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Institute of Tropical Medicine

**Social, Developmental
and Professional
Impact Evaluation of
ITM's Educational
Activities and
Scholarship
Programme**

Final Report
June 2021

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Abbreviations

ANGS	Actors of non-governmental cooperation
ARES	Académie de Recherche et d'Enseignement Supérieur
CSC	Cadre Stratégique Commun (Common Strategic Framework)
DGD	Directorate-general Development Cooperation and Humanitarian Aid
ECTS	European Credit Transfer System
EEA	European Economic Area
FA	Framework Agreement
ICASA	International Conference on AIDS and STIs in Africa
ICT	Information and Communication Technology
ITM	Institute of Tropical Medicine
KIT	Koninklijk Instituut voor de Tropen (Royal Tropical Institute)
MoH	Ministry of Public Health
MoS	Ministry of Science and Innovation
MPH-HSDC	Master of Public Health with an orientation either to health systems or disease control
MPH-TMIH	Master of Public Health with an orientation tropical medicine and international health
MSc	Master of Science
MSTAH	Master of Science in Tropical Animal Health
MTM	Master of Science in Tropical Medicine
NVAO	Accreditation Organisation of the Netherlands and Flanders
TMED	Tropical Medicine for Bachelors in Nursing and Midwifery
TMIH	Tropical Medicine and International Health
ToC	Theory of Change
UP	University of Pretoria
VLIR	Vlaamse Interuniversitaire Raad
VLUHR	Vlaamse Universiteiten en Hogescholen Raad

1 Introduction

The Institute of Tropical Medicine (ITM) has commissioned Syspons to conduct a Social, Developmental and Professional Impact Evaluation of ITM's Educational Activities and Scholarship Programme. The evaluation focussed on ITM's Master courses, Short Courses, and Post-Graduate Courses between 2008 and 2019, as well as the respective DGD-funded scholarships. In addition, the PhD programme in the period between 2003 and 2019 was analysed, with a focus on the DGD-funded sandwich programme.

This evaluation was grounded in **two rationales**: Firstly, ITM's Institutional Policy Plan refers to the intention of conducting a social impact survey to assess impact of educational activities. Secondly, the Framework agreement (FA) between ITM and the Directorate General for Development Cooperation (DGD) obliges ITM to conduct a mid-term evaluation of its multi-year programme for which the focus can be freely chosen in dialogue with the donor. Thus, the evaluation should serve a formative as well as a summative purpose. Regarding the former, the **evaluation's objective** was to generate insights into the social, developmental, and professional impact of ITM's educational and scholarship activities on alumni competencies, capacities, and networks. It should also help ITM gain an understanding of the mechanisms and conditions under which impact occurs. In this regard, it should be assessed whether diversity in student groups contributed to the quality of the learning process and networking opportunities. This led to the development of recommendations on which ITM can base potential adjustments to its policy strategies and practices and to inform a new DGD funded five-year programme. Furthermore, the evaluation should serve as a starting block for a longitudinal survey for which a concept should be developed based upon the impact evaluation's results. Concerning the summative objective, the evaluation aimed to contribute to accountability towards DGD and to gain insights in student and alumni profiles for strategic decision-making purposes.

The evaluation was conducted between September 2020 and July 2021. This **final report** presents the results and analysis of the evaluation. It first gives insights into the evaluation object, the evaluation methods and then presents the results and analysis, conclusions and recommendations. The report is structured as follows:

- **Chapter 2** introduces the evaluation object, namely the structure of ITM's educational activities and the scholarship programme. In addition, it describes the Theory of Change and the underlying hypotheses;
- **Chapter 3** provides a brief overview of the evaluation design and the methods used for data collection and analysis;
- **Chapter 4** presents the evaluation results along the evaluation criteria relevance, effectiveness, impact and coherence;
- **Chapter 5** outlines the conclusions as well as recommendations.
- The **Annex** contains a detailed description of the evaluation design and methods, the evaluation matrix, the bibliography and the annotated alumni survey, which can be used as a basis for the longitudinal alumni survey.

2 Educational Activities and Scholarship Programme at a Glance

2.1 Institutional and Programme Background

The Institute of Tropical Medicine (ITM) was established in Belgium as a training institute in 1906 with the **vision** of enhancing global health through fostering scientific progress as a motor of societal development.¹ ITM is recognized by decree as an independent institution of public utility with the mandate to carry out all initiatives and activities to achieve its intended purpose. The core mission of the institute is to conduct and promote scientific research, professional and academic education as well as scientific and community services in the field of tropical diseases and global healthcare with a special focus on cooperation with partners from low and middle-income countries.² Thus, the main areas of activity are based on the three different pillars of research, education, and service delivery. The pillar of service delivery entails aspects such as international cooperation, providing medical services, or laboratory work (as reference labs). The international cooperation is a fundamental part of ITM's engagement in the Belgian development cooperation, which is financed among others by DGD. It can act as a nexus between educational activities and development cooperation through the scholarship programme.

ITM's core activities are organised in three different **scientific departments**, namely the Department of Biomedical Sciences, the Department of Clinical Sciences, and the Department of Public Health.³ Each of the scientific departments is involved in the three different pillars outlined above. Additionally, three separate academic offices for international cooperation and development, education, and research are directly linked to the director of ITM and the Management Committee to offer support and further development of their respective area of expertise.⁴

To implement its activities, ITM has several **management agreements** with various Flemish and federal ministries. The core funding comes from the Ministry of Education,⁵ while additional programmatic funding comes from the Ministry of Science and Innovation (MoS), the Belgian and/or Flemish Ministries of Public Health (MoH), the Ministry of Foreign Affairs, specifically from DGD, and the Flemish Department for Development Cooperation. Together, these agreements amount to approximately 55% of ITM's total revenue.⁶ External competitive grants, medical services, and own income like the student tuition and registration fees form the rest of the total revenue.

ITM's activities within the area of development cooperation like the scholarship programme are mainly funded through **Framework Agreements (FA) with DGD**. For the evaluation focus, FA3 (2008-2016) and FA4 (2016-2021) are of specific interest. The overall objective of the FA is "to strengthen the rational basis and the country ownership of health care systems and policies in developing countries, in order to improve the health status of the populations and thereby to contribute to the reduction of poverty and inequity."⁷ The FA supports the Institute in expanding and continuing international medical and cooperation in veterinary medicine and fostering knowledge exchange by strengthening North-South and South-South partnerships. Leaders, scientists, and experts in the partner institutions as well as health professionals, managers of national health programmes and policy makers are the direct target groups, while communities and individuals are meant to benefit from improved practices and policies. A major part of the DGD funding is spent on the capacity strengthening country programmes, while the

¹ Institute of Tropical Medicine, 'About Us', accessed 20 October 2020, <https://www.itg.be/E/about-us>.

² Institute of Tropical Medicine, 'Statutes', accessed 20 October 2020, <https://www.itg.be/e/statutes>.

³ Organigram

⁴ Institute of Tropical Medicine, 'ITM Institutional Policy Plan 2020-2024. "Global Science for a Healthier World"', n.d., 8.

⁵ The yearly funding from the Ministry of Education is around EUR 11 Mio.

⁶ Institute of Tropical Medicine, 'ITM Institutional Policy Plan 2020-2024. "Global Science for a Healthier World"', 7.

⁷ Institute of Tropical Medicine, "Switching the Poles". FA3-III (2008-2013). Volume 1 A - Programme Level', 2007, 25.

scholarship and training components form the second largest part of the total DGD funding.⁸ In its implementation, FA3 was extended following a reform of the sector of the Actors of the non-governmental cooperation (ANGS) in 2012. Accounting for this reform, ITM and DGD agreed on a transition phase of three years before introducing FA4.⁹ While FA3 had been comprised of multiple subprogrammes, FA4 focussed on the country programmes and a Belgian programme. Whereas the former includes the institutional partnerships,¹⁰ the latter includes the scholarship programme, alumni networking and an Academic Alliance between ITM and institutional partners in the South.

2.2 Educational Activities

ITM offers a **range of educational activities**, from Short Courses to Master programmes, postgraduate courses, and PhD programmes. In the following, the **key educational missions** and **strategic operational objectives** regarding education will be presented. Further, the different Master courses as well as an overview of different short and postgraduate courses will be outlined. Lastly, to cover all educational activities which will be part of the evaluation, the PhD programme with a focus on the sandwich type PhD programme will be described.

In its educational activities, ITM focusses on **international knowledge exchange**. Until the 1980s, the target group for ITM's postgraduate courses offered in Belgium consisted primarily of development workers for the Belgian Development Cooperation or NGOs, training and preparing them for their work in the Global South.¹¹ With the increasing need for own medical and veterinary personnel in low- and middle-income countries after their independence, ITM began to develop a new concept not just to transfer knowledge to the Global South, but to foster international exchange through the creation of international Master's courses (before called diploma) in Public Health and Tropical Veterinary Medicine in 1964. In late 2009 then, the reform process "ITM2020+" was initiated. It formed an important cornerstone to shape the future strategic orientation of ITM and its educational activities in reaction to a rapidly changing global context with redefined "North-South relations, academic duties and health policies."¹² Regarding ITM's educational activities, the reform process emphasised the need for a strong research focus, content specificity, a clearly defined niche, global relevance, flexibility of curricula, an approach stimulating the autonomy of students, and the use of ICT for blended learning.¹³ This was reflected for example in the development of new short courses and a new master programme (MTM) and the flexibilisation of the existing Master in Public Health.¹⁴

The **costs** of the courses are, compared to similar European institutes like the London School of Tropical Medicine and Hygiene, relatively low and are divided in a registration fee and a fee for credits.¹⁵ According to the new tuition fee policy, which was introduced in 2020, a full-time Master programme of 60 ETCS is EUR 16,500 for non-EEA students, and EUR 5,460 euro for EEA-students. The costs for a Short Course of 5 ECTS is EUR 1,900 for non-EEA students and EUR 730 euro for the EEA-students.

2.2.1 Master

In 2020, **three different Master programmes** are offered at ITM, namely the Master (MSc) in Public Health with an orientation to health systems and disease control, the Master (MSc) in Tropical Animal Health (MSTAH) and the Master (MSc) of Tropical Medicine (MTM). The latter was launched in 2020, hence outside the scope of this evaluation. All Master's programmes at ITM are Master after Master

⁸ See for example for the funding period 2014-2016 FA3-III, Annex 03.

⁹ Institute of Tropical Medicine, "Switching the Poles". FA3-III (2014-2016). Volume IV - A. Version 2', 2014, 4.

¹⁰ Some PhD scholarships form part of the institutional partnerships.

¹¹ 'ITM Policy Plan 2016-2020. I. Institutional Framework' (Institute of Tropical Medicine Antwerp, 2015), 37. This does not fully apply to the Master in Public Policy.

¹² Institute of Tropical Medicine, 'ITM Annual Report 2010', 2010, 6.

<https://www.itg.be/files/docs/jaarverslagen/ITG%20Jaarverslag%202010%20ePDF%20HiRes.pdf>.

¹³ Institute of Tropical Medicine, 13.

¹⁴ "Switching the Poles". FA3-III (2014-2016). Formulation Proposal for Scholarships and Training Projects. Distance and Blended Learning Programme' (Institute of Tropical Medicine Antwerp, 2013).

¹⁵ Institute of Tropical Medicine, 'Fees and Scholarships', accessed 20 October 2020, <https://www.itg.be/E/scholarships>.

programmes, meaning that students need to have completed a previous Master programme. In total, around 1,000 students were enrolled in either the MPH and the MSTAH between 2008 and 2019.¹⁶

The one-year **Master in Public Health (MPH-HSDC)** is designed specifically for students with relevant professional experience in low- and middle-income countries to enhance their capacity to deal with current challenges in public health, like the control and elimination of (neglected) tropical diseases or the achievement of universal health coverage.¹⁷ The **Master in Tropical Animal Health (MSTAH)** in contrast has two majors: Epidemiology and Animal Disease Control. Since 2016, the MSTAH evolved to a two-year blended Master's programme to be implemented in collaboration with the University of Pretoria (UP), including both web-based and on-campus components.¹⁸

2.2.2 Short courses

The Short Courses at ITM are an important complementary tool to strengthen additional capacities and specialised skills. Students can either attend individual Short Courses or choose some courses as options in their Master's programmes. The courses offered vary in their length and the extent of the ECTS to be acquired. Most of the courses last three weeks and consist of 5 ECTS. The portfolio of ITM's Short Courses in 2020 comprises 24 different courses. Most of them (18) are Short Courses offered in the sector of public health.¹⁹ During the time period assessed in this evaluation, approx. 2000 students were enrolled in one of the Short Courses.²⁰ With the further development of the Short Courses, ITM aims to strengthen the partnerships with universities in Flanders and Belgium as well as abroad through the development and exchange of joint courses and the promotion of staff and student mobility.²¹ The Short Courses are a fundamental part of the scholarship programme funded by DGD, which will be outlined further in chapter 2.3.

2.2.3 PhD courses

ITM offers PhD training in all of its fields of expertise in collaboration with different universities in Belgium and abroad that deliver the PhD degree. In this regard, ITM offers different study trajectories to complete a PhD: a sandwich PhD programme, meaning that the student from the LMIC will spend the doctoral research time partly in the home institute and country and partly at ITM, as well as a 'full-time' ITM based programme. Object of this evaluation are the DGD-funded individual PhD programme, as well as PhDs that are conducted as components of the country programmes.²² Firstly, the **individual sandwich PhD** is funded by the DGD as part of the comprehensive capacity strengthening programme under the current FA4 and was also part of the former FAs. Candidates have to be ITM alumni²³, linked to a university or scientific institute in their home country, and assure supervision of their PhD project. Furthermore, as ITM is not a PhD-awarding institution, PhD students need to be registered with a PhD-awarding university and have a university supervisor too. The PhD project normally lasts four years and is conducted partly in the home country of the candidate and partly at ITM. Secondly, DGD supports PhD students as part of the DGD funded **country programmes**. In these cases, the training of PhD students is part of projects implemented under FA4 with the aim to increase local institutional capacity for research, and application of its results to improved health management.²⁴ Thus, these PhD students are associated with ITM's partners through institutional PhD scholarships.

¹⁶ Data for the newly launched MTM is not yet accessible and does not fall within the time frame of the evaluation.

¹⁷ Institute of Tropical Medicine, 'ITM Education - Master (MSc) in Public Health - Orientation Health Systems and Disease Control (MPH-HSDC)', accessed 20 October 2020, <https://edu.itg.be/courses/Masters-in-public-health-orientation>.

¹⁸ VLUHR, 'Educational Assessment. Institute of Tropical Medicine. An Evaluation of the Quality of the Master of Science in Public Health and the Master of Science in Tropical Animal Health, Institute of Tropical Medicine in Antwerp', 22.

¹⁹ Institute of Tropical Medicine, 'ITM Education - Courses', accessed 20 October 2020, <https://edu.itg.be/courses>.

²⁰ Institute of Tropical Medicine, 'Database of ITM Alumni 2002-2021'.

²¹ Institute of Tropical Medicine, 'ITM Institutional Policy Plan 2020-2024. "Global Science for a Healthier World"', 10,34.

²² Nonetheless, all registered PhD students at ITM were included in the survey.

²³ Alumni of the Interuniversity Programme in Molecular Biology (IPMB) are eligible as well, if they finished their Master thesis at ITM. According to the adapted definition of ITM alumni of 2020, candidates who e.g. finished a predoctoral period at ITM of at least six months under the supervision of an ITM supervisor are ITM alumni as well. Since the evaluation only takes into account the time period from 2008-2019, the adapted definition has no impact on the evaluation.

²⁴ Institute of Tropical Medicine, 'ITM FA4 - Country 02 - Benin', 2016, 3.

2.2.4 Postgraduate courses

The **postgraduate certificate courses** (PGC) offered at ITM are “extended” Short Courses of at least 20 ECTS leading to the attainment of a postgraduate certificate.²⁵ A postgraduate course can be a combination of several Short Courses and is organised in an interdisciplinary manner. Currently, ITM offers two different postgraduate courses: The Postgraduate Certificate in Tropical Medicine and International Health (TMIH) in English and the Tropical Medicine for Bachelors in Nursing and Midwifery (TMED) in English and French. These formats mainly attract students from Belgium and other European countries, who want to study tropical medicine and are interested in an exchange with the Global South. It is not part of the DGD scholarship programme, so that students cannot receive a DGD scholarship to attend the PGC courses. In line with ITM’s objective to foster exchange by enabling international networking in its courses, the postgraduate course TMIH is partly integrated into the Master’s programmes, like the new Master in Tropical Medicine.

2.3 Scholarship Programme

To **enhance access** to ITM’s educational activities and thus strengthen capacities in LMICs, DGD supports students from low- and middle-income countries with a scholarship programme for the Master’s programmes, the Short Courses, and a PhD programme implemented under the FAs.²⁶ As the programmes focus on mid-career professionals who might have a family and may need to interrupt their income-generating activities for at least one year, applicants may not be able to cover fees and living costs otherwise.

The DGD funding for the **Masters and Short Courses** guarantees a minimum number of scholarships per course. Under the current FA4, DGD provides at least 12 full scholarships for the joint Master in Tropical Animal Health and approximately 12 full scholarships to the Master of Public Health orientations. Regarding the Short Courses, DGD provides a minimum six scholarships on average per Short Course. The allowances for the Master’s programmes and Short Courses include tuition fees, living and housing allowances, as well as family allowances specifically for Master students.²⁷ An average full Master scholarship in the period of 2014-2016 amounted to around EUR 36,000. The combined allowances for students of Short Courses ranged between EUR 1,500 and around EUR 10,000.²⁸ Furthermore, a specific amount is budgeted under FA4 to support Short Courses or Master’s programmes jointly developed with and implemented at partner institutions to strengthen the development of joint initiatives.²⁹

The PhD scholarships are designed for a period of four years and include a **variety of allowances** to facilitate doctoral research (see Section 2.2.3 for details on the PhD programme). There are three individual PhD scholarships available per year.³⁰ Scholarship holders are offered an initial grant and after a positive progress evaluation by the ITM PhD Committee the scholarship will be extended.³¹ In contrast to the other scholarship programmes, the doctoral scholarship can be extended and spread over a maximum of 6 calendar years and is subject to progress reports and assessments.³² Those exceptional extensions on top of the four years may not be financed by DGD, but it is possible to use any balance of the research allowance during the extension period. The grant includes an allowance for living in Belgium, which amounts to EUR 1,500 per month for a maximum of 24 months. For the time in their home country, scholarship holders get a grant equivalent to a PhD salary of their home institutes’ regulations, capped at EUR 1,500 per month.³³ In addition, the PhD scholarship entails a research

²⁵ Explorative Interview

²⁶ Since the DGD scholarship programme is exclusively for students from the Global South, ITM has attributed core funding as well as private sponsorships from the Ministry of Education to lower the financial barriers also for European students.

²⁷ “Switching the Poles”. FA3-III (2014-2016). Formulation Proposal for Scholarships and Training Projects. Master and Short Courses Scholarships’ (Institute of Tropical Medicine Antwerp, 2013), 17.

²⁸ “Switching the Poles”. FA3-III (2014-2016). Formulation Proposal for Scholarships and Training Projects. Master and Short Courses Scholarships’, 18.

²⁹ Institute of Tropical Medicine, ‘ITM - FA4 - Country 11 - Belgium’, n.d., 17.

³⁰ ITM FA4 Belgium , p. 16.

³¹ Institute of Tropical Medicine, ‘Individual Sandwich PhD Scholarship Programme ITM-DGD Call 2020’, 2020, 3.

³² Institute of Tropical Medicine, ‘ITM Scholarship Regulations’, 2018, 8.

³³ Institute of Tropical Medicine, ‘Individual Sandwich PhD Scholarship Programme ITM-DGD Call 2020’, 2.

allowance, a supervision allowance, indirect mission cost allowance and logistical allowances, amounting to a total of around EUR 32,000 per year.³⁴

2.4 Application and Selection Process

The application and selection process at ITM are similar across the Master courses, and Short Courses. For these, students are selected based on their **academic merit**, their **prior professional and field experience**, their **motivation**, and the **quality of their thesis outline** (the latter for MSc students only). Applicants need to create an online account and submit their application file to the ITM course secretariat.³⁵ In the subsequent steps, the selection committee composed of the programmes' teaching staff and a coordination team screens and rates the application based on predefined criteria. Those criteria differ between educational activities.

