	Group meetings	Presentation	Written open questions exam,	Written exam, multiple choice	Individual assignment	Group work	Peer review
Dilemmas in infrastructure planning	2x			80%		20%		
EIP: Interactive workshop	4x	1x	1x			4x10%	30%	
Planning theory					100%			
Transitions in water management		3x		70%			21%	9%
Reinventing environmental planning		3x		70%			21%	9%
Comparative research and planning practice		1x		60%			40%	
IPD1 Planning methods & evaluation	1x		1x			100%		
IPD3 Programme management				100%				
IPD4 Coalition planning	1x			60%		40%		
IPD5 Adaptive governance	1x			60%		40%		
Master's thesis	1x		1x			100%		

Thesis assessment

The assessment of thesis work has received close attention in the programme. The Master's thesis involves an individual research project on issues relevant to environmental, infrastructure and water planning. A structured system of guidance and assessment is in place. Since the 2011-2012 academic year, student guidance during their Master's thesis process (20 ECTS) has been intensified and strengthened. Thesis writing is now a regular course unit with specific sessions, deadlines and evaluation criteria, leading to more involvement and completion rates.

Evaluation and grading of the Master's thesis is carried out by the supervisor together with a second supervisor (either from the Faculty or from double degree staff abroad), and is based on a standardized form. The opinion of a possible host organization (i.e. cooperating university department or policy institute) may also be taken into account.

Each Master's year ends with a thesis conference, where all thesis students present their work. It is a collective end to an intensive year. The thesis conference is meant to reinforce community-building, as well as to stimulate commitment and inter-student consideration. A peer review of presentations is the basis for awarding a 'best presentation award'.

Student evaluations

Results from internal and external evaluations are very positive for the EIP Master's degree programme. A curriculum evaluation for the 2011-2012 academic year, for example, shows that student respondents rated the programme a 7.8 on average; last year, it was 7.7 (see Appendix). Feedback from the Programme Committee over recent years has also been very positive. In addition, an evaluation by the International Graduate Insight Group (i-graduate) shows very high scores for the

University as a whole on learning spaces, the online and physical library, virtual learning, topic selection and course unit organization. For these items, the University of Groningen ranks number one in the Netherlands. The University, as well as the EIP Master's degree programme, received lower evaluation scores on aspects of labour market preparation. While the University scored relatively low on multicultural learning, the Faculty of Spatial Sciences scored much higher on this aspect than other faculties. Multicultural learning is important for international comparative learning, one of the main learning outcomes of the EIP Master's programme.

It is important to note that evaluation tools like i-grad are unable to measure in-class inclusion, and levels of transformation (differences in individual levels of skills and knowledge at the start of the program, and the levels reached at the end) that students experience.

Other positive indicators from student evaluations are that core teachers in the programme (Prof. Gert de Roo, Dr. Terry van Dijk, Prof. Johan Woltjer, Dr. Christian Zuidema) have each been elected individually in recent years as 'Teacher of the Year' for the Faculty as a whole.

Yet another key evaluation indicator is that the programme has been acknowledged by important partners (including universities in Oldenburg, Bandung, Beijing). Most notably, key scholarship agencies (Erasmus Mundus programmes, CSC, World Bank) have acknowledged the Master's degree programme and key scholarship providers in Indonesia have selected it as their programme of choice for more than 10 years.

Student performance

Student performance overall has been very good. The Master's thesis exit information and alumni contacts suggest that EIP graduates have been very successful in finding employment quickly. Typical jobs taken up by alumni are with consultancy firms (e.g. policy advisor at Royal Haskoning), national government (e.g. project manager at Indonesian Ministry of Planning, Director-General at the National Agency for Public Works), regional government agencies (e.g. inspection agent at State of Niedersachsen, strategic advisor at Hunze en Aas Water Board), city government (e.g. environmental planner with the city of Delft), research (e.g. research associate at World Bank), and development and investment companies (e.g. investment manager). A number of Master's students from the programme have been awarded prestigious prizes to conduct PhD research (including NWO, KNAW, UNSW, and DAAD). Overall, however, the job market is currently much more challenging than in the past.