To be considered for the **PhD fellowships**, applicants are evaluated by the ITM PhD Committee based on their academic merit, their project and the relevance and quality of the institutional and supervisory set-up.³⁶ In addition, candidates have to show that their proposed project contributes to strengthened capacity of their home institute or country. To be eligible for an individual PhD scholarship, candidates have to be ITM alumni, while candidates for the DGD country programme have to be affiliated with an ITM partner institute.

To apply for a Master's programme, candidates require a previous degree with an equivalent of 240 ECTS, as they are so-called Master-after-Master programmes.³⁷ Compared to the Master's programmes, the application procedure for Short Courses is generally leaner and selection criteria are less strict, since there are fewer applicants.³⁸ In both procedures, however, the cohort's diversity is considered next to the qualification of individual applicants. In this sense, ITM aims to diversify each cohort by mixing students in terms of professional and geographical background as well as gender.

To apply for a **scholarship**, applicants must **fulfil the regular criteria** for admission to the respective course and need to attach a separate DGD scholarship application form to their normal application.³⁹ In addition to the criteria for the different courses, DGD has defined a number of criteria to rank applicants for the available scholarships. Those criteria include the likely professional (re-)integration after the course and the employment in a research institute, a higher education institution, the public or social sector, a small or medium-sized enterprise, or in a non-governmental organisation. At equal qualification, female candidates are preferred. After preselecting the applicants on the basis of their eligibility (origin from a low- or middle-income country etc.), the selection committee ranks them and creates a list which is then approved by DGD.⁴⁰ Furthermore, ITM has to assure that most of the applicants come from the DGD priority countries.⁴¹

Regarding the **postgraduate courses**, applicants are admitted on a first come first-served basis, if the applicants belong to the target group of the course, fulfil the admission requirements, and have completed the application file.⁴²

³⁴ "Switching the Poles". FA3-III (2014-2016). Formulation Proposal for Scholarships and Training Projects. PhD Scholarships' (Institute of Tropical Medicine Antwerp, 2013), 5.

³⁵ For example including copies of academic and professional degrees, CV, motivation letter, passport copy, provisional thesis-outline, references, funding plan, proof of english language proficiency.

³⁶ Institute of Tropical Medicine, 'Individual Sandwich PhD Scholarship Programme ITM-DGD Call 2020', 1.

³⁷ If this requirement is not met, the MPH can, for example, apply a special admission procedure focusing on the scope and relevance of previous professional experience in the health sector.

³⁸ Explorative Interviews

³⁹ Institute of Tropical Medicine, 'Fees and Scholarships'.

⁴⁰ Explorative Interviews.

⁴¹ DGD partner countries are Benin, Burkina Faso, DRC, Guinea, Mali, Morocco, Mozambique, Niger, Palestinian Territory, Rwanda, Senegal, Tanzania, Uganda, according to [Partner countries | Federal Public Service Foreign Affairs \(belgium.be\)](https://www.federaal.gov.be/en/partner-countries) (accessed 15 July 2021)

⁴² Institute of Tropical Medicine, 'ITM Education - Postgraduate Certificate in Tropical Medicine and International Health (TMIH)', accessed 20 October 2020, <https://edu.itg.be/courses/postgraduate-certification-in-tropical-medicine-and-international-health>.

2.5 Alumni Activities and Networking

ITM offers a worldwide alumni network to bring together students, alumni and staff members living and working around the world. It seeks to facilitate scientific knowledge and information sharing and networking, strengthen career development of students and alumni, generate interdisciplinary and cross-regional collaboration, develop mentorship opportunities, as well as to enable lifelong relationships with ITM.⁴³ To boost the alumni networking, ITM launched an online alumni platform in January 2020 to offer the possibility for exchange. Through this platform, students, alumni, and staff announce webinars, conferences, colloquia, share sector related opportunities, and have the possibility to pitch projects.⁴⁴ ITM provides travel grants for alumni from low- or middle-income countries to attend alumni meetings and profit from social networking and thematic inputs, such as exchange and updates on specific topics or problems. Under FA3, alumni meetings have been organised both outside of and within the context of pre-defined scientific conferences like the ITM Colloquium or the International Conference on AIDS and STIs in Africa (ICASA), while the alumni meetings under FA4 are organised just within the framework of those scientific conferences.

These alumni activities are part of the FAs as well and have been systematically advanced in the framework of the “**alumni network project**” supported through FA3 and FA4.⁴⁵ In both FA3 and FA4, alumni support is a dedicated part of the agreements. Under FA3, the subprogramme “alumni network project” includes activities to promote exchange via e-newsletters, communities of practice, Emerging Voices meetings⁴⁶, internet forums and exchange visits. In 2013, a coordination group was set up to revise the alumni policy and activities in the framework of ITM 2020+. The new alumni framework formulated the following general principles for alumni activities: To reduce the fragmentation between different course specific alumni groups, the adequate embedding of ITM’s alumni activities within the overall educational activities, and the use of new communication tools and social media.⁴⁷ Under FA4, alumni activities are included under the first specific outcome of the Belgium Programme, which is to strengthen the academic capacity for health through improved quality in education and access to postgraduate education and training.⁴⁸ Moreover, alumni can contribute to societal impact in the health field, especially in the Global South, thereby contributing to DGD’s objectives. Alumni surveys and career follow-up as well as the impact evaluation of programmes as well as virtual and face-to-face meetings are activities mentioned in this context.

2.6 Student Population

The population analysed in this evaluation consists of all graduates of Master courses, Short Courses, and post-graduate courses between 2008 and 2019, as well as PhD graduates and students who started between 2003 and 2019. According to the student database, 3903 individuals attended courses at ITM in these time frames. In total, there were 4895 student-course entries, as some students attended multiple courses.

Analysing the **students over time**, the number of students is relatively constant from 2008 onwards (see Figure 1). Before that, only PhD students were included in the analysis, explaining the low numbers in the first years in the Figure below. As the figure shows, 2018 is an exception, with 733 students starting courses at ITM. This high figure is driven by high numbers of enrolment in specific courses. Specifically, 132 PGC doctors started in 2018, as opposed to 70 in 2017 and, 92 students started the MSTAH, as opposed to 44 in 2017.

⁴³ Institute of Tropical Medicine, ‘ITM Alumni Network’, accessed 20 October 2020, <https://itmalumni.org/page/about-us>.

⁴⁴ Explorative Interviews.

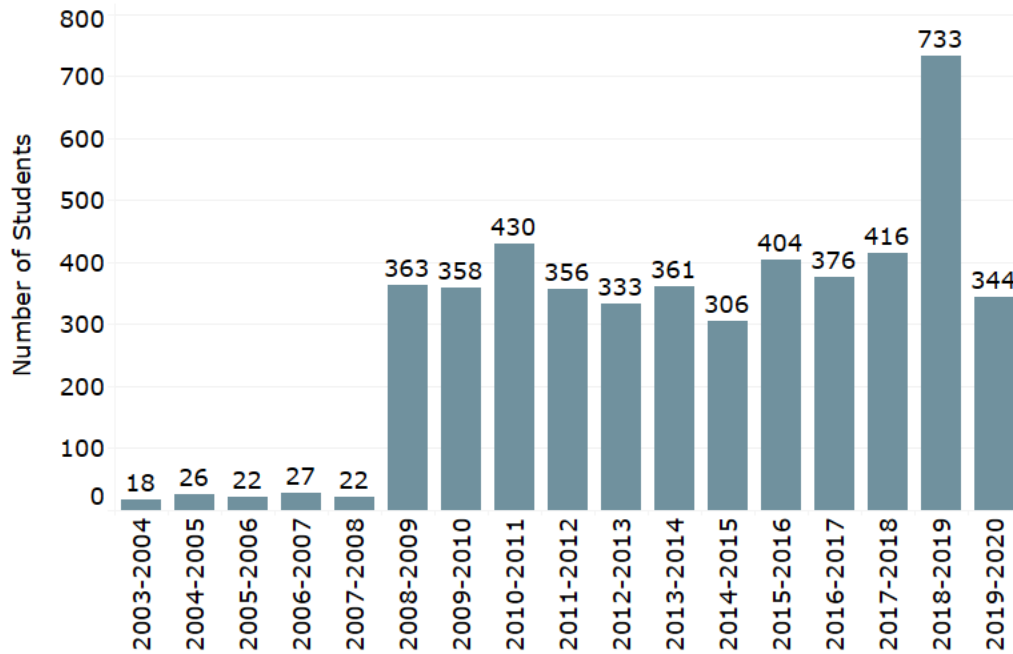
⁴⁵ “Switching the Poles”. FA3-III (2014-2016). Formulation Proposal for Scholarships and Training Projects. Alumni Networking and Support’ (Institute of Tropical Medicine Antwerp, 2013), 4.

⁴⁶ Health Systems Global, ‘Emerging Voices’, [Emerging Voices | Health Systems Global](#), accessed 15 July 2021.

⁴⁷ “Switching the Poles”. FA3-III (2014-2016). Formulation Proposal for Scholarships and Training Projects. Alumni Networking and Support’, 6.

⁴⁸ Institute of Tropical Medicine, ‘ITM - FA4 - Country 11 - Belgium’, 14.

Figure 1: Number of Students per Year

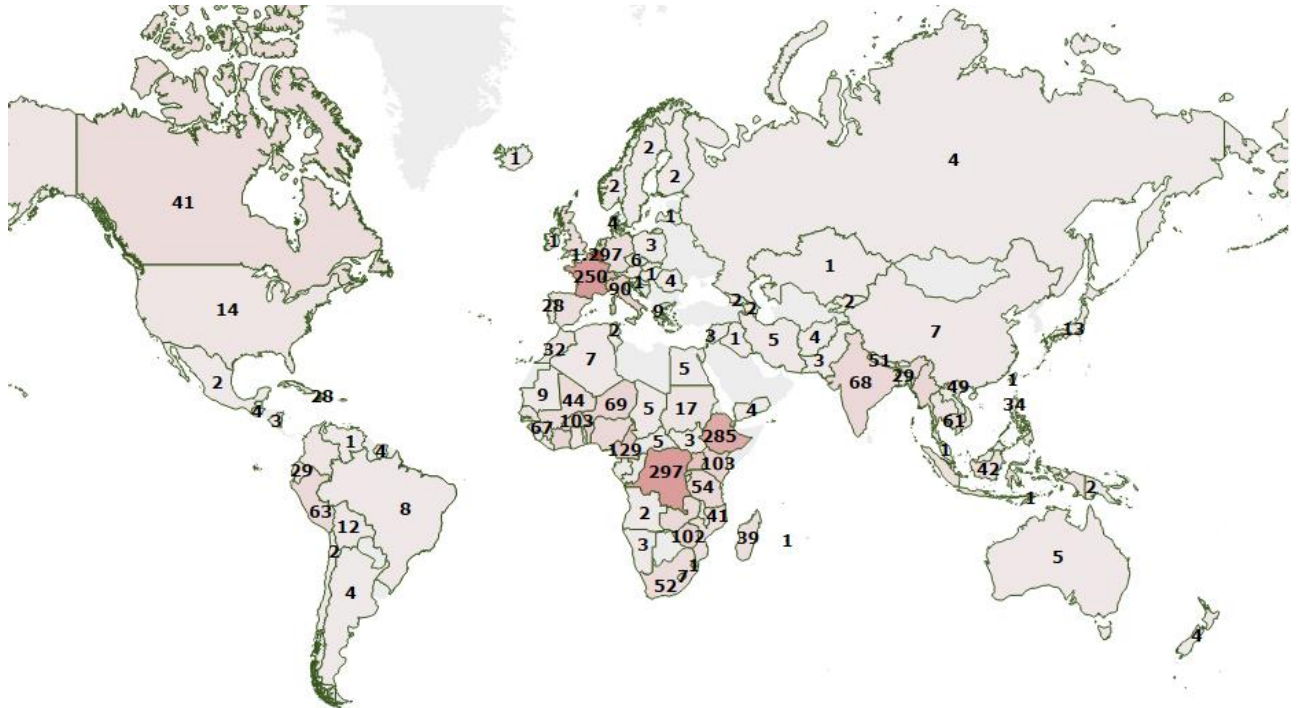


Source: ITM Student Database

Next, the **gender balance** has remained relatively stable over time, but varies between course types. In 2008, women and men participated to almost equal parts in ITM educational activities, with 50.3% of the student population being female. Over the years, the proportion of women has increased slightly, with 56% of students enrolling being female in 2018. This pattern differs between course types. In the PGC courses, for instance, 76% of students were female. This proportion ranged between 71.2% (2018) to 84.9% (2012). In all other courses together, 40.5% were female, with an upward trend over time. As such, the proportion of women increased from 30.4% in 2002 (only PhD students) to 34.5% in 2008 (PhD, Short Course, Master), peaking at 50.3% in 2018.

In terms of the **countries of origin**, the student database shows that ITM students come from a wide range of countries. In the evaluation timeframe, 122 nationalities were represented at ITM (see Figure 2). Zooming into the different course types shows that the European students mostly participated in the PGC courses. For instance, out of 1.297 students from Belgium at ITM, 1.000 participated in the PGC. In contrast, African, Asian and Latin American students mostly attended the Master, Short Courses and PhDs. Specifically, students from DRC are strongly represented, with a total of 297 students in the evaluation time frame. Out of these, 83 participated in the e-SCART short course and 48 participated in the MPH. Similarly, in the third most represented nationality of Ethiopians (285 persons), 49 did the SCREM short course, 39 did the MSTA Master and 35 did the MPH. This general distribution is in line with the respective target groups of the courses (see Section 2.2). Moreover, the countries of origin change over time. In particular, they oscillate between francophone and other countries for the years in which the MPH switched between francophone and anglophone countries biannually (also see Section 4.2.1).

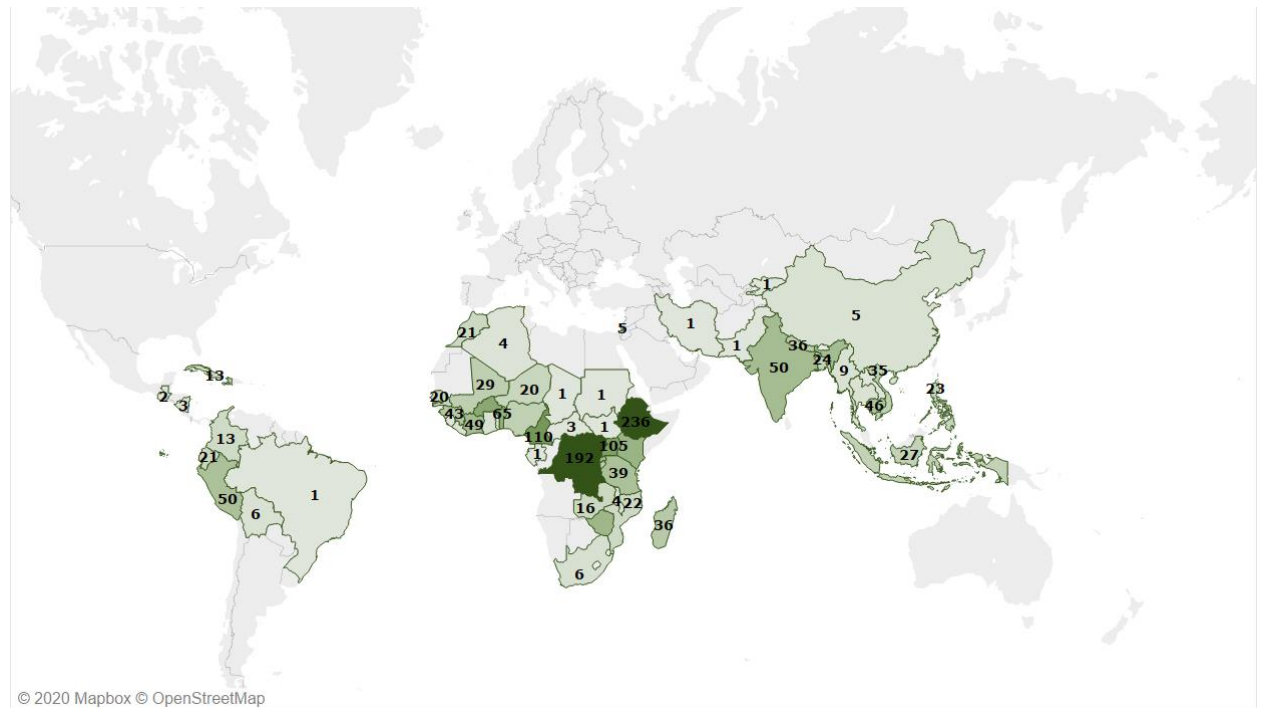
Figure 2: Map of Students' Countries of Origin



Source: ITM Student Database

Regarding the **funding sources**, 36% of all students received DGD funding, including both individual and institutional funding through ITM's partners. 43% of all students had no or unknown external sources of funding. Zooming into the Short courses, Master and PhD students (as PGC students are not eligible for DGD scholarships), the proportion of students with a DGD scholarship increases to 52%. These students are from Latin America, Africa and Asia, with the two most prominent countries being Ethiopia and DRC (see Figure 3). Out of the 2821 non-PGC students, 26% had other sources of funding, which are very diverse and include the World Bank, WHO, Solidarmed or MSF. The remaining 22% had no or unknown external sources of funding.

Figure 3: DGD scholarship students 2003-2019



Source: ITM Student Database

2.7 Theory of Change

To understand and visualise the objectives of ITM's education and how they are supposed to be achieved, a Theory of Change was developed in the inception phase of the evaluation. This Theory of Change visualises the intended impacts and outcomes of ITM's educational activities and scholarship programme and shows the underlying impact hypotheses by connecting the impacts and outcomes to outputs, activities, and inputs. In the following, the Theory of Change is briefly described. Indicators to measure individual aspects of the Theory of Change can be found in the evaluation matrix.

Overall, ITM aims to contribute to improving health worldwide. This includes improving health in LMIC, but also other countries, such as Belgium. To achieve this **impact**, ITM conducts various activities in three pillars, namely services, research, and education. For the present evaluation and this Theory of Change, we focus on education and – in relation to the DGD-funded PhD programme – research aspects and developmental impact. In the realm of its educational activities, ITM aims to achieve three intermediate impacts. Firstly, informal, and formal alumni networks are intended to contribute to lifelong learning and exchange and shape discourse on health worldwide on national, regional, and international levels. Secondly, alumni and ITM staff act as agents of change that embody scientific, ethical, and professional attitudes and values. Thirdly, organisations, including partner organisations and ITM itself are strengthened in their professional capacities to contribute to scientific and public discourse and practice relevant to their respective contexts.

To achieve these impacts, ITM pursues four objectives on the **outcome** level. In the Theory of Change of ITM, connections between **outputs** and outcomes explain how outcomes are achieved in the project. The following impact hypotheses lay out these connections and thereby explain the connection between output and outcome level.

Outcome 1: Graduates strengthen formal and informal networks for lifelong learning, exchange and belonging.

Hypothesis OC1-OP1⁴⁹: If students study in diverse cohorts, study groups or communities and engage in peer-learning, they can strengthen formal and informal networks for lifelong learning, exchange, and belonging after their graduation.

Outcome 2: Graduates further develop their soft skills.

According to Outcome 2, ITM intends for graduates to further develop their soft skills. This entails skills such as networking, intercultural competencies, or communication. It also includes wider concepts, such as broadening the horizons of students and contributing to their ability to critically reflect.

Hypothesis OP2-OC2: If students, invited lecturers, ITM staff, and graduates exchange knowledge and perspectives based on different disciplines, traditions, and field experience, and students study in diverse cohorts, study groups or communities and engage in peer-learning, they further develop their soft skills.

Hypothesis OP3-OC2: If students conduct research in their home countries and/or at partner institutes and/or at ITM, they further develop their soft skills.

Hypothesis OP4-OC2: If students gain thematic, methodological, and ethical competencies and capacities in the areas of public health, biomedical sciences, or clinical sciences they further develop their soft skills.

Outcome 3: Graduates use their acquired competencies to add value in their professional practice and interactions (professional agency).

Hypothesis OP2-OC2: If students, invited lecturers, ITM staff, and graduates exchange knowledge and perspectives based on different disciplines, traditions, and field experience, they use their acquired competencies to add value in their professional practice and interactions.

Hypothesis OP3-OC2: If students conduct research in their home countries and/or at partner institutes and/or at ITM, they use their acquired competencies to add value in their professional practice and interactions.

Hypothesis OP4-OC2: If students gain thematic, methodological, and ethical competencies and capacities in the areas of public health, biomedical sciences, or clinical sciences they use their acquired competencies to add value in their professional practice and interactions.

Outcome 4: Graduates are regarded as competent actors and a valuable asset by/to the scientific and public health community.

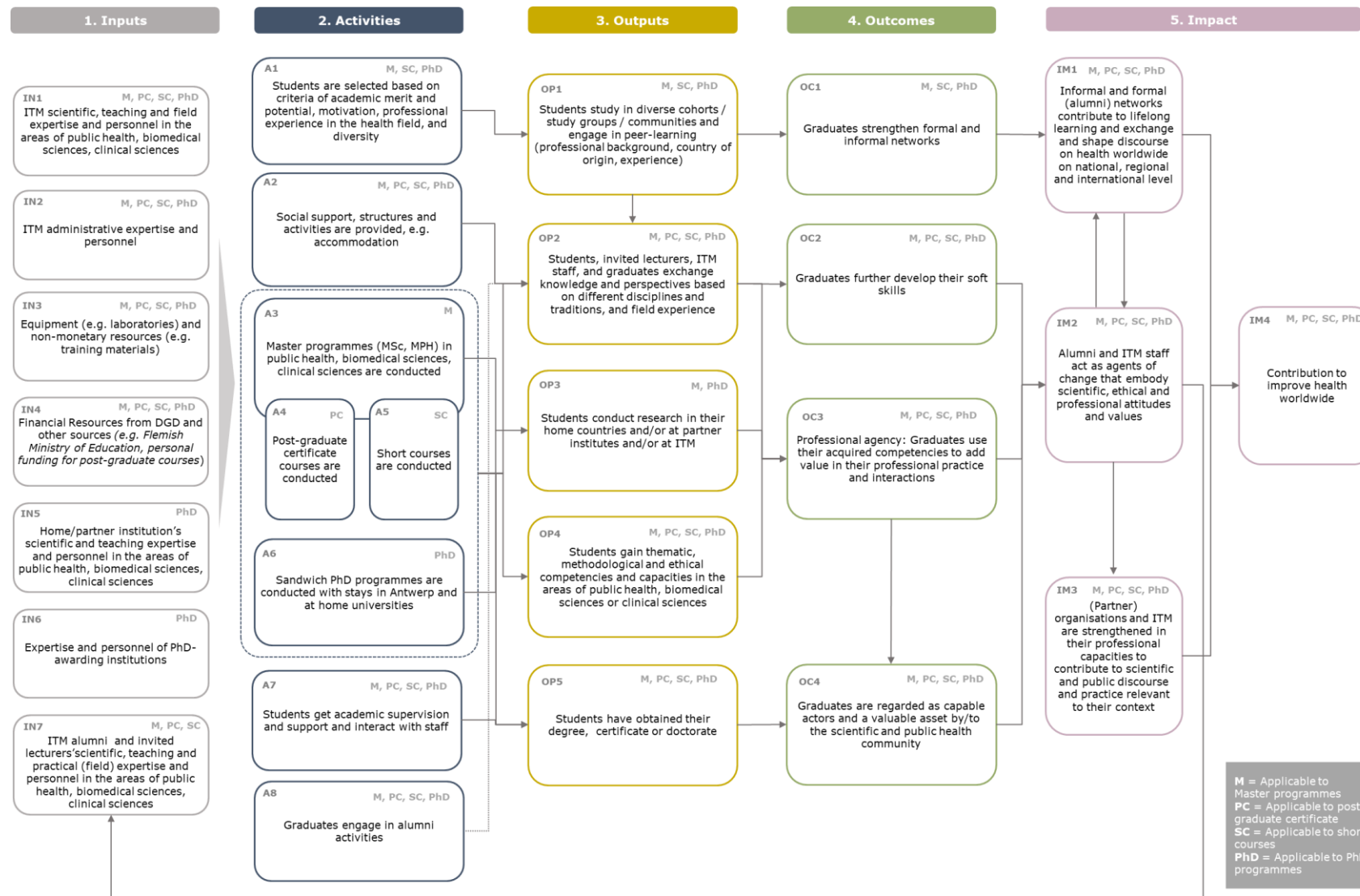
Hypothesis OP5-OC4: If they have obtained their degree, certificate, or doctorate; ITM graduates are regarded as competent actors and a valuable asset by/to the scientific and public health community.

On the level of **activities**, ITM carries out the selection, conducts Master's courses, PhD programmes, Short Courses, and post-graduate certificate courses, provides academic and social support, and carries out alumni activities.⁵⁰ The necessary **inputs** for these activities are provided by ITM (expertise and structures), external experts, lecturers and ITM alumni, as well as DGD and other financing bodies, such as the Ministry of Education.

⁴⁹ The names of the hypotheses refer to the numbering of the outputs and outcomes in the Theory of Change. Accordingly, Hypothesis OC1-OP1 refers to the connection between outcome 1 and output 1.

⁵⁰ After the Theory of Change workshop, feedback was given that the alumni activities should be placed lower in the Theory of Change workshop. While this would represent the sequence of events more accurately, it would make the visual representation of connections to outputs more difficult.

Figure 4: Theory of Change



3 Methods

3.1 Methodological Steps and Data Collection⁵¹

The evaluation was started with a **kick-off workshop** between Syspons and the evaluation's Steering Committee on 9th September 2020. At the workshop, the proposal for the evaluation was discussed and a mutual understanding regarding the objectives and expectations of the evaluation were developed.

As a next step, Syspons conducted an **analysis of strategic and operational documents** of ITM and conducted **14 in-depth interviews**. The analysis served the purpose of gaining an understanding of the structures and objectives of ITM educational activities and scholarship programme. Moreover, it served to inform the development of the Theory of Change and highlight any questions or unclarity that could be included in the evaluation matrix. The stakeholders were identified between Syspons and ITM, with Syspons suggesting the categories (ITM staff, student and alumni representatives, DGD representative, staff of partner institutes) and ITM suggesting specific contact persons. Moreover, a **literature review** on the impact of higher education, models, contributing factors and potential pathways to measuring the impact was conducted.

Based on the gathered information in the previous steps, Syspons drafted a **Theory of Change** of the ITM educational activities and scholarship programme. This Theory of Change was discussed and further developed in a joint workshop on 14th October 2020. In the workshop, several representatives from ITM participated, including the evaluation's Steering Committee, education coordinators, course directors, as well as ITM's director. The inputs and discussions were included in a revised Theory of Change, which was open to another round of comments from the workshop participants. Based on this feedback, the Theory of Change was finalised as presented in Section 2.6.

Building on the knowledge and insights gathered in the previous steps, Syspons developed an **evaluation matrix**, giving an overview of the analytical aspects, evaluation questions, indicators and descriptors and the relevant data collection techniques for each evaluation question (see Appendix). In addition, the evaluation design was further developed (see Appendix).

At the end of the inception phase, the **inception report** was drafted. This report was discussed with the evaluation's Steering Committee in a joint workshop on 5th November and revised afterwards.

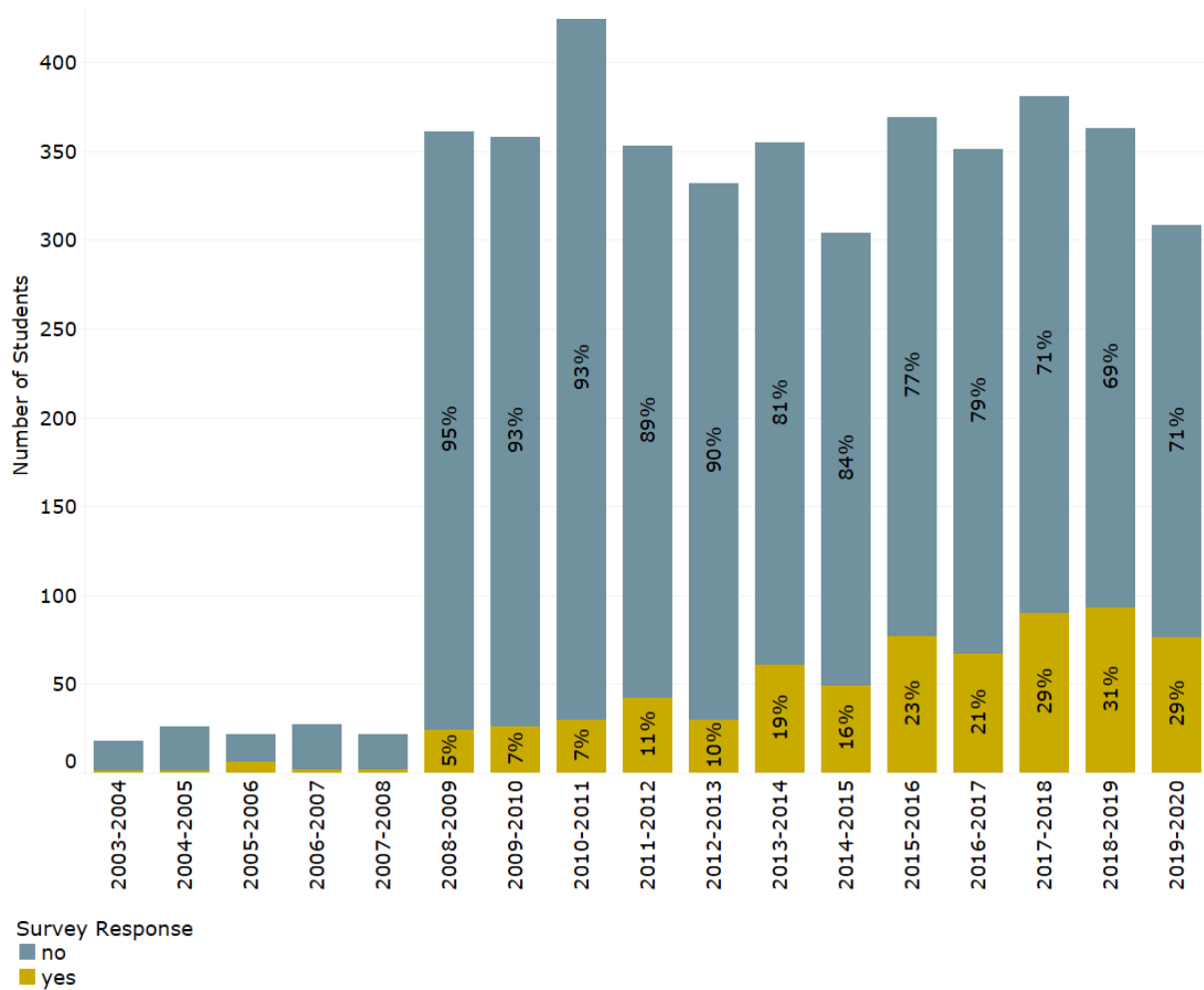
After the finalisation of the inception phase, quantitative and qualitative data was collected. For this, we designed and implemented the **online survey of current PhD students, alumni, and a comparison group**.

The population for the alumni and PhD student survey consisted of all graduates of Master courses, Short Courses, and post-graduate courses between 2008 and 2019, as well as PhD graduates and students who started between 2003 and 2019. The student database with these parameters had 4895 course-student entries, with 3903 unique student IDs.⁵² Of these students, 1004 gave consent to be contacted for the evaluation's data collection and 541 filled in the survey, leading to a response rate of 55% of those who were contacted for the survey and 18% of the persons in the database (see Figure 5 for the response rate per cohort).

⁵¹ For an extensive description of the evaluation design and the theoretical background, see the Annex.

⁵² Students who took multiple courses at ITM within the evaluation time frame, such as Short Courses and Master courses, appeared multiple times in the database.

Figure 5: Survey response rate per cohort (based on the student data base)⁵³



Source: Source: ITM Graduates Survey 2020 and ITM student database

Among the respondents, graduates of recent cohorts were more represented than graduates of earlier cohorts. For example, 31% of the 2019 cohort responded to the survey, while 5% of the 2009 cohort responded. The response rate by gender was equally distributed, with 14% of males and females in the database responding to the survey. Among the DGD-funded graduates, the response rate was 22% and therefore higher than the overall response rate. Looking at the course types, 29% of the Master students responded, 17% of the PhD students, 17% of the Short Course students and 11% of the PGC students.

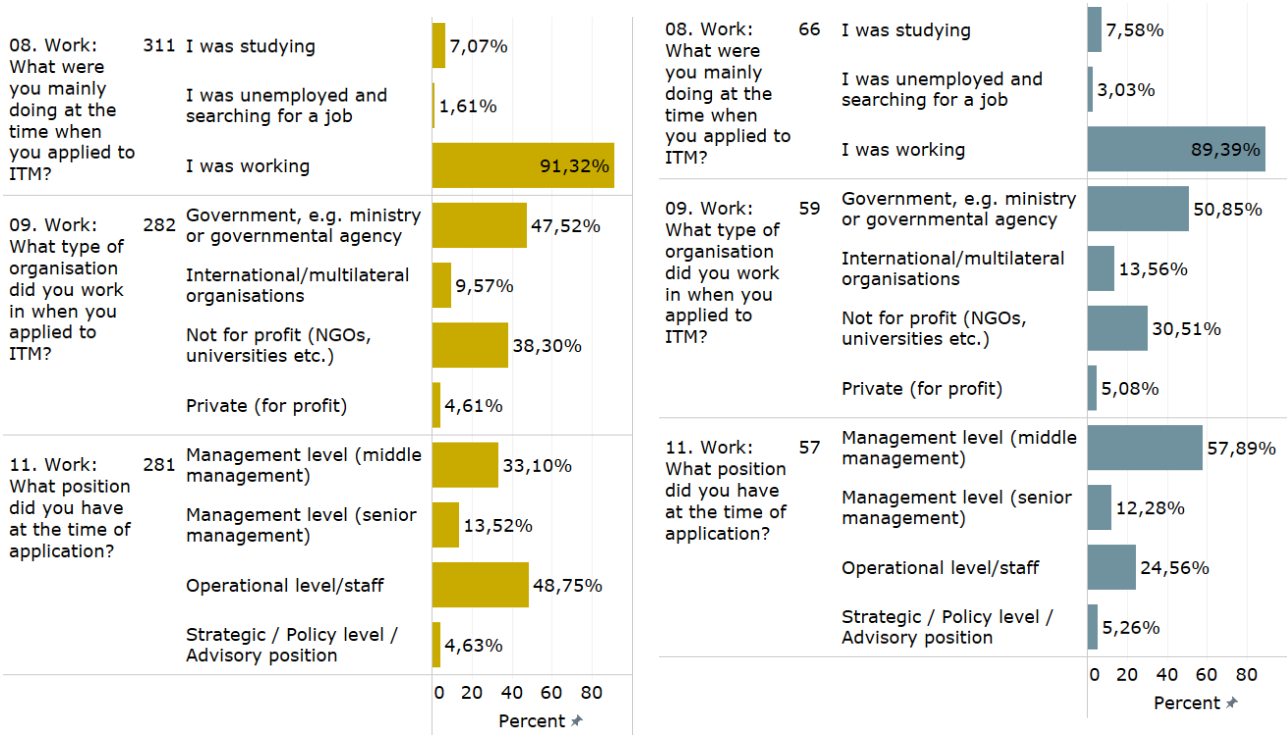
The individuals who responded to the survey were mostly working at the time of the application (87%, n=501). This is the case for all course types, even though the number is higher for Master students (96%, n=179) than for PGC, PhD or Short course students (81%, n=132; 79%, n=57; 86%, n=132). Regarding the organisations in which they worked at the time of application, they mostly worked in government (42%) or in the not for profit sector (39%, n=431). This distribution is similar across the course types, only PGC applicants mostly worked in the not for profit sector (36%) and in the private sector (33%, n=103). In terms of their positions, most successful applicants worked on operational level (59%), followed by middle management level (26%, n=425). Again, the pattern generally holds across the course types, with PGC being an exception, as 92% of the respondents worked on the operational level (n=100), probably as doctors in hospitals or private practices.

⁵³ Note that between 2003 and 2007, only PhD students were included in the sample.

To form a comparison group, shortlisted, but unsuccessful applicants for the Master and Short Courses were contacted. The comparison group was restricted to these two course types, as the PGC admission process is conducted on a first come-first-serve basis, so that applicants are not shortlisted. For the PhD programme, the decision is made on an individual basis, so that no meaningful comparison group could be formed. Overall, 141 persons consented to be contacted and 76 filled in the survey, resulting in a response rate of 54%.

To assess the comparability of the comparison group with the ITM graduates of Master and Short Courses, the two groups were compared (see Section 3.2 for potential methodological limitations). The groups are similar regarding the division between the two course types, with 61% Master students in the comparison group and 58% Master students among the reference group of ITM graduates. They differed regarding the gender balance, with more women being represented among the ITM graduates (78%) than among the comparison group (59%). Furthermore, many respondents in the comparison group applied in recent years (50% in 2018 or 2019), whereas the study years are more varied among ITM graduates, where only 27% of the respondents studied in 2018 or 2019. Analysing the situation at the time of application shows that both groups were mostly working, and working in similar types of organisations, where government and not for profit are the most prominent groups (see Figure 6). They differed, however regarding the position in which they worked, with ITM graduates mostly working at the operational level and the comparison group mostly working in middle management.

Figure 6: Comparison of situation at application of ITM graduates (yellow) and comparison group (blue)



Source: Source: ITM Graduates and Comparison Group Survey 2020

For the **qualitative data collection**, four **country case studies** were conducted next to the surveys for an in-depth qualitative analysis of ITM’s educational activities and scholarship programme. The selection of countries was based on the following three criteria:

- **Size of the alumni population:** We focused on countries with a large alumni population (in relation to the overall population size). In this way, the chances of identifying institutions where

multiple alumni work were increased. As a result, there were higher chances of observing impact or analysing networks of alumni in particular countries.

- **Geographical diversity:** Case studies from different regions were included in the evaluation, namely Southeast Asia, Latin America, a francophone African country, as well as an anglophone African country. In addition, at least one country that is not on the DGD priority list was to be included to observe potential difference with countries with a strong DGD presence.
- **Institutional partnerships:** This criterium was added based on the findings of the explorative interviews, as they highlighted that a mix of countries with institutional partnerships and without institutional partnerships should be considered.

Based on these criteria, Peru, Kenya, Cambodia and DRC were selected for the case studies. In the following, a brief overview about the alumni population, partner institutes and the sample included from the respective countries will be outlined (also see Figure 7). During the case studies country-specific differences regarding the applicants' favourite countries to study health related topics became apparent, which will be briefly described as well.

- **Peru** has by far the highest ITM alumni population in Latin America (63 alumni, as opposed to 26 in Ecuador). Further, it is a DGD priority country and there is an institutional partnership with the Instituto de Medicina Tropical "Alexander von Humboldt" (IMTAvH), Universidad Cayetano Heredia, Lima. In Peru, 19 interviewees were included in the evaluation in total. The sample consisted of nine alumni, one educational expert, one drop-out student, three representatives of the partner institutes and four employers who were alumni as well. Seven of the interviewed alumni and employers were PhD graduates, four were Master graduates and four followed an ITM Short Course. The interviewees stated that the focus of Peruvian students applying for study programmes in the health sector is on the USA.
- **Kenya** has a high alumni population in a non-francophone sub-Saharan African country (103 persons). There are no institutional partnerships, and it is not a DGD priority country. In Kenya, 17 interviewees were included in the evaluation in total. The sample consisted of nine Master graduates, one Short Course graduate, one PhD graduate, five employers and one educational expert. Most of the interviewees stated that the focus of Kenyan students looking for quality education in the health sector primarily is on universities in the UK (e.g., London School of hygiene and tropical medicine) and USA (e.g., University of Washington).
- **Cambodia** has a relatively high alumni population (61 persons), even though numbers are relatively similar in India (which has a much larger population, 68 persons) and Myanmar (where internet access is less stable, 62 persons). It is a DGD priority country under FA4 and there are four DGD institutional partnerships. 12 interviewees were included in the evaluation from Cambodia in total. The sample consisted of four Master graduates, one PhD graduate, three Short Course graduates, two employers and two representatives of the partner institutes. In Cambodia, the focus of applicants to study abroad in the health sector was on the UK and Australia.
- **Democratic Republic of the Congo** is a francophone sub-Saharan African country with a very high ITM alumni or student population (297). Like Cambodia, it is a DGD priority country under FA4 and there are four DGD institutional partnerships. 15 interviewees were included from the Democratic Republic of the Congo in the evaluation. The sample consisted of six Master graduates, two Short Course graduates, one PhD graduate, three employers, one educational expert and one representative of one partner institute, the Public Health School (ESP) Lubumbashi. In DRC, the interviewees stated that Belgian universities in general are favoured by applicants when they want to study health related topics abroad.