Further needs and improvement

The following focus points have emerged from the reflections on assessment and evaluation:

Assume international teaching standards. International classroom teaching is increasingly associated with international principles to dealing with exams, evaluation and grades. Students tend to bring different standards from their previous education. Scholarship providers and quality assessment agencies operate internationally and are increasingly adopting a general model to education. In this light, Dutch and UoG practice, has some particular characteristics. Grading is different and includes a peculiar practice of grading 'low' (even excellent work is graded typically only with an 8 or perhaps 9 out of 10).

Allow flexibility and buffers. It is suggested here that students in an international classroom need sufficient feedback and time for adjusting assignment work and sufficient retakes for exams. More formative feedback (on progress and transformation) is also needed, in addition to substantive feedback on assignments. In any case, some tolerance is required for students with a different university background. In addition, room for some freedom of choice is important for determining topics for assignments or thesis work.

5. Conclusions

The Msc. EIP program turns out to have a set of seven strong points for international classroom education: 1. Strong focus on context, 2. Recognition of the importance of interaction for community building, 3. Gathering of evidence for evaluation, 4. Approach looks outside the Netherlands for comparisons, 5. Developed in response to global needs, 6. Focus on graduate attributes (including skills), 7. Focus on (freedom of) choice.

Four further conclusions emerge:

- Be aware of culture, i.e., address specifics of Dutch academic culture. In general, international students have been able to adapt relatively easily to UoG learning arrangements and regulations. However, channels of English-language information provision on UoG facilities and regulations can be improved. Further international standards for grading (e.g., ECTS, but also allowing higher grades: excellent is a 10 on the international market), and examination need to be adopted.

- Use diversity and variety appropriately. The benefit of International Classroom teaching mainly emerges through comparative interaction between students. Diversity is an important resource to generate understanding, scope and innovations for societal problems. Diversity should be seen beyond only nationality (e.g., distinguishing between 'Dutch' and 'international' students -a false dichotomy), and include aspects like experience, background, location and life. Using diversity as a resource in-class requires careful attention: it is time-consuming (but will deliver learning quality and satisfaction both for students and staff). This time aspect needs to be planned into the program. Graduate attributes related to diversity skills should also be made more explicit (not just employment). The key issue is that diversity skills should be taught, practices, and reflected upon.

- Be context specific, emphasise context. Particularly important are in-class practices of providing example and differences. Learning objectives should mention the importance, and purpose of contextual awareness (i.e., understand differences between countries, and work practices), the attainment of which is seen as a substantial career benefit by students. Examples preferably cover not only Dutch or European experience. It is useful to include contextual awareness as a skill in learning-outcomes. It is also important to use early experiences from students actively in joint projects. A final aspect is the importance of practice: attention to context implies more attention to specific applications, products, cases or practices, and less attention to generic knowledge. International students generally express the importance of in-depth practical and applied knowledge in combination with theoretical perspectives.

- Facilitate broader and informal interaction at class level (rather than regulate at program level), and allow for flexibility and adaptation time. Local discretion for lecturers and students is essential to facilitate freedom of choice (e.g. , on a thesis or assignment topic, or on electives), staff-student

meeting places, and community-building activities like excursions. It is also recommended to use the capacities in the international alumni-network extensively, particularly for internships and jobs.

The main challenge, therefore is to achieve higher educational standards by employing diversities in students' backgrounds. The challenge is also to create a facilitating learning environment aimed at creating contextual awareness and allowing for the power of example.