Figure 7: Overview of Case Study Interviews

Country	Total	PhD graduates	Master graduates	Short Course graduates	Employer	Partner institute	Other / Educational experts
Peru⁵⁴	19	7	4	4	4	3	2
Kenya	17	1	9	1	5	-	-
Cambodia	12	1	4	3	2	2	-
DRC	15	1	6	2	3	1	1

Next to the interviews with alumni that are conducted within the country case studies, eight interviews with **alumni of the post-graduate certificate courses** were implemented: four alumni of the course for doctors and four alumni of the course for nurses (see Figure 8). As many persons in this group were still in Belgium or Europe, these interviews were conducted in addition to the country case studies. Further, an online focus group with **ITM staff** was conducted to discuss aspects of the Theory of Change that relate to ITM itself, such as the exchange between staff and students (Output 2) or ITM staff acting as agents of change (Impact 2). Furthermore, three interviews with **VLIR, ARES and KIT** were conducted to address questions on coherence and complementarity. The three organisations VLIR, ARES and KIT were identified as similar organisations to ITM for the purpose of this evaluation. VLIR and ARES also run scholarship programmes funded by the DGD. Specifically, VLIR is a network of universities that supports partnerships between universities in Flanders and the Global South, while ARES brings together the higher education institutions of the Federation Wallonia-Brussels. In addition, the Royal Tropical institute (KIT) is an independent Dutch institute for applied knowledge that focusses on public health and tropical medicine. It was analysed as it has a similar education and scholarship scheme, as well as a similar focus regarding its educational activities to ITM.

Figure 8: Overview of further qualitative data collection

	PGC graduates	ITM staff	VLIR, ARES, KIT
Interview partners	4 PGC doctors, 4 PGC nurses	Focus group with 3 participants	3 interviews total, 1 per institute

In the next phase of the evaluation, the **data analysis phase**, the results of all data collection were summarised and analysed. The **quantitative data analysis** entailed a descriptive analysis of the survey results, analysing the responses across all ITM graduates and divided by course type. Additionally, the results for the ITM graduates of Master courses and Short courses were compared to those of the comparison group for selected indicators. This comparison focussed on perception of the application process, as well as outputs and outcomes relating to increases in skills, use of knowledge and changes in career. For the output and outcomes, the analysis only included members of the comparison group who studied somewhere other than ITM, instead of working. The analysis was conducted using a difference in difference design, comparing the increase in skills or change in career between the comparison and the ITM group using t-tests. In addition, correlation analyses for the ITM graduates were conducted as one method to understand the hypotheses suggested in the theory of change, analysing whether the connection between outputs, outcomes and impact where possible and plausible. As correlation analysis does not uncover causal mechanisms and does not account for confounding variables, the results were triangulated with qualitative data. Furthermore, regarding the use of knowledge and career development, the results were compared between different organisational types as well as between different time frames using ANOVAs to compare the means of different groups.⁵⁵ The **qualitative data was recorded and analysed** in a synthesis grid, which recorded each interview

⁵⁴ Some interviewees in Peru had multiple roles, such as graduate and employer. Thus, the total number of interviewees does not match the sum of interviewees in each category.

⁵⁵ The analysis over time was done in four cohorts to form groups of similar sizes (pre 2013, 2013-2015, 2016-2018, 2019)

categorised by country and type of interview partner. This enabled the data analysis along different criteria, for example by course type or by country. To synthesise and triangulate this data, Syspons conducted an **internal workshop** for data synthesis and triangulation with the evaluation team. This workshop served as an opportunity for all involved consultants to discuss and triangulate the results from the different data collection methods. As a result, Syspons developed preliminary answers to the evaluation questions.

To ensure that ITM gets useful input for the proposal of the FA5, we conducted a **presentation of the preliminary results** and findings as well as (possible) improvement areas. In the workshop, first insights into the evaluation results were presented. The workshop was conducted on April 21st, 2021.

Based on the findings and inputs from the preliminary results workshops, four **online validation focus groups** were conducted in May 2021 to answer and discuss questions that emerged from the data and to fine-tune recommendations (see Figure 9). Each focus group focussed on a different topic, namely career trajectories, cooperation with partner institutes, networking and impact, as well as equity and scholarship admissions.

Figure 9: Overview of online validation focus groups

<i>Topic of the focus group</i>	<i>Career trajectory</i>	<i>Cooperation with partner institutes</i>	<i>Networking and impact</i>	<i>Equity in scholarships</i>
Target Group	ITM graduates	Representatives from partner institutes	ITM graduates	ITM graduates, ITM staff
Number of participants	3	2	2	5 graduates

Based on the feedback from ITM and the focus group discussions, the present **final report** was written. The report, and especially the recommendations and the dissemination strategy, were presented to the Steering Committee in June 2021 and formed the basis for the discussion prior to finalising the report. Once the steering committee had provided written feedback, the report was finalised.

Furthermore, **supplementary forms of results communication** were developed to ensure that different stakeholders were reached. These included summaries of the evaluation results for scholarship funders, students and alumni, as well as the general public. In addition, the analysis of the alumni survey and the database were made publicly available, so that interested stakeholders can engage with the data. Finally, the results were presented to a wider audience, including alumni, interview partners, partner institutes and the DGD.

3.2 Methodological Limitations

When designing evaluations, we try to answer the evaluation questions, while weighing different constraints, for example of practical feasibility, ethics, or finance. As such, the evaluation design above is limited in some regard, namely the challenge of attributing effects to the intervention, to operationalising effects appropriately as well as concerning the chosen data collection methods and the remote case study design.

Firstly, the evaluation design combines a **contribution analysis, stratified cohort, and a counterfactual approach**. In this way, we aimed to ensure that observed effects can be attributed to ITM’s educational activities and scholarship programme as well as to understand how these effects were achieved. Nonetheless, the suggested approach cannot eliminate potential selection bias completely and the analysis in Section 3.2 has shown that some differences remain between the two groups. Therefore, it is possible that differences between the treatment and the comparison groups are attributable to these pre-existing conditions, rather than ITM’s education and scholarship programme. Furthermore, the analysis can only be conducted regarding some outcomes, as other outcomes are not meaningful for the comparison groups, as they relate specifically to ITM (e.g. Outcomes 1 and 4). Applicants were

selected based on academic merit and professional experience, among others. To address this limitation, the quantitative data analysis was triangulated using qualitative data analysis.

Next, in the evaluation, intended effects and impacts should be **operationalised and measured** in a reliable and valid manner. In the evaluation, however, we mostly used surveys and interviews to understand the effects of ITM's education on graduates and institutions. In this context, it is challenging to operationalise the concepts captured in the Theory of Change and the analysis grid, while keeping in mind the time individuals would be willing to spend on a survey or an interview. Thus, we adapted operationalisations from the academic literature wherever possible, while keeping in mind time constraints. Furthermore, as one key data collection instrument was a survey of PhD students and alumni, much of the evaluation was based on self-assessments of their competencies, skills, or their professional development. To address the potential subjectivity of this data, we triangulated it with qualitative data sources. For instance, in the case studies, colleagues and superiors of the graduates were interviewed to get a more holistic impression of their development. Nonetheless, this triangulation was only possible to some extent, as it was challenging to identify individuals who have in-depth knowledge of their colleagues' long-term development, especially before and after their studies. Therefore, the evaluation team mostly "pieced together" the information from different sources to form a coherent story.

In addition to the subjectivity, the data collection approach was limited by self-selection and, in some cases, by selection by ITM. In the survey and in the qualitative interviews with graduates, we could only collect data of those who agreed to be part of the data collection and who are willing to share their experiences. For some aspects of the qualitative data collection – especially the validation focus groups – this resulted in relatively low participation numbers. As a result, the recommendations could not be differentiated and finalised to the extent originally intended. For interviews that were not conducted with alumni, interview partners were suggested by ITM. In this, the ITM tried to be objective and agreed on criteria for selection with the evaluation team. Nonetheless, a potential bias may emerge from the selection of interview partners by ITM.

Finally, the data collection was conducted between January and March 2021, when **the Covid-19 pandemic** was still affecting travel and in-person meetings as well as the availability of interview partners and survey respondents. Therefore, this evaluation adopted a remote case study design. Through our remote case studies, we were able to conduct most of the interviews as planned, but some interviews were interrupted due to bad internet or phone connections. Wherever possible, we tried to switch the communication channels or reschedule the interviews. Moreover, as potential interview partners and survey respondents were involved in the Covid response, not all persons had time to be interviewed or reply to the survey for the evaluation.

4 Evaluation Results

In this section, the evaluation results along the criteria relevance, effectiveness, impact, and coherence are outlined. The results are presented by referring first, if applicable, to the survey results and then to the qualitative data. Results on specific course types are only described when differences emerged. At the end of each section, the results are summarised by course type.⁵⁶

4.1 Relevance

The criterion of relevance addresses the extent to which ITM's educational activities and the scholarship programme are designed to respond to the needs of its students and partner institutions. Therefore, in the scope of this criterion, we analyse to what extent a project "does the right thing" and meets the needs and demands of the target groups. In this evaluation, relevance is analysed on an individual and on an institutional level. The individual level addressed the extent to which the educational activities of ITM and the scholarships respond to (potential) students' and scholarship holders' needs. Further, the alternatives to ITM courses for alumni were analysed to understand how ITM is positioned in relation to other institutions offering similar programmes. In addition, the institutional level of relevance addressed the extent to which the educational activities and the scholarship programme respond to the needs of ITM's partner institutions and the needs of graduates' employers. For longstanding institutional partners, the evaluation aimed to identify gaps and strengths of the educational activities and scholarship programme. Moreover, the evaluation aimed to understand how employers (and the respective organisations) of ITM graduates can benefit from ITM's education programmes.

4.1.1 Individual relevance

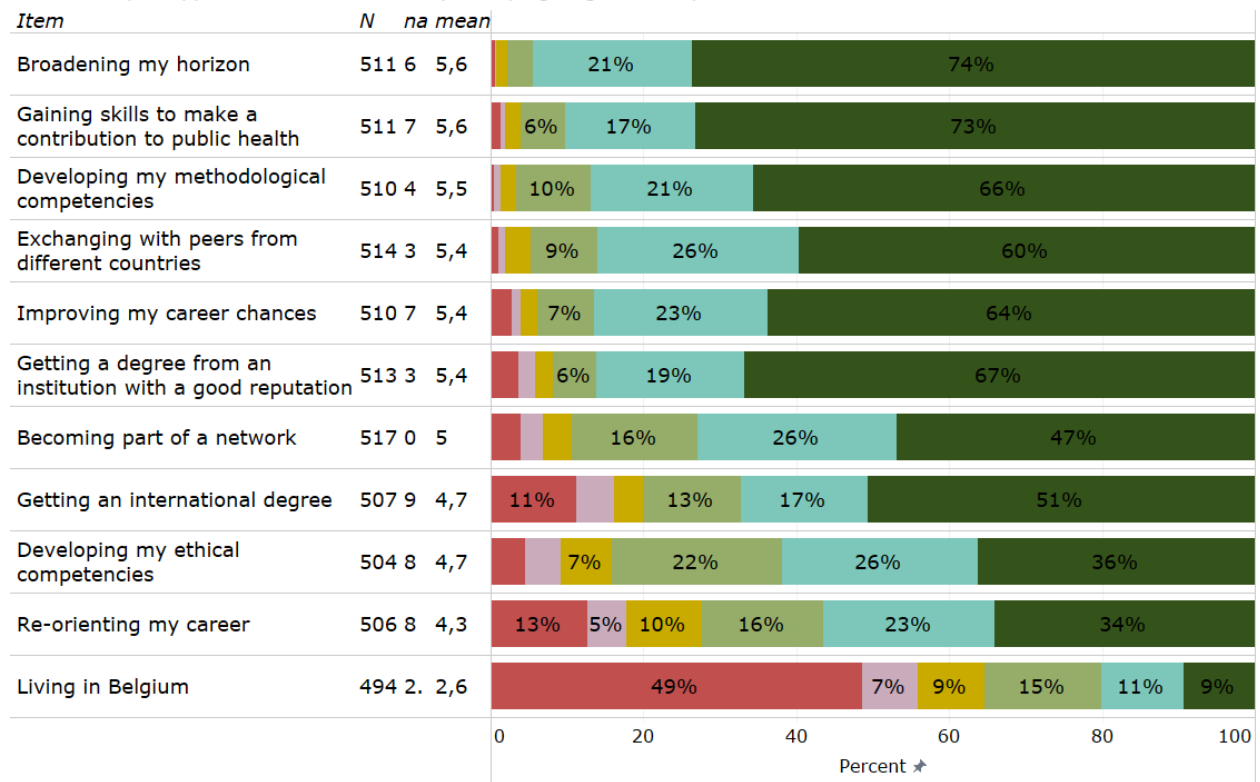
Through its educational activities, ITM seeks to meet the needs of its (prospective) students. ITM offers a wide range of courses with different topical foci and structures, ranging from Short Courses to PhD programmes. In this section, we analyse to what extent these activities meet the needs of students by analysing why they applied to ITM in the first place and whether they were satisfied with the educational activities. Furthermore, we analyse whether the DGD scholarship programme meets the financial needs of the scholarship recipients.

The main aspects, which motivated applicants to apply at ITM are **largely congruent with the main factors contributing to the satisfaction** of graduates and employers. The survey results indicate that the main motivation of ITM students and the comparison group was the acquisition of methodical technical expertise as well as skills enabling them to contribute to public health in general. Applicants identified the broadening of the individual horizon to also be a crucial aspect for their motivation to study at ITM. 98% of the applicants rated the broadening of their horizon as an aspect which has positively influenced their motivation (n=511). With 97% (n=510) positively rating the development of methodological skills and 96% (n=511) pointing on skills to better contribute to public health, both aspects were rated similarly to have contributed to their motivation to study at ITM (see Figure 10). In contrast, only 35% (n=494) of the respondents stated that the motivation to live and study in Belgium specifically has influenced their motivation to apply at ITM.

⁵⁶ As the main results are summarised for each course type, repetitions between the sections may occur.

Figure 10: Motivation for applying to ITM

04. When you applied to ITM, what were you hoping to get out of your studies?



Responses
 Not at all
 •
 ••
 ••• Very much

Source: ITM Graduates Survey 2020

Regarding their motivation to study at ITM as opposed to studying at different institutions, almost all survey respondents (97%, n=513) stated that **ITM was their first choice** at the time of application.⁵⁷ This statement was further qualified in the case studies. Especially in Peru and Kenya, many interviewees were oriented towards studying at other institutes in the US or in the UK at first. In Kenya for example, most of the interviewees named two reasons to prioritise ITM instead of other institutions. The scholarship programme was a main reason to study at ITM if the applicants did not know ITM before. The comprehensive financial support was crucial to most of the interviewees to be able to study abroad. The second reason to study at ITM were personal recommendations. In Kenya, the interviewees were generally well connected to ITM alumni, who often recommended them to apply for an ITM course. In this way, many interviewees learned about ITM and the practice-oriented learning content and applied to the course recommended to them. As a result, even when they were accepted to multiple programmes, they selected ITM as their first choice.

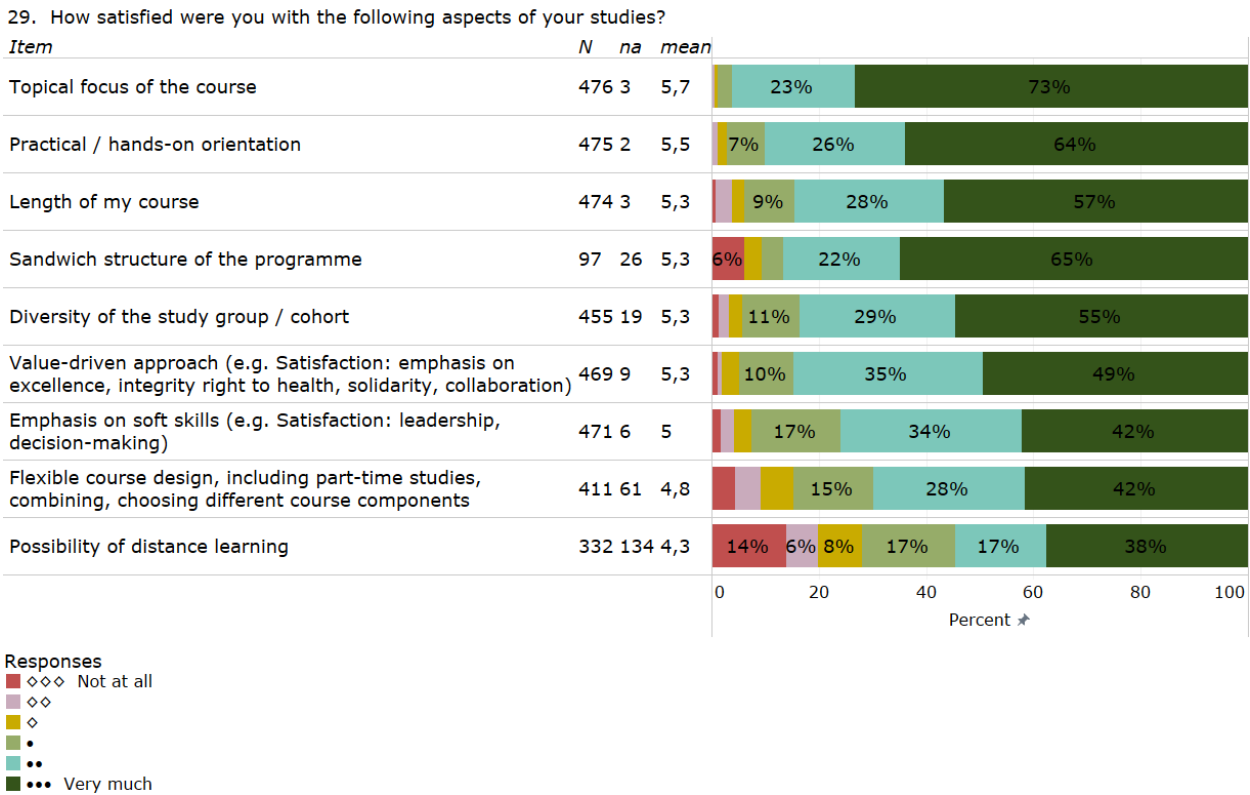
However, this shows that ITM’s **visibility and attractiveness is still partly reliant on personal recommendations**. In Kenya for example, the focus of student applicants in the health sector is on the UK (e.g., the London School of Hygiene and Tropical Medicine) and the US (e.g., University of Washington). In Peru, the interviewees stated that applicants mainly focus on the US when looking for health-related study programmes abroad. The interviewees in Peru highlighted ITM’s value-based

⁵⁷ This observation both applies for students/graduates as well as the comparison group included in the survey. Looking at the comparison group, all of the respondents (100%, n=73) stated that ITM was their first choice.

approach compared to the approach of other universities. In this regard, interviewees emphasised ITM’s focus on enabling students to contribute to change and impact in their home country, while universities in the US were perceived as more competitive and career oriented. In Cambodia, interviewees cited universities in the UK and Australia as ITM’s main competitors, while the graduates and employers interviewed in DRC mentioned a focus on Belgian universities. Strengthening the visibility of ITM’s competitive advantage in the countries ITM is seeking applicants is therefore particularly crucial according to the interviewed alumni.

Regarding the extent to which students are satisfied with their educational experience, the evaluation results show that particularly the thematic foci of the courses, the practical, case-based learning methods align with students’ needs. First, **thematic focus** and **practical orientation** were found to rank the highest in terms of alignment of educational activities and scholarship programme with the student’s needs. This is highlighted by the survey results which show that the most crucial aspect influencing the satisfaction of the graduates with their studies was the thematic focus of the respective courses. 99% of the survey respondents stated that they were satisfied with the thematic focus of their course (n=476). Second, as an equally strong factor leading to overall satisfaction, 97% of the respondents stated to be satisfied with the practical or hands-on orientation of the courses (n=475).. All other aspects covered in the survey were rated positively as well (see Figure 11).

Figure 11: Satisfaction with the Studies



Source: ITM Graduates Survey 2020

These results can be further backed by the qualitative findings gained during the four different case studies in Kenya, Peru, Cambodia and the DRC. Interviewees especially highlighted the development of relevant methodological, technical and hands-on skills to contribute to strengthening the health sector in the respective home countries. The expertise of the lecturers as well as the value-driven approach taught at ITM further supported the suitability of the course contents for the students through country-specific knowledge, the reflection on their own biases and the high focus on development-related topics in public health. During the courses, lecturers were furthermore able to follow on country-specific questions of the students, who stated that they were able to discuss topics that were particularly

relevant to them even in the diverse cohorts. In this regard, the interviewed graduates highly appreciated opportunities to discuss topics of individual concern while learning about relevant health sector issues in the various country contexts to broaden their horizon. Overall, the study load in the limited study time was however found to be demanding but appropriate throughout the different courses, by the interviewed alumni in the case studies.

Compared to the above-described factors determining the students' satisfaction, distance learning was assessed most ambivalently. In the survey, the possibility of **distance learning** contributed the least to satisfaction, but still influencing it positively. While 72% of the respondents stated that they were overall satisfied with the possibility of distance learning, 14% were rather unsatisfied and 14% were not satisfied at all regarding this aspect (n=332). In detail, however, the survey results show that the courses that offered distance learning led to high satisfaction rates, for example 84% of MSTAHA graduates (n=40) and all e-Scart graduates (n=19) were satisfied with the possibility of distance learning. The high satisfaction with distance learning was also confirmed in the case studies. Interviewees who participated in the Master on Tropical and Animal Health (MSTAHA) described that they could continue their job while studying and they appreciated the face-to-face sessions in Pretoria and Antwerp. Furthermore, particularly students with young families stated that they could not have participated in a one-year Master programme with only face-to-face teaching in Antwerp or Pretoria. In contrast to the positive findings for the courses with distance learning, PGC students showed a low satisfaction rate, with 50% being rather unsatisfied, out of which 22% were not satisfied at all with the aspect of distance learning (n=63%). One possible interpretation of this finding might be that half of the PGC graduates wished to have this option, since there are no distance learning opportunities for PGC graduates. However, further data to support this hypothesis is not available.

While the thematic focus and the practical orientation of the courses were generally appreciated by the graduates of the different course types, **differences in the extent of satisfaction** among the various courses emerged. The survey results show that the greatest differences in the satisfaction level concern aspects related to diversity of the study group and the flexible course design. Overall, the survey results indicate that Master programmes and Short Courses suited the needs of the students the most. Master graduates together with the graduates of the Short Courses were satisfied the most with the diversity of their cohorts. 68% (n=166) of the Master graduates and 62% (n=126) of the Short Course graduates rated their satisfaction in this regard as "very much". The flexibility of the course design in comparison was rated most positively by graduates of Short Courses and Master programmes and least positively by PGC graduates.⁵⁸ This is supported by evidence from the case studies, where particularly the interviewees from Master programmes positively highlighted the variety of offered modules with the further option to look for specialised courses taught at different universities. Likewise, the various options of obtaining a Master's degree on a full-time or part-time basis were appreciated, mainly due to enhanced possibilities for combining job and family with studies.

In line with the findings presented above, ITM's DGD-funded **scholarship programme** also met the needs of the target group in terms of financial support during their studies.⁵⁹ Particularly, the amount of funding was considered adequate in most of the cases; 93% (n=255) considered the duration to be appropriate and 87% (n=239) of the survey respondents generally considered the financial support to be sufficient. This was confirmed and expanded on in the case studies, which showed that without the financial support of the DGD scholarship, most of the interviewees would not have been able to study at ITM due to insufficient personal funding. In the validation focus group discussion on the DGD scholarship, it was confirmed that the scholarship overall comprehensively addresses the needs of the students. For example, it covers visa costs, travel and flight costs and used to provide a budget for dependents of the scholarship recipients.

⁵⁸ The targeted focus and structure of the Postgraduate courses is not geared towards flexibility and distance learning. Therefore, no specific conclusion can be drawn on the ratings from the online survey, as no further qualitative data is available which could explain the ratings in more detail.

⁵⁹ This section only refers to Master, Short courses and PhD graduates, as PGC students cannot receive DGD funding.

The further analysis shows that overall, the Short Course graduates were more satisfied with the financial support than the PhD or Master students. Specifically, in the survey, Short Course graduates were the most positive about financial support. In comparison 17% (n=26) of the Master and 21% (n=5) of PhD students reported not having sufficient financial support to cover their costs. The case study interviews showed that this pertained mostly to research expenses. Some Master and PhD students stated that they were not able to cover all costs related to their research with the stipend received by DGD.

Furthermore, the **social support structures** of ITM were highly appreciated and met the needs of the ITM graduates. Overall, 98% (n=438) were satisfied with ITM's social support. In particular, ITM was able to address the needs of 97% (n=335) of the survey respondents regarding the support with immigration issues and 95% (n=402) regarding the support for social activities. Next to these results the interviewees in the case studies also repeatedly emphasised the great efforts of the student support centre in organising social events to foster cohesion among the cohorts and offer intercultural learning opportunities like joint excursions and dinner events. This was assessed as having contributed to a positive overall experience and the development of a sense of community and belonging.

For the **academic support**, similarly high satisfaction rates could be observed, meaning that ITM's academic support was comprehensive and targeted the students' needs. Overall, academic support met the needs of 99% of the survey respondents (n=468). The aspects credited with the highest satisfaction rates were the support provided by the course secretariat as well as by the course coordinators. Of the 98% (n=462) who said they were overall satisfied, 76% expressed to be satisfied "very much" with the support from the course secretariat. For the academic support by course coordinators, 70% reported being "very" satisfied" (overall satisfied: 98%; n=418). The results of the case studies support this evidence. Interviewees mentioned targeted and appropriate support for instance regarding reflections on thesis topics. Moreover, they profited from ITM's international focus and academic partners worldwide. The interviewees highlighted ITM's broad network to various research institutions worldwide.

Overall, the graduates were **highly satisfied** with their studies at ITM, indicating that they recommended the programme to others, and would re-do the experience themselves. In this regard, 99% (n=467) of the survey participants stated that they would likely recommend studying ITM to a friend or a colleague. Moreover, 20% of the students in the database did multiple courses at ITM, also indicating that they were satisfied with their first experience. This was confirmed in the case studies, as most interviewees stated that they had already recommended ITM to friends or colleagues interested in studying a health-related programme. This resulted in a high recommendation rate among ITM alumni and their peers. Moreover, 98% (n=469) of the survey respondents stated that they would study at ITM again and 86% (n=467) expressed that they would do the same course or programme again. The interviews showed that the combination of ITM's support structures, which are largely oriented towards the needs of the students, as well as the thematic focus of the courses and the case-based learning, led to the graduates being highly satisfied overall to have chosen a study programme at ITM.

4.1.2 Institutional relevance

Next to addressing the individual learning needs of its students, ITM aims to ensure its relevance on an institutional level. In this sense, the skills developed by ITM students should fit the needs of organisations and institutions at which they work. These institutions can be ITM's partner institutes or other employers of graduates in the field of health and medicine.

Across different types of institutions, the case studies show that ITM meets a need for **practical skills, transferable knowledge and soft skills**. According to interviews with ITM's partner institutes as well as other employers, transferring theoretical knowledge into practice is a key skill across disciplines. Employers emphasised that other study programmes do not always ensure a practical orientation and application of contents. Among ITM graduates, however, the interviewed supervisors and employers valued the practical skills, which graduates gain through the hands-on orientation of the courses. In addition, soft skills like leadership and decision-making were identified as needs and valued by employers of ITM graduates. Moreover, increased team management and presentation skills were needs

which were met by the programmes according to the interviewed graduates and their employers. Furthermore, improved skills in drafting and formulating proposals as well as reports were needs the employers and supervisors referred to as having been met.

For employers in research (such as universities or health institutes) and policy (such as international organisations or NGOs), application of **research methods** in the field as well as the transfer of **research results into policy briefs** were particularly relevant. Furthermore, employers in the policy sector specifically mentioned that staff need to be able to process complex scientific analysis into appropriate policy briefs and provide practical recommendations to inform local and national policy makers. Generally, they reported that ITM graduates had these skills, as ITM's courses involve many practical sessions on research, analysis and discussion.

Next to the overall usefulness and adequacy of ITM's teaching to (potential) employers, the evaluation showed that **institutional partners** were able to some extent to use the individual capacity building strategically. Overall, the interviews and validation focus group with partners showed that the combination of institutional partnerships and individual-level funding means that partner institutes can rely on capacity-building in the long run. As a result, they know that a certain number of their staff can be trained at ITM over the time of the partnership. In this regard, the case studies showed that the partners used this knowledge to strategically train their staff. For instance, in Peru candidates were selected for studies at ITM based on – among others – the extent to which their research interests aligned with the strategic interests of the institution. This was also confirmed in the validation focus groups, where representatives of partner institutes described that they send their staff to ITM, so that they can come back and implement their own projects using the skills that they have learned. Nevertheless, the case study also revealed that it was difficult for the institutional partner in Peru to retain the ITM graduates, as they often moved to different institutes upon return to Peru. This was perceived as a limiting factor to fully use the potential of strategic individual capacity building.

Another aspect influencing institutional relevance is the partner institutions' **need for more visibility, reputation** and their **ability to recruit highly qualified staff** for research projects. In the case studies, the partners described that this need can be addressed by sending staff abroad, for example to ITM, but is dependent on retaining ITM graduates once they come back (see above). The validation focus group confirmed that through the institutional partnerships, ITM strengthens its partners in the long term, who in turn benefit from enhanced skills, new research approaches and new technologies, as well as national/international reputation and visibility. Further details on how ITM has contributed to enhanced partner capacities will be outlined in chapter 4.2.

As a result, various employers – according to the conducted interviews – recommended the courses and study programmes to their employees because they had studied at ITM themselves or had positive experiences with ITM graduates. In general, this shows the high compatibility of ITM's educational activities with the students' and employers' needs, thus highlighting the individual as well as institutional relevance.

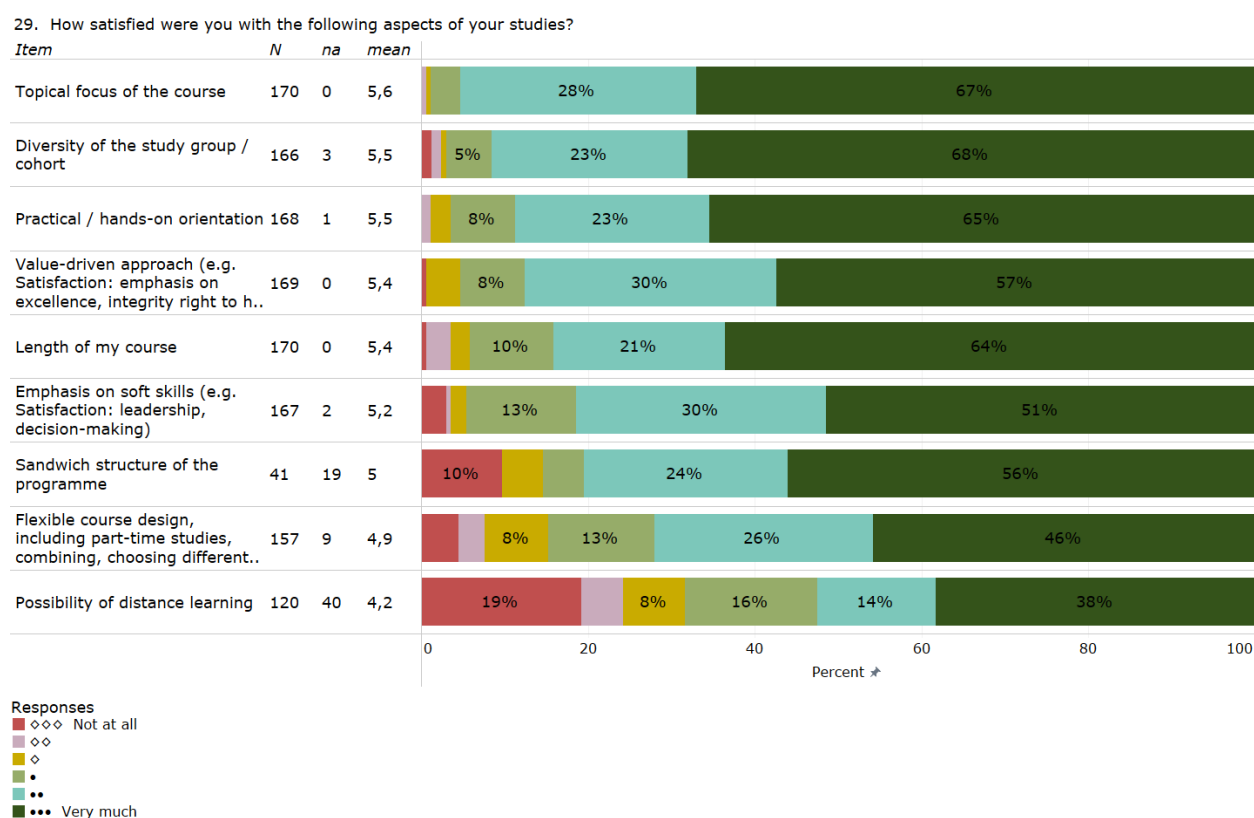
4.1.3 Differentiated results by course types

4.1.3.1 Relevance of Master

Overall, the **Master programmes** of ITM were **well aligned with the needs of** the students. Graduates appreciated the focus on applied research and the opportunity to choose from a variety of content for an individualised study programme. All in all, the Master programmes largely met the needs of the graduates. As a result, the graduates were most satisfied with the thematic focus of the course as well as the diversity of the study group. All (100%, n=170) Master graduates who participated in the online survey stated that they were very satisfied with the thematic focus, and 67% indicated very high satisfaction (see Figure 12). The case studies confirm these results, as students described the course content to be comprehensive, country-specific and relevant to addressing individual health concerns in the respective countries. Regarding the diversity of the study group, 96% (n=166) of the survey respondents expressed their satisfaction with the composition of their cohorts regarding diversity. The interviewees further emphasised the good opportunities to benefit from different health-related

perspectives and approaches due to the diversity of their cohorts. The academic support was also appreciated by 100% (n=169) of the Master students with support from the course secretariat being the most important aspect. This result is like the findings on social support services (99%, n=164), with the most important factor being the support with immigration as well as housing issues. Interviewees also highlighted the efforts of the student support centre to organise social events to foster intercultural exchange. The case studies confirmed the relevance of Master programmes to the employers of ITM graduates. Especially the practice-oriented skills, transferable knowledge, and soft skills. The ability to transfer the knowledge acquired at ITM to the context specific needs of the employer were appreciated. Further, soft skills like decision-making and leadership met the needs of the employers as well.⁶⁰

Figure 12: Satisfaction with the Master



Source: ITM Graduates Survey 2020

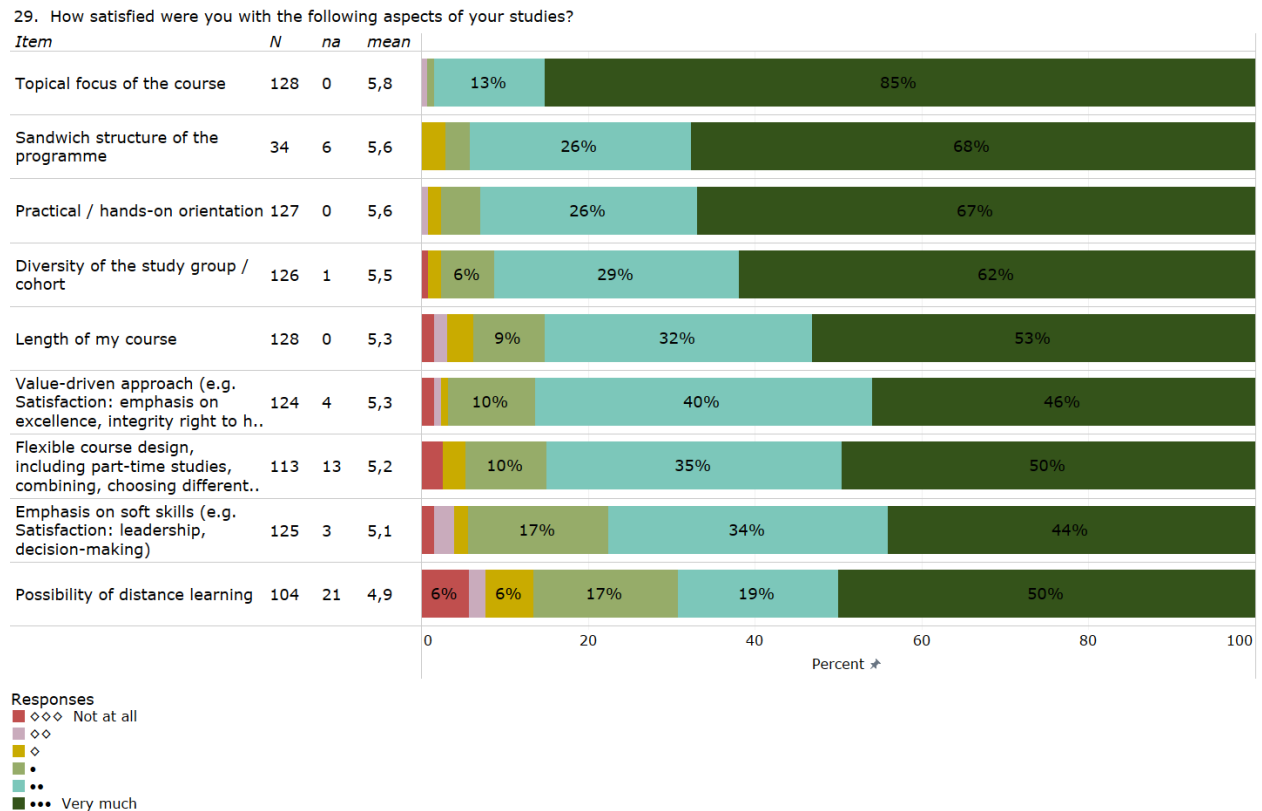
4.1.3.2 Relevance of Short Courses

In comparison, the Short Courses of ITM were also highly aligned with the needs of the students. With clearly targeted and focused course content and the short duration, Short Courses were relevant for either healthcare professionals with a specific need for further qualification or as a first step towards more comprehensive Master programmes. The most positively rated aspects were the thematic focus of the course and the practical/hands-on orientation. 99% (n=128) of the Short Course graduates included in the online survey stated that they were very satisfied with the thematic focus, out of which 85% indicated a very high satisfaction (see Figure 13). The case studies confirm these results, as students highlighted the opportunity to explore new approaches or broaden their knowledge specifically in certain fields required for individual professional development. Regarding practical/hands on orientation, 97% (n=127) of the survey respondents expressed their satisfaction. The interviewees

⁶⁰ As many of the employers included in the evaluation were referring to ITM master students, it is possible to draw specific conclusions on the institutional relevance of the Master programmes. Further, various employers were included who employed several students from various courses. In this case, the employers did not differentiate their reporting. This results in a limitation of the data basis, which does not allow to draw concrete conclusions about the other courses.

attributed this to the case-based learning methods and in particular learning how to translate complex research facts into policy briefs and practical recommendations. 98% (n=127) of the Short Course students furthermore appreciated the academic support; the most important aspect being the support provided by the course secretariat. Also, here, similar findings emerged regarding the social support services (97%, n=115), with the most important aspect being the support with housing issues.