A Generic Model for the International Classroom at University of Groningen may look like this:

	<i>At program level</i>	<i>In-class</i>
Learning outcomes	<ul style="list-style-type: none"> • Acknowledge that diversity helps to generate a richer variety of solutions and raises quality and satisfaction • Learning outcomes should focus on the use of examples and context • Seek 'double valorization', from both professional practices and the domain of science • Develop intercultural skills 	<ul style="list-style-type: none"> • Expose students to real-life problems • Focus on international case studies and examples • Make explicit the use of student and staff diversity as a resource in improving teaching outcomes, and in interaction • Discuss 'theory' in the context of specific applications, products, cases or practices
Teaching environment	<ul style="list-style-type: none"> • Establish extensive, English-language information provision on local arrangements for teaching and regulations and Dutch education (hand outs, contact points, reception committees, mentoring programs), addressing active learning, equality, examination, grading, and facilities • Allow for adjustment time for international students • Define key characteristics of diversity for program, particularly experience, national, cultural and educational background • Select students based on their diversity and past experiences 	<ul style="list-style-type: none"> • Facilitate interaction and community building including informal and voluntary activities, 'out of class activities' like trips and excursions, and meeting places for students and staff • For assignments and group work, mix students based on their diversity (but not only their nationality) • Adjust learning material to include international examples, attention to contextual setting, and comparative data • Ask students to bring their own background as an example • Ask students to apply newly learned concepts to their own cases • Ask students to describe the cultural context of examples, cases, decisions
Assessment and evaluation	<ul style="list-style-type: none"> • Assume international teaching standards (grading, examination, enrollment, participation) • Focus on monitoring transition: measure specific, personal, individual progress of students pre-, during, and end program 	<ul style="list-style-type: none"> • Allow for sufficient feedback and time for adjusting assignment work and sufficient retakes for exams (some leniency is required for students used to a different university culture) • Facilitate freedom of choice, and an 'own' topic for assignments and thesis work

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Appendices

Interview questions

1. Are any international/intercultural learning goals, aims and outcomes defined and articulated?

2. Teaching and learning arrangements
 - 2a Do the teaching and learning arrangements support students to work effectively in cross-cultural groups and teams?
 - 2b Do the teaching and learning arrangements encourage intercultural interaction?
 - 2c Do the teaching and learning arrangements assist all students to develop international and intercultural skills and knowledge?
 - 2d To what extent are regulations in line with the overall goal of “international and intercultural learning”?

3. Assessment
 - 3a Do assessment tasks require students to consider issues from a variety of cultural perspectives?
 - 3b Do assessment tasks require students to recognize intercultural issues relevant to their discipline and/or professional practice?
 - 3c Are assessment tasks culturally sensitive?
 - 3d To what extent are regulations in line with the overall goal of “international and intercultural learning”?

4. Content/Context
 - 4a Is the content of this program internationalised?
 - 4b Are students required to apply knowledge and skills in a variety of national and cultural contexts?
 - 4c Are teaching staff in this programme prepared/trained to understand the international context of the discipline and related professions?
 - 4d (How) is the informal curriculum of influence to the “international and intercultural learning”?

5. Didactics
 - 5a Are teaching staff prepared/trained to employ teaching strategies that engage students from diverse cultural backgrounds?
 - 5b Are teaching staff prepared/trained to employ teaching strategies that engage students from diverse linguistic backgrounds?
 - 5c Are students prepared/trained to participate with peers from diverse cultural backgrounds?
 - 5d Are students prepared/trained to participate with peers from diverse linguistic backgrounds?

6. Language (students)
 - 6a Are the language needs of students ascertained and assessed?
 - 6b Are the academic reading/writing skills of students ascertained and assessed?

- 6c Are the language needs of students supported/provided for?
- 6d Are the academic reading/writing skills of students supported/provided for?

- 7. Language (academic and other staff)
 - 7a Are the language needs of staff ascertained and assessed?
 - 7b Are the language needs of staff supported/provided for?
 - 7c Are staff supported in the use of a second language?
(e.g. help with translation or revision of teaching materials, documentation and communication)

- 8. Employability
 - 8a How do you envision your future employability (for students and staff)?
 - 8b What impact does being part of an international environment have on your career/international employability? Are there any specific elements in this programme that will contribute to your international study/working environment?