Figure 13: Satisfaction with the Short Course



Source: ITM Graduates Survey 2020

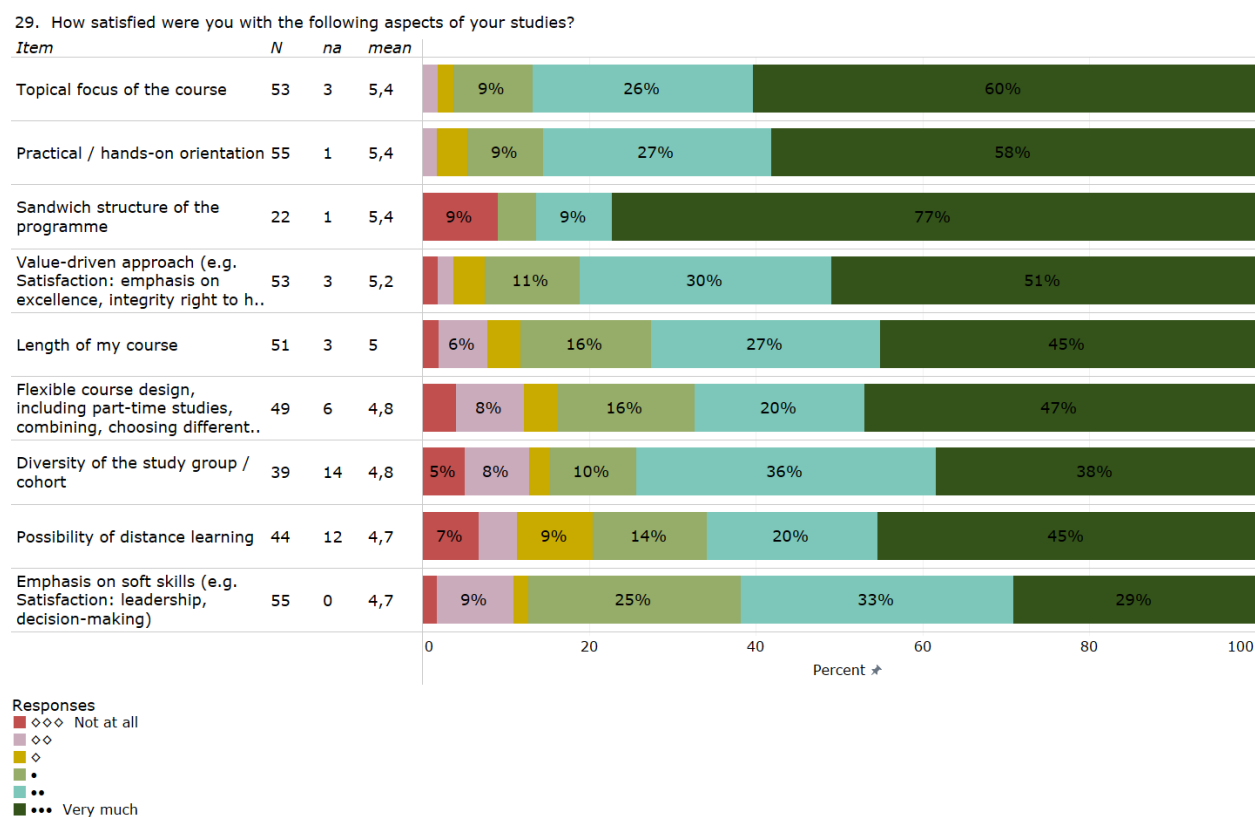
4.1.3.3 Relevance of PhD

Similarly, the **needs of PhD graduates were also met** by ITM's **PhD programme**. Since the PhD programme is structured to meet individual needs compared to other ITM courses with a fixed structure, the comparability with more formalised courses like Short Courses and Master programmes is limited. However, the qualitative as well as the quantitative results show that ITM was generally able to meet the individual needs of its PhD students. PhD students appreciated the comprehensive thematic expertise of ITM staff and valued the support in conducting their own research on topics relevant to them. 95 % (n=53) of the PhD graduates included in the survey were satisfied with the thematic focus of their PhD programme and 99% (n=52) were satisfied with the overall academic support (see Figure 14). Throughout the case studies, PhD graduates also appreciated the different offered courses, such as academic writing and research project management, as well as soft skill courses such as presentation skills.

Overall, the sandwich structure of the programme was also valued by the graduates, as it allowed students to build a broader network and remain connected with institutions from their home countries. 100% (n=23) of the PhD graduates emphasised good collaboration between their supervisors and 95% (n=21) also valued the administrative collaboration between their home institute and ITM. Graduates also benefitted from the social support structures (94% satisfaction rate, n=52), with immigration and housing support being the most important issues. While most of the interviewees during the case studies rated the financial support as adequate, 21% (n=5) of PhD students reported not having enough

financial support to cover their costs. During the case studies, this was detailed by interviewees as this lack in financial support was attributed to high laboratory research costs and generally high housing costs.

Figure 14: Satisfaction with the PhD



Source: ITM Graduates Survey 2020

4.1.3.4 Relevance PGC

In terms of **Post Graduate Certificate courses**, students also indicated a **high level of alignment** with their needs. 100% (n=124) of the PGC survey participants stated that the thematic focus of the course met their needs (see Figure 15). The practical/hands-on orientation of the course, the length as well as the value-driven approach were rated similarly. The targeted course offers and short study terms allowed the students to specifically further their education in their envisaged professional sector. Some interviewees stated that they chose to study a PGC course to refocus their professional orientation or improve individual project management skills.

Compared to other courses offered at ITM, the PGC showed slightly lower satisfaction rates regarding the diversity of the study group, the flexible course design and the possibility of distance learning. As the PGC courses are mainly tailored to students from the Global North, there was less diversity of cohorts regarding the geographical origin of the students and thus fewer opportunities for intercultural exchange. This can be explained by the fact that PGC participants usually come from Belgium or other European countries and therefore usually study in less diverse cohorts. They also tend to find private housing in Antwerp or live with their families, therefore creating less opportunity for exchange than in other courses while master, PhD or short course students often stay in ITM-owned accommodation. Nevertheless, 90% (n=123) stated to be satisfied with this aspect and PGC graduates also appreciated the diversity of their cohorts in the qualitative interviews.

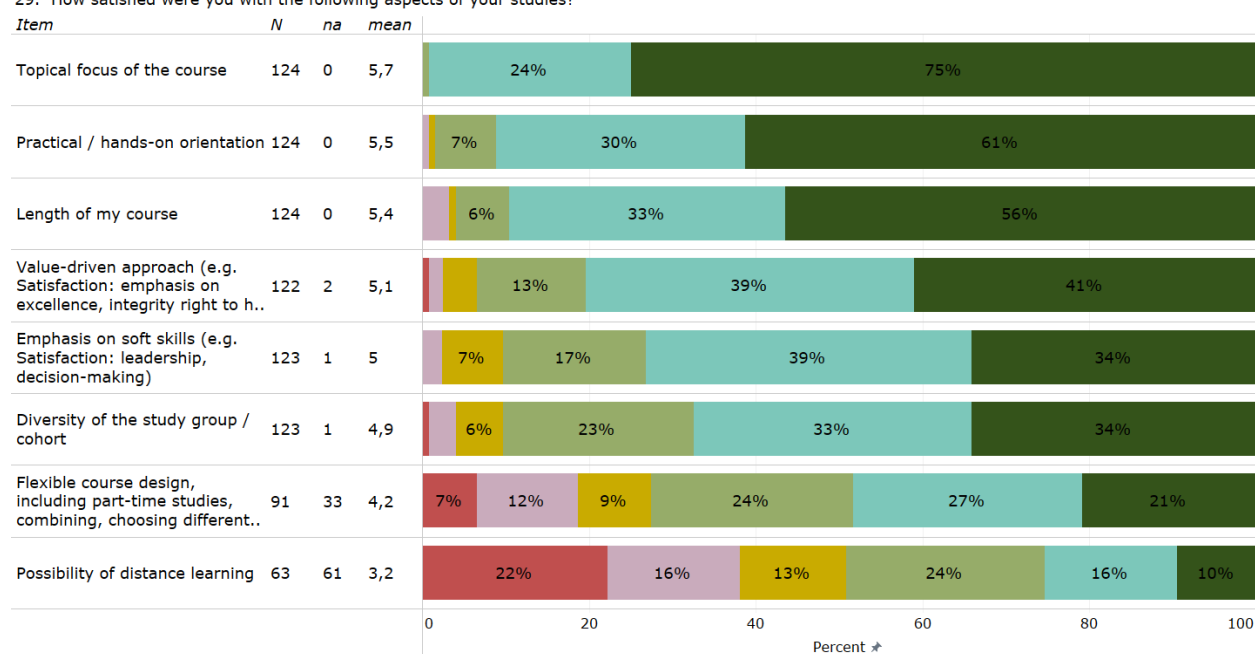
In comparison to the other courses, PGC courses were rated by the survey respondents however as less flexible in their design. While 72% (n=91) stated to be satisfied with this aspect, 28% expressed the opposite. As mentioned above, the targeted focus and structure of the courses is not geared towards

flexibility and distance learning. Therefore, no specific conclusion can be drawn from the rating of those two aspects. The possibility of distance learning had furthermore the lowest satisfaction rate. 50% (n=63) stated to be satisfied with this aspect, while 50% stated to be rather unsatisfied and 22% expressed to be not at all satisfied with this aspect.. One possible interpretation of this finding might be that half of the PGC graduates wished to have this option, since there are no distance learning opportunities for PGC graduates. However, further data to support this hypothesis is not available.

Moreover, the academic support was appreciated by 97% (n=119) of the PGC course students with the most important aspect being the support from the course secretariat. Finally, social support services also experienced a high satisfaction rate (99%, n=106) in which the support for social activities was rated highest.

Figure 15: Satisfaction with the PGC

29. How satisfied were you with the following aspects of your studies?



Responses
 Not at all
 Slightly
 Somewhat
 Satisfied
 Very much

Source: ITM Graduates Survey 2020

4.2 Effectiveness

This section focuses on the results ITM’s educational activities and scholarship programme. This analysis provides an overview of the results achieved so far, as planned in the Theory of Change. It covers the extent to which the activities have led to the achievement (or not) of the expected results (outputs) and changes (outcomes). This section also provides an assessment of the extent to which ITM’s activities contributed to these changes and whether potential explanatory factors for these outcomes can be identified. The section therefore discusses the results of ITM’s activities with regards to the development of skills (OC2), the development and use of alumni networks (OC1), the influence of ITM’s education and programme on the career trajectory of the graduates (OC3), and the added value of ITM graduates in their professional environments (OC4).

4.2.1 Peer-learning through diversity

As stated in the Theory of Change, ITM aims to provide an enabling environment for peer-learning and knowledge transfer that will lead to the creation of formal and informal networks to contribute to life-long learning. The networks that are expected to be developed can be formally supported by ITM but can also emerge informally from the ITM graduates themselves and can take different shapes (some groups are relatively small, while others include a whole cohort, or even include all ITM alumni in a country). ITM supports this objective by providing a diverse educational environment in its educational activities and programmes that fosters exchanges.

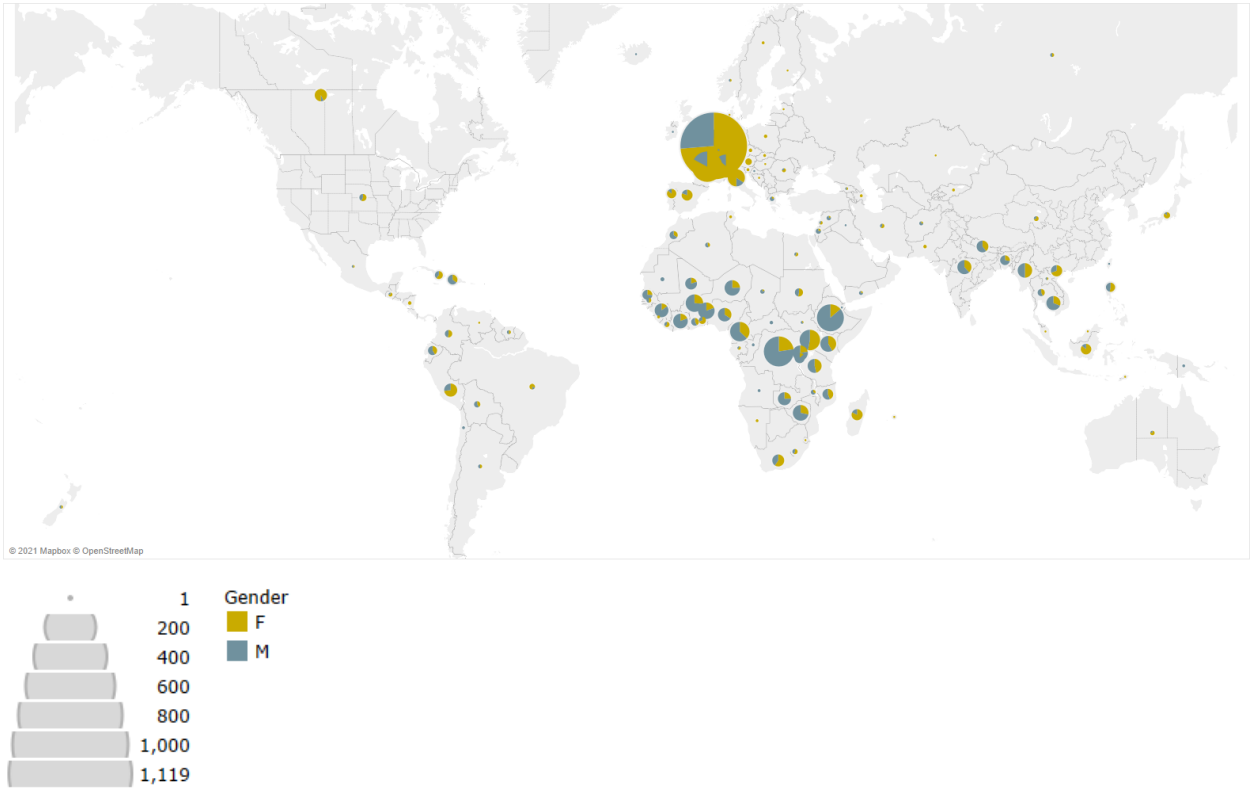
To foster exchange in a diverse educational environment, it is thus important for ITM to establish a fair **selection process** that guarantees a diverse selection of students. In this regard, the results show that the selection process and criteria are clear and transparent. Students in Master, Short Course, PhD are selected based on their academic merit, their prior professional and field experience, their motivation, and the quality of their thesis outline. When asked about their perspectives on the selection process and criteria at ITM, 97% of the participants in the alumni survey state that the information about the application procedure (including deadlines, necessary documents, etc.) was complete and that the communication was clear (n=488, n=490 respectively). The participants that graduated from ITM also felt that the process was fair and that the criteria for selection were transparent (96%; n=419 and 94%; n=451, respectively). When analysing the data between the ITM graduates and the comparison group, we see that both groups are rather satisfied with the selection process. The comparison group's satisfaction with the information about the application procedure and communication during the application process is close to the satisfaction of the participants that attended ITM. However, with regards to the other two items that compose the question of the satisfaction with the application process, we observe much less positive results than for ITM graduates. In particular, the comparison group is less satisfied with the transparency of the selection (approximately 66%, n = 46) and much less satisfied with the fairness of the selection (approximately 55%; n = 45). This is supported by qualitative data from the case studies, during which students were overall satisfied with the selection process. In addition, some graduates from Peru and Kenya for example, indicated that support provided from ITM alumni during the application process was considered useful. Nonetheless, the selection process is sometimes considered lengthy by some graduates from the PhD programmes, considering they need to conduct two application processes, one at ITM and one at the diploma-awarding institution. This could be an explanatory factor as to why some programmes do not have enough PhD candidates.

Beside the eligibility criteria mentioned above, ITM aims to diversify each cohort by mixing students in terms of professional and geographical background as well as gender. In this way, they aim to foster a diverse international and professional exchange through its selection process. In this regard, the results of the online survey show that the **cohorts at ITM were relatively diverse**. 81% (n=465) of the respondents answered that the cohorts were composed of students from different countries. The diversity in terms of continent representation was perceived to be lower (65%; n=468). The perspectives of graduates corroborate this tendency stating that the African continent was represented in majority, which was sometimes raised as criticism towards the expected diversity of group composition. Some factors influenced the geographical diversity, such as the language of the course. On the one hand, some of the Master programmes were taught entirely in French, thereby increasing the proportion of French-speaking African countries being represented in these programmes. On the other hand, the data gathered from the case studies uncovered that the graduates perceived the English language requirements as less strict than at comparable institutions. They considered that this has opened the door to students for whom English is not their native language, which could therefore foster diversity in cohort composition. An additional factor that has an influence on the geographical diversity is the partner country approach adopted by DGD. As such, most of the scholarships are awarded to students coming from countries defined as priority countries for DGD.

When considering the composition of the cohorts in terms of gender, the numbers from the database indicate there is a larger proportion of women attending ITM than men (54% women and 46% men; n=464). This aligns with the practices put in place at ITM during the selection process, where at equal

qualification, female candidates are preferred (also see Section 2.6). It can be observed, in the analysis of the database, that there are large differences in female participation between the countries of origin of the ITM students, as shown in Figure 16 below. The gender diversity is greater in the alumni population from Northern Africa and Southern Asia than from Southern and Western Europe. Furthermore, in the populations from South America and Southern Africa women were selected in greater number than men. In contrast hereto, in Eastern Africa and Western Africa the proportion of men were generally greater than the proportion of women. The results of the survey also show a difference between the course types in terms of gender participation. The students of Master, Short Courses and PhD are generally mixed in terms of men and women (35%; n=169; 30%; n=125 and 32%; n=44, respectively reported the gender representation was very different).

Figure 16: Gender distribution across countries



Source: ITM Student Database

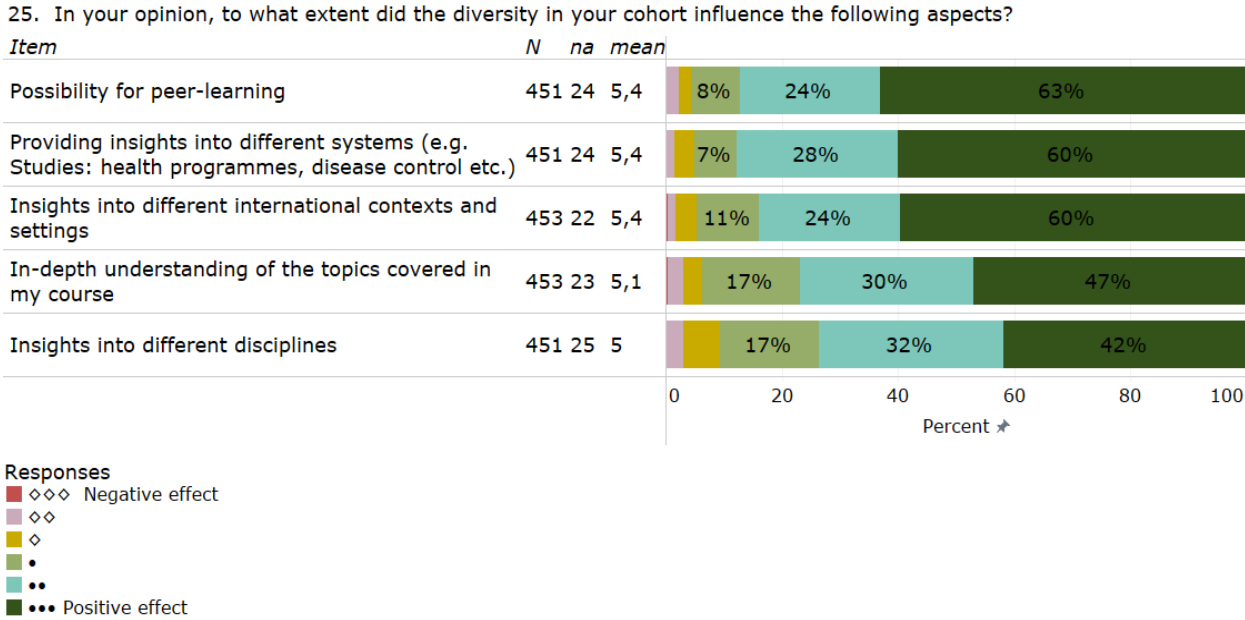
Further, it was analysed whether disadvantaged groups are included in the composition of the cohorts and the extent to which ITM contributes to the “Leave no one behind” objective of the Agenda 2030. The DGD country approach already focuses on LMIC which, to some extent, contributes to this objective. Although there is no universally accepted definition of “disadvantaged groups”, the evaluation used an additional aspect for the inclusion of this group by looking at financial aspects in the survey participants. As such, the online survey asked the participants to state what financial means they would have to pay for their course fees at ITM, if not for the DGD scholarship. The scholarship was highlighted as one of the most important reasons to study at ITM when considering other potential institutions (see Section 4.1). Therefore, through the scholarship scheme, ITM is already contributing to increasing access to higher education for students that do not have the means to access higher education. The survey results show that 50% of the survey participants (n=464) enrolling into ITM did not plan on studying elsewhere, therefore supporting the observation that ITM contributed to increase their access to education. When looking at the comparison group, the results also show that for 62.5% (n = 72) of those applying to ITM, not being to ITM would mean not studying. However, no mechanism was found across courses to encourage applicants from disadvantaged socio-economic background to study at ITM. Such a mechanism would particularly encourage members of disadvantaged groups to study at ITM. This could

include, amongst others, specific communication means and channels (if, for instance, the contextual analysis of the partner countries shows lower access to internet than in Northern countries) or a specific communication strategy tailored to address this group's needs.

In addition, ITM strives to select diverse cohorts in terms of professional backgrounds and work experience. In this regard, the survey results show that the participants consider the cohorts to be different in terms of professional background (69%; n=464) and work experience (78%; n=462). Moreover, the graduates underline that the selection criteria related to the professional background required high educational levels and work experience from its applicants. This is line with the fact that for all Master programmes, which make up around 60% of the scholarship recipients, a previous degree with an equivalent of 240 ECTS is required, as they are so-called Master-after-Master programmes. With regards to the inclusion of disadvantaged groups in the ITM cohorts, the academic requirement could already represent a selection bias since the possibility to obtain two Master degrees could be lower for disadvantaged groups. The proportion of applicants that were in a strategic- or policy-level advisory position at the moment of the application is however diverging from this trend, since they represented only 4 % of the online survey respondents. In that context, the graduate interview data does not allow for a complete picture. This result could therefore be related to the age of persons in strategic positions, who are less inclined to apply to ITM (to be eligible, DGD funded PhD students must be able to obtain their PhD before the age of 45).

Following the analysis of the study cohorts, the evaluation finds that the diversity is considered to have a very positive effect on the **exchange of knowledge and peer-learning** (63%; n=451) and on providing insights into different systems (such as health programmes, disease control etc.) (60%; n=451) as well as into different international contexts and settings (60%; n=453) (see Figure 17). The interviews with graduates and partner institutes also confirm this pattern, highlighting this aspect as a clear added value of their experience at ITM. As a result, the graduates mention that they have gained intercultural experience from exposure to other regions of the world. They also appreciated the exposure to the Belgian health system and, by extension, the knowledge it generates on health systems in Europe. This has been actively supported by ITM through excursions organised at local health centres. The interviewees also note that the diverse professional experiences and backgrounds contributed to peer-learning in their courses. For instance, students within one class can help each other to solve specific issues they face in their respective contexts. This is also one of the results of the survey that shows that 42% of the participants considered that the composition of the group very positively influenced insights into different topics (n=451).

Figure 17: Perceived influence of the diversity of cohorts on peer-learning and exchange



Source: ITM Graduates Survey 2020

These findings were confirmed for Masters and Short courses as the diversity of the cohorts was seen as having a very positive effect on exchange of knowledge. Graduates from all courses however state that diversity of cohorts has the most positive effect of the possibility for peer-learning (rated most positive by graduates from the Short Courses with 72% agreeing it has a very positive effect; n=123) and least positive effect on insights into different disciplines (42%; n=451).

When looking at the results regarding the diversity of cohorts across courses, the analysis needs to provide a separate set of observations with regards to the PGC certificates. Although part of the educational activities of ITM, the logic and structure of the certificate courses are clearly distinct from the rest of the courses under evaluation. It is therefore useful to consider that the results mentioned above do not necessarily all align with the experience of the PGC courses. We provide disaggregated information in the following section on the results per courses. With regards to the diversity of the cohorts in terms of geographical origin, the structure of the PGC courses target different groups than the rest of the ITM courses. By nature, they are more targeted towards European audiences. With regards to the composition of the PGC groups in terms of gender, the results show that the PGC courses are mostly attended by women, who are strongly represented among nurses and doctors. This is shown in the analysis of the student database also support this argument since 84% of the students in the PGC for nurses are women (n=845) and 67% in the PGC for doctors (n=692). For the PGC graduates, the effect of diversity on the insights into different disciplines was rated low (25% state it had a very positive effect on exchange; n=122). This can be explained by the fact that the PGC course targets specific professions, namely doctors and nurses, creating fewer possibilities for exchange. An additional explanatory factor for this result is that PGC students have much lesser work experience, therefore creating less opportunity for peer learning.

Lastly, ITM expects that through **invited lecturers and ITM staff, graduates exchange knowledge and perspectives based on different disciplines, traditions, and field experience.** The explorative interviews showed that ITM also contributes to this objective by creating a learning environment that encourages close interaction between students and staff. The graduates interviewed recognized that the availability of the teaching staff for academic supervision facilitated the exchange on specific topics. As such, the participants to the online survey stated that the staff diversity at ITM

allowed them to have an in-depth understanding of the topics covered in the course (94%; n=453). In this regard, the graduates interviewed mentioned that the professional experience and specialisation of teachers and lecturers gave them an opportunity to discuss different diseases, such as HIV and malaria. In particular, the alumni note that the field experience of teachers in developing countries made the teaching pertinent to the reality of students back home. This, in turn, facilitated exchange with and advice from teachers. Considering the role of the teachers in supporting exchange on certain topics and giving advice to students, the diversity of the teaching staff was identified as an important facilitating factor. In that sense, the graduates considered that the lecturers and supervisors were most diverse in terms of work experience (83%; n=436 of participants indicated diversity in this aspect) and professional background (81%; n=469). However, the graduates considered that the teachers were not as geographically diverse, neither in terms of countries, nor in terms continent (54%; n=446 and 43%; n=444 respectively). This can represent a risk of bias in the perspectives of the teachers and their approach to tropical disease and public health.

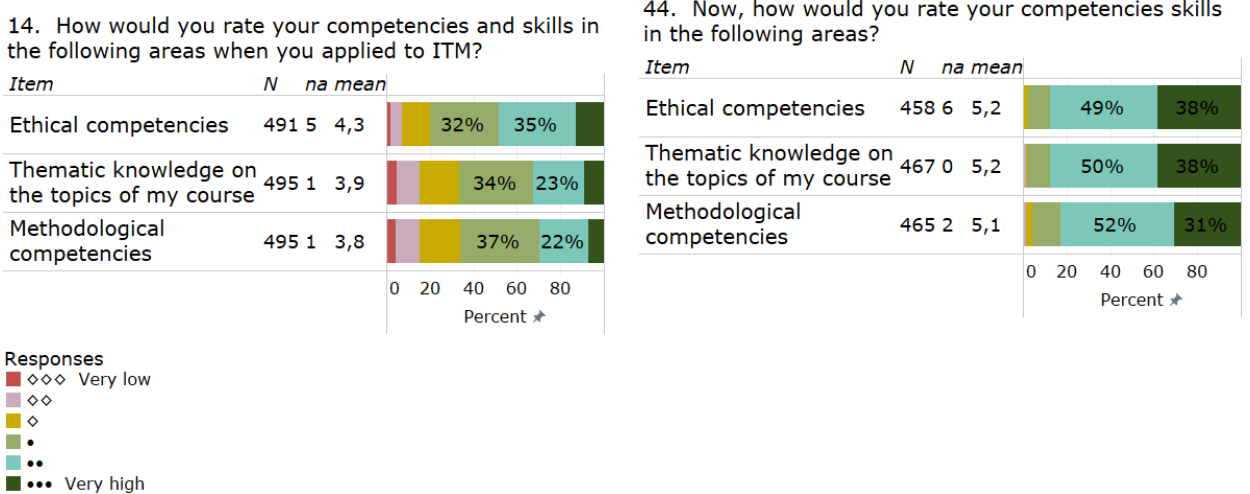
Finally, the interviews also uncovered that the **formats and size of the classes** at ITM also contribute to creating a setting favourable for students to exchange and incite peer-learning between students. Indeed, according to the description of the courses offered at ITM and interviews with graduates, teamwork was actively encouraged by ITM to capitalize on each other's knowledge.

4.2.2 Capacity development

ITM also pursues the objectives of developing the thematic, methodological, and ethical competencies and capacities of its students in the areas of public health, biomedical sciences, or clinical sciences with the goal of further developing their soft skills. This entails skills such as networking, intercultural competencies, or communication. It also includes wider concepts, such as broadening the horizons of students and contributing to their ability to reflect critically. Through the value-driven approach to learning and teaching adopted in the Masters, Short Courses, PGC and PhD at ITM, these skills are developed.

The survey results shown in Figure 18 indicate a clear increase in the self-assessed **gain in thematic, methodological and ethical competencies**. For this, the participants were asked to rate their competencies before and after attending ITM (see section 3.2 for potential methodological limitations of this approach). In that context, the analysis of the comparison group data shows that there is no statistically significant difference between the gain in skills of the ITM graduates and those who were not accepted. Thus, the comparison group, who was not accepted to a Master or Short Course, but studied elsewhere, also gained thematic, methodological and ethical competencies (further details on the composition of the comparison group are provided in section 3).

Figure 18: Assessment of soft skills before and after attending ITM



Source: ITM Graduates Survey 2020

The results show, however, that during their participation in ITM programmes, the graduates have developed their thematic knowledge and methodological competencies. In the category of thematic competencies (for instance in tropical medicine, public health, epidemiology, etc.), graduates thereby indicate the greatest development (from 32% (n=495) to 88% (n=467) with “high competency” or “very high competency”) (see Figure 18). This was supported by qualitative interviews with graduates and comparable institutions that emphasize that one of ITM’s strengths is that it offers a clear specialization in international public health and tropical medicine. A slight difference can be noted between the different courses assessed by the evaluation, as the greatest increase in these competencies can be seen in the PGC and PhD alumni. This is explained by the focus of these courses on specialized topics. For instance, for PGC programmes, the contents of the courses are specifically tailored to doctors and professionals with a medical background.

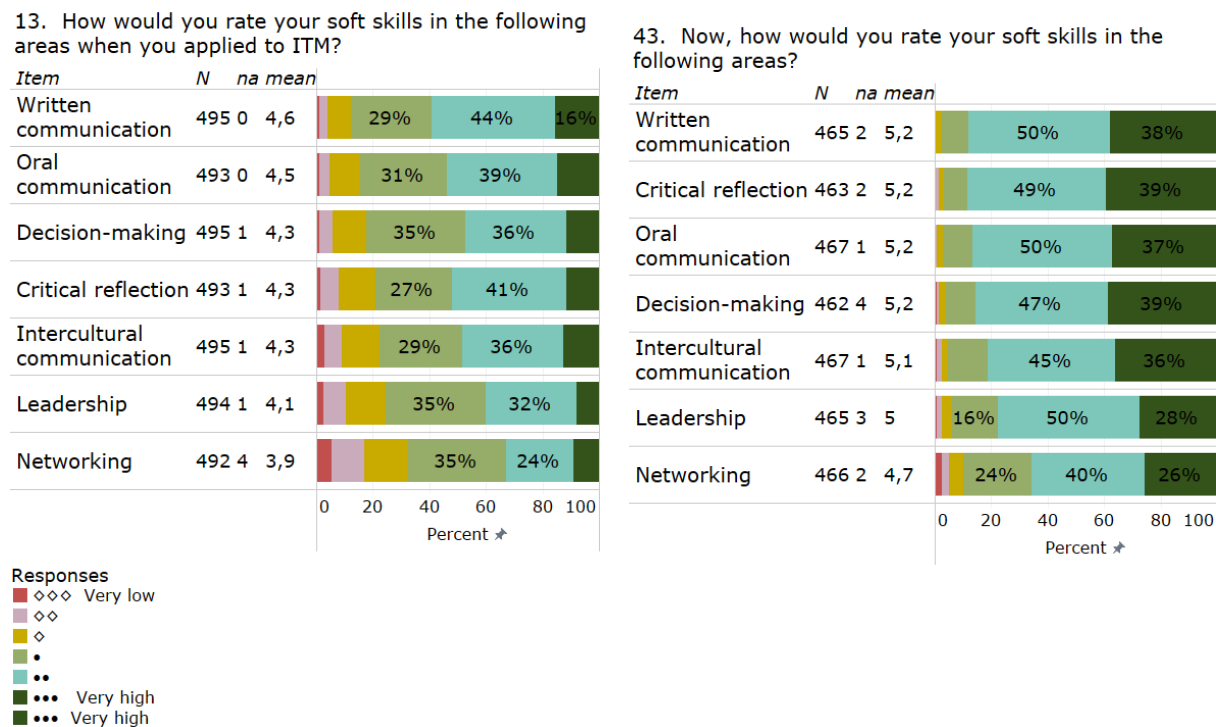
Moreover, the graduates have also seen a noticeable development in their methodological skills (from 29% (n=495) to 83% (n=465) with “high” or “very high” competency). This entails the development of relevant tools for data collection, data analysis or evidenced-based decision making. The interviews with graduates highlighted in this regard that the high practice orientation of the courses and the case-based learning adopted in the ITM educational courses and programmes were important for the development of their skills. This aspect was also underlined by employers, which noted that ITM graduates offered this case-based and practical capacity in their professional environment. When comparing this aspect across courses, it appears that the Master students identified the greatest increase in methodological competencies. This is consistent with the structure of the course that offers a comprehensive content of technical knowledge and its application in the field, using a multidisciplinary approach. In comparison, the Short Courses target only specific aspects in the health sector.

Lastly, the graduates also consider that they have increased their ethical skills (from 48%, n=491 to 87%, n=458 with “high” or “very high” competency). Ethical skills are hereby understood as understanding ethical implications of research and professional practice and how to comply with them. According to the interviews with graduates, ethical skills are very relevant in certain fields, such as HIV, sexual and gender-based violence. Moreover, the development of these skills was particularly true for Master students, who experienced the greatest increase in this area. Qualitative interviews with ITM supported this trend, explaining that in Master programmes, the ethical skills are developed through targeted courses, for example on how to write a research ethics proposal and get an approval. In comparison, Short Courses and PGC, which rated the development in this skill as lower, there are no classes dedicated to ethical skills.

As envisioned by ITM, the increase in thematic, methodological and ethical skills can contribute to the development of soft skills.⁶¹ In that sense, the results of the survey show a strong correlation between the development of hard skills and the development of soft skills ($r=0.827$, $p<0.01$, $n=418$). Thus, graduates who strongly developed hard skills also strongly developed soft skills (this does not show the causal link in itself). This is in line with the value-driven approach to learning and teaching at ITM, according to which these skills are intertwined. Figure 19 shows that the alumni consider that their soft skills have increased when comparing their competency before and after their time at ITM. When analysing the data between the ITM graduates and the comparison group, however, there is no statistically significant difference between the two groups regarding the overall development of the soft skills. However, looking at the individual dimensions, we see that ITM graduates have stronger increase in their oral and written communication, and decision-making skills ($p<0.05$). Further details are provided per course in section 4.2.5.

⁶¹ When asked to rate their soft skills, the participants to the online survey were asked to reflect on their competencies on the following aspects: networking; intercultural communication; critical reflection; oral communication; written communication; leadership and decision-making.

Figure 19: Assessment of skills before and after attending ITM⁶²



Source: ITM Graduates Survey 2020

The graduates interviewed provide that by increasing their hard skills, their confidence improved, leading them to assume greater responsibilities and decision-making power. When looking at the results in-depth, it becomes apparent that the soft skills of alumni have particularly increased in terms of critical reflection. Here, the proportion of alumni that consider their competency as “high” or “very high” rose from 53% at the time they applied to ITM (n=493) to 88% after they graduated (n=463). The graduates mentioned that they applied their critical thinking into the critical use of data for impact. Other soft skills the graduates have developed during their time at ITM include networking, with 33% considering they had “high” or “very high” networking competency before ITM (n=492) compared to 66% after their time at ITM (n=466). Furthermore, they could also increase their leadership (rising “high” or “very high” from 40%; n=494 to 78%; n=465), decision-making (“high” or “very high” from 48%; n=495 to 86%; n=462), and intercultural communication skills (“high” or “very high” from 49%; n=495 to 81%; n=467). The qualitative interviews showed that leadership and decision-making in particular were considered important and were linked with greater career opportunities for the graduates. The increase in intercultural communication skills can be explained by the diversity within cohorts, as described above. In particular, the graduates note that this skill is appreciated to be able to communicate with people from different backgrounds.

Good practice example: Developing soft skills in Cambodia

Overall, the results show that the development of written and oral communication of graduates have improved. This was exemplified by multiple graduates in Cambodia, who highlighted their developed presentation and debating skills. For instance, one graduate described how she practiced presenting in a loud and clear voice at ITM. After returning to Cambodia, she was able to use this skill in her teaching at the university. Another person explained that he had never done presentations in English before. At ITM, he got the time and space to adapt and practice, first presenting in front of a partner, then a small group and then the whole class. These stories were confirmed by the employer, who identified presentation skills as one of the key skills developed at ITM.

62 Question 43 asks about the current set of skills of the participant at the time of the survey, conducted in January 2021, not necessarily right after their studies.

When looking at the development of the soft skills across programmes, PhD and Master graduates have developed their soft skills more than the PGC and Short Courses graduates, as we see a greater increase in the graduates with “high competencies” in Master and PhD programmes. The interviewed ITM staff members highlight in this regard that there is a greater focus on soft skills in Master and PhD programmes with specific courses on this aspect (for instance on how to develop a scientific poster) while in PGC, the graduates note that soft skills were addressed in a more indirect and underlying way through the course. In this regard, a relatively higher assessment of the competencies on some of the soft skills at the time of application for the PGC and Short Courses graduates can also be observed, meaning that their development after their time at ITM is also less steep than for Master and PhD graduates.

4.2.3 Use of skills in the professional environment

The Theory of Change holds that graduates use their knowledge and competencies developed to add value in their professional practice and interactions. As described in the previous section 4.2.2, the graduates have developed thematic, methodological, ethical and soft skills through the programmes and courses at ITM. In this section, we discuss the extent to which the competencies were used directly to solve workplace problems, but also for instance to engage in debates or strategic processes. For this analysis, the theoretical framework described in section 6.1.1 of the annex served as a starting point.

First, the analysis of the survey results shows that the ITM **graduates use their knowledge in their professional situation**. Overall, the analysis of the results shows that there is a weak correlation between the hard skills and the use of knowledge ($r=0.168$, $p<0.01$, $n=357$). In addition, the results of the survey also show that there is no correlation for the thematic skills and the use of knowledge. However, there is a weak to medium correlation between ethical competencies ($r=0.229$, $p<0.01$, $n=339$) and methodological competencies ($r=0.216$, $p<0.01$, $n=351$). These tendencies suggest the methodological and ethical skills can be more broadly applied than the hard and thematic skills.

In particular, the skills and competencies they gained at ITM were mostly used to solve problems in their professional practice (93%, $n=375$). This result is supported by the qualitative interviews that highlight the problem-solving quality of the teaching at ITM. Graduates interviewed value this problem-solving skill when faced with challenges. They mention that ITM does not provide them directly with answers to problems but rather teaches them to think logically through problem-solving. The survey results also show that the ITM graduates use the knowledge they have acquired to make decisions in their daily professional practice (89%; $n=375$). In that regard, the alumni identify a good fit between their knowledge and their work.⁶³ They could use their practical skills, which they acquired through the experienced lecturers and the hands-on orientation of the classes. When looking at the differences in the comparison group, the results show that there is no significant difference with the comparison group ($p>0.1$) who also studied.

In addition, ITM expects that by conducting their research in or on their home country, the students will use the newly acquired competencies to add value in their professional interactions. As such, 70% of the participants declared having conducted their research in their home country ($n=114$). The interviewed graduates underline that they tackled research questions and topics that were closely related to a specific issue faced by their country in the public health sector, for instance regarding patient care in the treatment of neurological diseases in rural and urban centres or regarding national programmes on diseases such as malaria. They report that their research therefore added value in their professional practice.