Interview results –summary

Category	Responses	Notes
Learning goals, aims and outcomes	<ul style="list-style-type: none"> - not explicitly named - the exchange of ideas and experiences of students of different home countries lead to international/intercultural learning outcomes - content is internationalized 	<ul style="list-style-type: none"> - tell the students that there is a diversity helps them that they develop sensitiveness - more variety in home countries prevents nation based group building
Teaching and learning arrangements	<ul style="list-style-type: none"> - one contact person during the application process - problems during the application process are more unique; knowledge about informal procedures insight RUG is useful for administration staff - special letters like 'ß' unknown in application programs - support for housing, health insurance and visa necessary - point out further steps after application on time necessary - fast application process secures that students enroll at RUG - short distance between faculty board and administration staff allow quick problem solving - introduction session explains Dutch higher education system - international lecturer - shared national backgrounds between students, lecturer and administration staff gains identification with each other - not every information on the website is available in English or has the same quality as in Dutch - nearly no facility outside of standard students cosmos is known - facilities seem to be anonymously - international students contact persons of earlier exchange still during the program - breaks during lecture allow exchange with other cultures - workload is not too high 	<ul style="list-style-type: none"> - the presented information in the introduction session are insufficient, a lot of processes and facilities are still unknown - handout about most important procedures would be useful - mentoring program to introduce RUG procedures, facilities and town - administration staff has not enough time to translate every information, formula into English - solving of problems in another cultural surrounding is a learning experience - higher workload for lecturer and administration staff, because of different cultural backgrounds - 'reception committee' at the airport generates a welcome feeling and prevents problems with going to Groningen - contact point for international students at Zernike
Assessment	<ul style="list-style-type: none"> - different understandings about a grade, because of different opinions on the quality of an assignment/exam - expectations of lecturer regarding to quantity and quality have to be told; example of an assignment is useful - essays leading to a reflection about the own country; 'scientific knowledge' will be linked to home country developments 	<ul style="list-style-type: none"> - 'normal' issues are still available, pay attention to them - students have to feel familiar to perform as good as possible - international standards of grading - a mix of cultures during group discussion, assignment or

	<ul style="list-style-type: none"> - link to home country is not required in most assignments - students from some cultures have more pressure to get high marks - some students never had a presentation before - different cultures have a different style of writing, Dutch style is using short sentences - 2nd try for assignments necessary, because the style of assignment or the style of presentation of the assignment might unknown in other cultures - not every culture is familiar with open questions; students adapt soon - peer reflection can be used to gain knowledge about other cultures - level of group working skill differ between different cultures 	feedback is desirable
Content/Context	<ul style="list-style-type: none"> - group discussions, assignments and small lecture groups leading to intercultural exchange - use of diversity of students for more versatile comments of students - some students have to be encouraged to participate in discussions, because it is not normal to have another opinion than the lecturer in their culture. Students will get over this barrier soon - reflection about home country can gain higher satisfaction with lectures - content is related to Western world issues, tiger states or developing countries are not considered - 'make a hero' of Dutch problem solving demotivates - mainstream Dutch content is equal to mainstream international content - international literature guarantee a not Dutch specific content - content is theoretical and abstract and not applied - not technical based argumentation is new - highlighting important literature before each lecture helps to prepare - overview about problem solving in different countries helps to reflect about own country 	it is preferred to learn about different countries
Didactics	<ul style="list-style-type: none"> - special course for didactic in intercultural classroom available - informal talks with students help them to feel familiar/welcome - mainstream Dutch didactic is equal to mainstream international didactic - critical thinking is not normal in every culture, 	booklet about some facts about intercultural problems develop higher grade of awareness

	<ul style="list-style-type: none"> - students has to be encouraged - not every slide is offered in English, this is followed in additional work for foreign students 	
Language	<ul style="list-style-type: none"> - there are always students who struggle with English, especially with difficult texts - the hidden message of a text will not be identified as easy as in native language - lecturer have a high level of English - presentation in English is new 	<ul style="list-style-type: none"> - language courses for English would enable to be more detailed and confident in talks with foreign students - offer of Dutch and English language courses before program starts - English doesn't improve, because there are not enough group discussion
Employability	<ul style="list-style-type: none"> - better English skills - become faster familiar with new cultural surroundings - intercultural competence is an additional feature - support for working in international organizations (EU, World Bank... - different opportunities to do an internship - studying abroad is required for some jobs - labor market requires more technical knowledge in some countries - knowledge about problem solving in other countries helps for future tasks 	<ul style="list-style-type: none"> - alumni can offer internships also abroad - career advice is not prepared for international students - no real holidays to do an internship
Other	<ul style="list-style-type: none"> - some students have more pressure to finish the program on time, because they have to go home fast (visa, family commitments) - informal drinks like having a drink stimulate group identification - be aware of religious tradition before scheduling a lecture - different home countries are just one part of variety, also differences in age, religion etc. will increase - international concept of the program is not known before the program starts 	<ul style="list-style-type: none"> - support out of class activities, because they increase the group identification - tour through the Netherlands help to identify with new country - booklet with an introduce of each students helps to prepare more efficient before a meeting - a shared room for all stakeholder of a program enables informal and formal exchange - program before the semester starts enables to become more familiar with new town - course about Dutch cultural specialties before the program starts

Intended learning outcomes for EIP Master's degree programme

1. Impart knowledge and understanding

The degree programme is designed

- a) such that students acquire sufficient knowledge and understanding in the field so that they can make a substantial and original contribution to the development and/or implementation of ideas, particularly with regard to research
- b) such that students have knowledge at the level of international academic publications of the theories, methodologies and techniques, and ethical foundations of the field of environmental and infrastructure planning, and that they develop the capacity to interpret this knowledge in context
- c) such that students are able to form a critical assessment of the relationships between theoretical concepts, research methods and empirical findings in international academic publications in the field of environmental and infrastructure planning
- d) such that students are independently able to employ specific research and analysis methods within the field of environmental and infrastructure planning
- e) such that students explain the characteristics and role of water, environmental and infrastructure planning in light of international academic views and debate
- f) such that students are proficient in arguing how a geographical and societal context produces policy choice
- g) such that students adequately describe current transitions in the planning of our environment.

2. Applying knowledge and understanding

Graduates

- a) are able to apply the knowledge and understanding and problem-solving abilities they have gained in new or unknown situations within wider contexts related to the field of environmental and infrastructure planning
- b) are able to integrate knowledge and understanding and apply them to complex problems
- c) are able to integrate ethical, normative and expressive ways of thinking in environmental and infrastructure planning into their academic approach
- d) are able independently to direct and perform research, whether or not in an interdisciplinary context
- e) are able to initiate a relevant angle of research
- f) are able to apply theoretical insights within the field to the analysis of concrete issues in the field of environmental and infrastructure planning
- g) are able to work across disciplines and thereby translate the contribution of their own discipline to other disciplines
- h) are able to reason logically and independently formulate and analyse a problem and create a solution-driven synthesis
- i) are able to reflect on the diversity and complexity of social structures and processes, as well as on interactions with environmental structures and processes

- j) are able to debate the latest developments within the field and the consequences thereof for society
- k) are capable of designing concrete policy solutions for problems in the field of environment, water and infrastructure
- l) apply appropriate methods for planning practice, including problem structuring, policy transfer and evaluation.

3. Judgement

Graduates

- a) are able to make judgements based on incomplete or limited information, bearing in mind social and ethical responsibilities
- b) demonstrate originality when critically reflecting on their personal academic conduct
- c) are able to critically reflect on ways of reasoning, arguments and points of view
- d) learn to evaluate and critically assess the scope of spatial impacts from planning intervention
- e) develop an open and critical attitude to new ideas and developments within the field of environmental and infrastructure planning
- f) are attentive to how planning intervention affects the interests, well-being and safety of people
- g) consider planning problems in view of their physical and institutional context.

4. Communication

Graduates

- a) are able to clearly and straightforwardly present conclusions as well as the knowledge and motives behind them to specialist and non-specialist audiences, both in oral and written form
- b) demonstrate a critical understanding of issues relevant to water, environment and infrastructure through convincing and captivating presentation
- c) communicate a balanced view to the planning of these issues
- d) report credibly both on planning theory and on cases from international planning practice.

5. Learning skills

Graduates

- a) develop the learning skills to allow them to continue to study in a manner that may be largely self-directed or autonomous
- b) learn to independently and critically continue to follow the relevant developments within their field after graduation
- c) apply international comparative learning to identify and suggest useful planning strategies and designs from abroad
- d) generate institutional and policy innovation through collaborative reflection and evaluation
- e) position their own work within the current planning debate.

6. Attitudes

Graduates

- a) develop an investigative and critical attitude to content and to new ideas and developments within the field of environmental and infrastructure planning, i.e. students will be able to take a stand
- b) develop an academic attitude in order to be able to work professionally in relevant social and academic positions
- c) handle sensitive planning issues with academic authority and appropriate skills
- d) use theoretical knowledge and comparative insight as a basis for leadership in the field.

Source: Faculty of Spatial Sciences (2012). Study guide 2012-2013 Master's degree programmes. Groningen, p. 110-118.

Admission protocol for EIP Master's degree programme

1. Students should have a Dutch Bachelor's degree (research university level) in Environmental and Infrastructure Planning, or Human Geography and Spatial Planning.
2. Holders of a Bachelor's or Master's degree with learning outcomes equivalent to the Bachelor's degree programmes set out in Article 1 will also be admitted to the Master's degree programme in Environmental and Infrastructure Planning, subject to the assessment of the Admissions Board.
3. Applicants should have an adequate command of the English language. All candidates must meet one of the following conditions:
 - Cambridge Certificate of Proficiency in English (A, B or C)
 - Cambridge Certificate in Advanced English (A, B or C)
 - A score of 6.0 or higher in the complete International English Language Testing System (Academic version)
 - A score of at least 550 on the paper version of the Test of English as a Foreign Language
 - A score of at least 213 on the interactive version of the Test of English as a Foreign Language
 - English at VWO level
4. All applicants with a professional Bachelor's degree certificate (i.e. university of applied sciences) in a related field will have to file an application to the Admissions Board. These applicants will have to submit evidence of:
 - Good study results and high marks for their Bachelor's degree certificate at their university of applied sciences (A to B range, minimum Dutch grade 7, typically top 25%)
 - Educational background, appropriate course work profile prior to Master's (substantive linkages to the broad field of planning and development)
 - A well-considered statement outlining their reasons for wishing to follow the degree programme (this will need to reflect programme objectives of the EIP Master's).

In addition, these applicants will have to discuss possibilities for additional requirements and a bridging programme, to reach a level equivalent to a Dutch Bachelor's degree at research university level in the field of Environmental and Infrastructure Planning, or Human Geography and Spatial Planning.

5. For international applicants, the following additional criteria apply:
 - Good study results and high marks at university level (A to B range, typically top 25%)
 - Educational background, appropriate course work profile prior to Master's (substantive linkages to the broad field of planning and development)
 - A well-considered statement outlining their reasons for wishing to join the programme (this will need to reflect programme objectives of the EIP Master's)
 - Pertinent, clearly positive recommendations (from supervisors or professionals in the field and appropriate programme objectives of the EIP Master's).

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