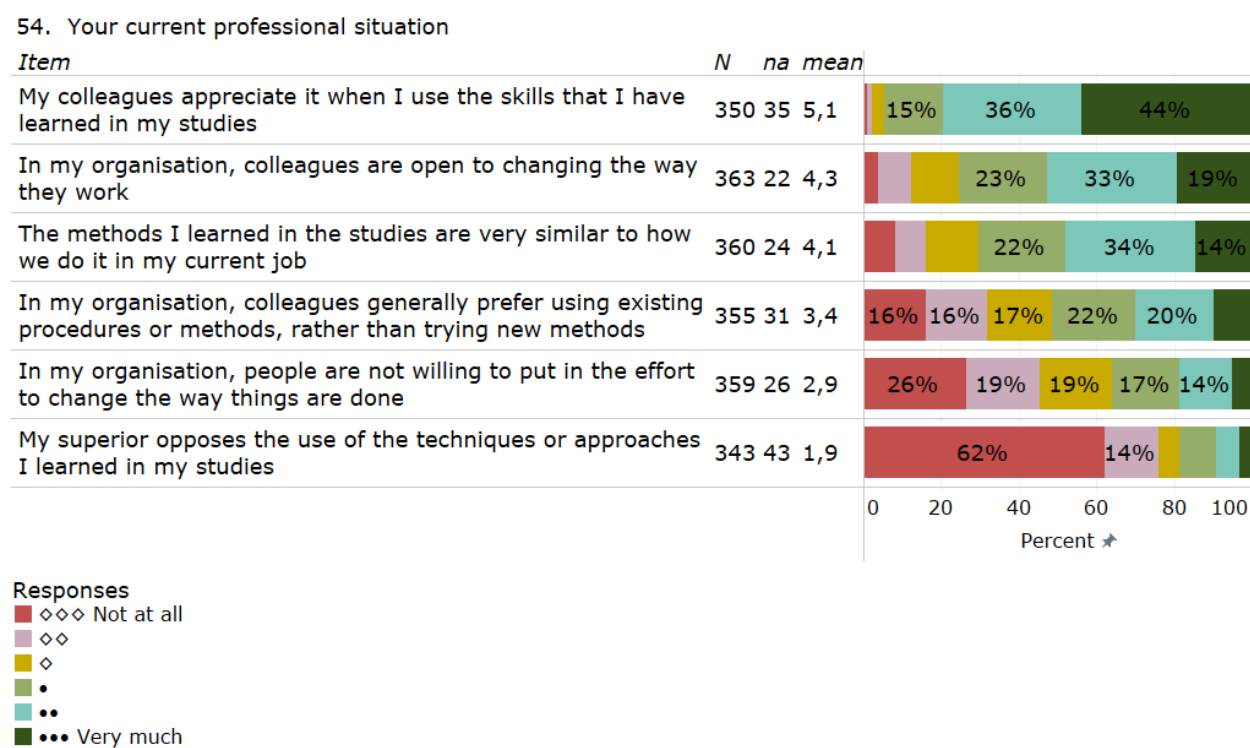
The results also indicate that the graduates used their skills to support their argument when facing disagreements (85%; $n=363$) and to generate changes in their organisation (79%; $n=364$). The interviewed graduates emphasized the importance of soft skills in that regard. Particularly their critical and independent thinking in their work, as well as leadership skills related to leading teams and building

⁶³ When looking at the changes over time for this aspect, the results show there are no changes over time.

confidence were relevant. Furthermore, graduates used their communication and presentation skills through open dialogue with stakeholders, which contributed greatly to solving problems.

To explain the use of knowledge, the most influential aspect according to the survey is that graduates feel that their job performance improves when using the competencies acquired at ITM (94%; n=362). Some alumni mentioned for instance that their improved skills in project management enabled them to better follow-up on the implementation of programmes and introduce course-corrections when needed. Others also mention the innovative approach they bring to their job, in the way they treat certain diseases, based on what they have learned and witnessed during their time at ITM. Other factors that can explain the use of knowledge is the openness of the work environment to introducing new knowledge, as presented in Figure 20 below. When looking at the results for the comparison group, they show that the comparison group rates higher on learner readiness ($p < 0.05$), performance self-efficacy ($p < 0.05$) and, transfer design ($p < 0.05$) than ITM graduates.⁶⁴ No other differences were noted on the other dimensions.

Figure 20: Factors influencing the use of knowledge⁶⁵



Source: ITM Graduates Survey 2020

Regarding the organisations' openness to change, the results are mixed since 75% of the respondents agree with the statement that their colleagues are open to changing the way they work (n=363) and people in their organisations are ready to change the way things are being done. Most of the respondents also indicate their colleagues and supervisors do not oppose and even appreciate the use of their newly acquired techniques (81%; n=343 and 95%; n=350, respectively). When looking at the use of knowledge in different organisations, the results show similar levels of use of knowledge among government and not for profit and international organisations. The use of knowledge is however lower for private organisations, especially, with regards to the dimension of generating important changes in the organisation. The results of the use of knowledge are different between regions. As such, graduates from Western, Eastern and Middle Africa overall report greater use of the knowledge acquired at ITM

⁶⁴ We highlight however the relatively small sample size for the comparison group who studied and now works and answered the question (n between 14 and 24 for the comparison group)

⁶⁵ Please note that the last three statements are negatively phrased (inverted).

than graduates from Southern Africa and Northern Europe. The qualitative interviews also confirm the results in terms of knowledge use. Some alumni sharing that the introduction of new ways of working was more difficult at the higher institutional level, rather than at the level of their colleagues and supervisors. This is particularly important in highly centralised systems where change in practices can be seen as more difficult to implement. In this context, qualitative interviews highlight that in centralised systems, practices and orientation of the health systems are decided at central level, making it more difficult to introduce changes at regional, provincial levels that follow central guidelines. When faced with resistance to change, some alumni in those contexts have changed their work for an international organisation. There they felt that their skills fit better in the working environment and that their profiles were more valued. Alumni from PGC courses also highlight in this sense that their level of responsibility is not necessarily linked with changes at the organisational level. They do not have contact, nor do they directly work on management levels.

Moreover, the alumni consider that the competencies they gained at ITM have helped them add value to their professional profile and in their **career trajectory**. A majority of alumni previously worked as operational staff (59%) and at middle management level (26%), a minority worked in senior management position (11%) and in strategic positions (4%; n=425). After graduating from ITM, the number of alumni in the strategic positions (12%) and in senior management positions increased (17%; n=385). When looking at the data over time, the results show that this effect becomes stronger. In particular, there is almost no improvement in the career trajectory when graduation is one year ago or less, but approximately 50% of the graduates' trajectories improve after that. This can suggest that those that graduated a long time ago have more time to develop their career.

When analysing the contribution of ITM to this effect, the results of the analysis with the comparison group shows no significant difference between the graduates and comparison group. It needs to be noted, however, that on average, the comparison group was in a higher position at the time of application than those who ended up studying at ITM (please refer to section 3.1 for greater details on composition of the comparison group). The qualitative interviews with graduates have confirmed that their qualifications were crucial for their promotion to higher positions. In that regard, the graduates interviewed shared that their professional profiles had become increasingly specialised after their time at ITM, for instance in tropical diseases, management of public health programmes, epidemiology, amongst others and had allowed them to become focal points on specific topics and assume greater responsibility, including to develop clinical protocols and take part in expert committees.

In addition, the results show a slight change in the type of organisations the alumni work at. More of the alumni worked for a government institution (ministry, governmental agency) prior to their application to ITM (42%; n=181), followed by positions held in not-for-profit organisations (NGOs, universities, etc.). This pattern is reversed after graduation. Furthermore, the proportion of alumni that now work in international organisations has also increased (from 8%; n=36, to 11%; n=44).

Beyond their career development, ITM aims for its graduates to be regarded as capable actors and a **valuable asset by or to the scientific and public health community**. In this sense, colleagues and employers share the perception of the alumni, in that the skills they have acquired are relevant to their position (see section 4.1. on relevance). In particular, the employers raised that they appreciated the evidence-based thinking of the alumni, as well as their transferrable skills and the ability of alumni to transfer skills to colleagues. The development of the soft skills was also an important aspect for some employers, notably their leadership skills and their confidence. Some employers note that ITM graduates display confidence and are not averse to taking responsibilities in the face of crisis, for instance during the COVID-19 pandemic.

Good practice example: Strengthening capacities at the workplace

A positive example is a graduate of the Master in Tropical Animal Health (MSTAH) programme in Kenya, who has significantly contributed to strengthened research capacities after his graduation. He works for a Kenyan ministry in a senior research position. After graduating from ITM and returning to his former employer, he helped identify the main requirements to further equip the employer's laboratory,

developed new tools and methodologies for field research and trained other staff in applied research. Furthermore, his employer pointed to increased confidence in his own skills and improved leadership skills, which were particularly useful for the training and team leadership part of his position.

His example shows how the employer's human, material and topic-related resources and capacities were improved after the employee graduated from ITM. The employer particularly emphasised ITM's strengths in applied science and in teaching the ability to break down complex scientific content into practical recommendations for policy dialogue.

4.2.4 Lifelong exchange through networks

By studying in diverse cohorts, study groups or communities and engaging in peer-learning, ITM students can strengthen formal and informal networks for lifelong learning, exchange, and belonging after their graduation, as described in the Theory of Change.

Therefore, ITM engages with students with the aim to encourage graduates to form and strengthen formal and informal networks. For this, the alumni newsletter is appreciated by most of the participants (92%; n=391), as it promotes ITM activities and ITM-organised alumni events. However, the results show that the formal alumni activities supported by ITM are not well known. The results of the survey show that the alumni population is not widely engaged in the formal alumni network(s) (71% indicate they are not engaged in any of the alumni activities, n=420). However, for those who are engaged, the results show that the alumni are most satisfied with the Emerging Voices for Global Health (EV4GH) training programme and meetings (94%; n=30). Moreover, the qualitative data uncovered that the alumni events are not systematically organised throughout the countries participating in the educational activities, although they are highly appreciated by those who attend. In this regard, alumni meetings have been organised on the side of a number of international scientific conferences (ITM Colloquium, ICASA, ECTMIH, etc.) and for which a limited number of alumni travel grants was available to present their research findings to an international scientific audience, upon abstract selection.

Regarding the alumni platform, the data from the case studies also shows that graduates are aware of the alumni platform, but it is only partially used. This is because this platform is quite new.

Thus, the qualitative interviews underline the importance of the informal alumni networks, initiated by the graduates while being on campus and being recognized as the most widely used channel. The most used means are WhatsApp and other messaging services (62%) as well as email (53%) (n=465). This is confirmed by the interviewed graduates, who, for the majority are part of informal WhatsApp groups of various sizes. The graduates indicate that there are small groups that are based on interpersonal connection or field of work (doctors for instance), larger groups of the size the whole cohort for a certain programme per year and in some cases some groups that cover a whole country (e.g., in DRC).

Regarding the types of contacts created, the results show that most the new contacts⁶⁶ were with participants from their own course, be it from other regions or continents (83%) or from other countries in the region (80%). Further, graduates made contacts with ITM staff (72%), more so than with students of other courses (56%; n=468). The qualitative interviews also confirm this trend by highlighting that the interactions between students are mostly within courses. The graduates explain this pattern by referring to the density of the course and the group work that were seen as encouraging the contacts between students, by spending a lot of time together and working towards the same goal. In addition, as described in section 4.2.1, the diversity of the educational environment at ITM is seen as a positive influence on the exchange among students. Moreover, the interactions with ITM staff were considered very positive by the graduates. They emphasize that the teachers and lecturers treated them on an equal footing, therefore creating an environment of facilitated exchange. As a result, some ITM staff are also included in some of the informal alumni networks.

Although there is no specific expectation from ITM as to the regularity or frequency of contacts among alumni, they do aim for the networks to remain throughout the years for lifelong learning. The results

⁶⁶ By "new contact" we refer to any person you met and interacted with during your studies.

suggest that the lifelong character of the networks might not be yet viable, as expected by ITM. The graduates keep in touch with the new contacts multiple times a year, although the regularity of the contacts fades away as the years pass. Students who graduated in 2019 keep in touch with students from their own course and country weekly (22%) to multiples times a year (28%; n=72), while alumni that graduated in 2010 keep in touch less regularly (once a year or less for 25%) and some never kept contact (35%; n=20). This was also supported by information shared during the case studies as the alumni that graduated within the past five years seem to have kept in touch more than the alumni from older cohorts. This could also be explained by the technological development in messaging services, illustrated with the increasing use of the WhatsApp application.

In addition, the results show that Master graduates are more likely than graduates of other courses to stay in touch with other students from their own course. The Master graduates interviewed during the case studies explained this result by citing the intensity of the course, coupled with the living arrangements on campus mixing people from different backgrounds, and the social activities organised by ITM. In addition, the structure of the Master course is more conducive towards creating new contacts and providing greater probability to stay in touch, than PhD or PGC, or SC. In turn, PhD graduates report they keep more in touch with lecturers.⁶⁷

Beyond the longevity of the networks created, ITM aims to foster lifelong learning, enable exchange, and create a sense of belonging. The results show that the networks are particularly important for international students during their time at ITM. Qualitative interviews highlight that the creation of WhatsApp groups for the whole cohort, especially in the most recent cohorts greatly contributed to their integration into ITM and Belgium and to their feeling of belonging in a group. This was strengthened by the social activities undertaken by ITM. Furthermore, the results show that the networks are also used both for professional and personal reasons, contributing to continuous learning and exchange. The alumni indicate that the purpose of the interactions is mostly professional with members of ITM staff (71%; n=309) and a mix of professional and personal with other students (42%; n=439). According to the graduates that were interviewed, the relationship with the teachers is mostly used for professional advice, for instance asking for career advancements or for specific advice on certain practices (for instance, in the response to COVID-19).

4.2.5 Differentiated results by course types

4.2.5.1 Effectiveness of Master

As stated in section 4.2.1, ITM aims to enable peer-learning and transferring knowledge. ITM supports this objective by providing a diverse educational environment in its educational activities and programmes that will foster exchanges. It is thus important for ITM to establish a fair and transparent **selection process** that guarantees a diverse selection of students. In this regard, when asked about their perspectives on the selection process and criteria at ITM, the **Master graduates** are satisfied with the process. According to 100% of the participants in alumni survey (n=178), the information about the application procedure (including deadlines, necessary documents etc.) was complete and that the communication was clear (99%; n=178). The participants also felt that the process was fair and that the criteria for selection were transparent (97%; n=150 and 95%; n=164, respectively).

Beside the eligibility criteria mentioned above, ITM aims to diversify each cohort by mixing students in terms of professional and geographical background as well as gender to foster a diverse international and professional exchange through its selection process. The respondents to the alumni survey answered that the cohorts were diverse in terms of geographic representation, gender, work experience and professional background. These results are supported by the case studies. However, some interviewees noted that the African continent was the most represented in their cohorts. The Master graduates perceived this was the case for the Master of Public Health which was delivered in French biannually until 2019. It was subsequently decided to offer the MPH in English only to facilitate the participation of non-native (French-speaking) participations. The Master graduates particularly

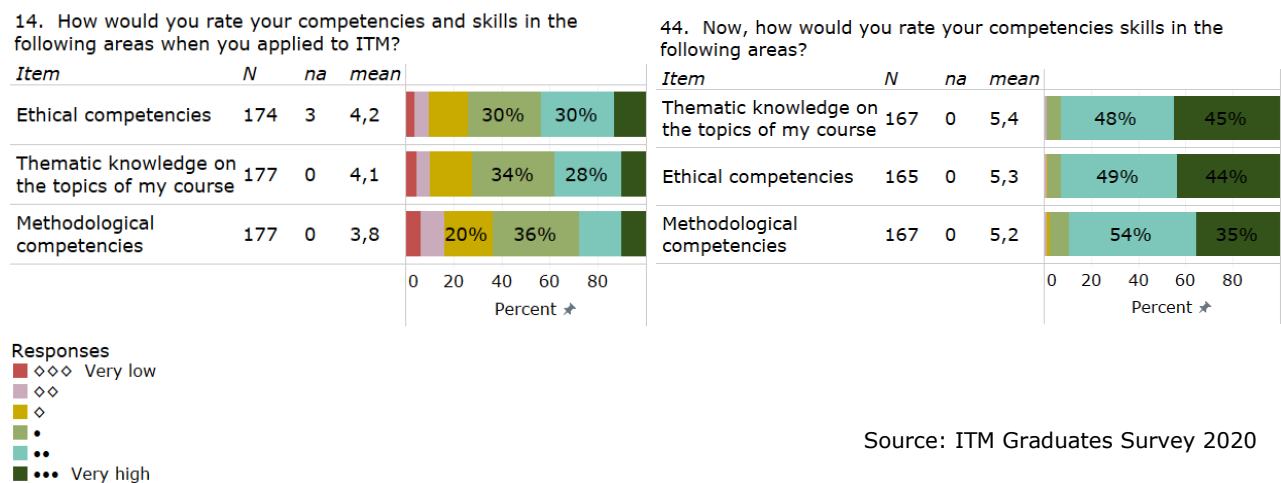
⁶⁷ The comparison group is too small (sample size too small) for the relevant question.

highlighted the geographic diversity of the group composition as a very positive feature of their experience at ITM, as being conducive to great intercultural exchange and peer-learning.

As expected by ITM, the results show that for the Master graduates, the diversity in the educational environment has positive effect on the **exchange of knowledge and peer-learning**. The results of the survey show that the diversity of the cohorts provides insights into different systems (e.g., health programmes, disease control etc.) and international contexts, and contributes to peer-learning. Interviews with the graduates underlined the richness and wealth of experience of the backgrounds in their cohorts. They recognized that this allowed them to draw on each other’s experience depending on the course and the topic covered and complement each other. The graduates also point to the activities organized by ITM to foster intercultural knowledge, which are crucial to be able to respond to cultural differences.

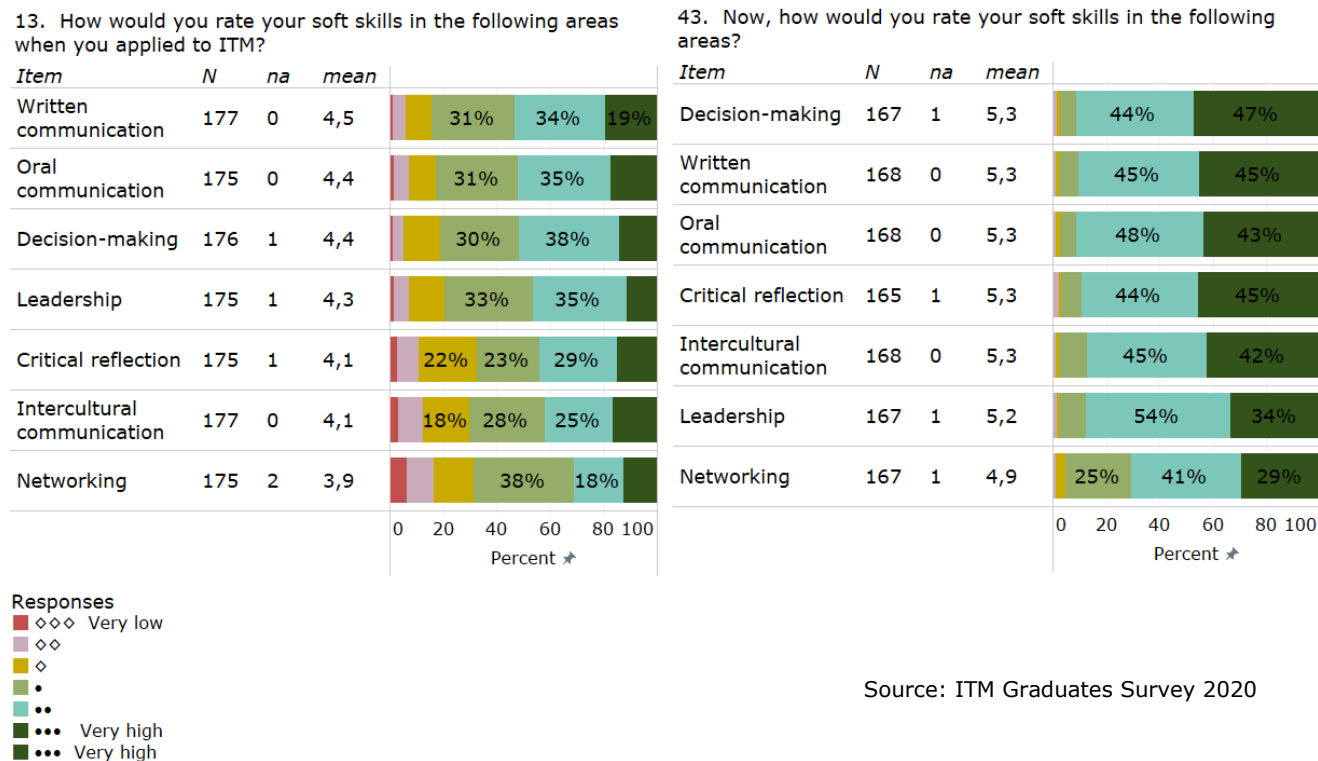
ITM also pursues the objectives of developing the thematic, methodological, and ethical competencies and capacities of its students in the areas of public health, biomedical sciences, or clinical sciences with the goal of further developing their soft skills. Through its Master programmes, ITM contributes to the development of thematic, methodological and ethical skills. When asked to rate their competency in these skills before and after their time at ITM, the alumni indicate the greatest increase is in methodological skills. The Master graduates particularly pointed to their skill development regarding disease management, as well as project management (i.e., planning and management of activities and budget, theories of change and stakeholder analysis), data analysis and evidenced-based decisions. The thematic competencies of the graduates also increased, from 57% (n=177) to 89% (n=167) (see Figure 21). Finally, with reference to the ethical skills, the results show an increase in “high” or “very high” competency from 43% (n=174) before their time at ITM to 93% (n=165) when they assess their skills after their time at ITM. The Master graduates all underlined the importance of ethical skills in the scientific field. In that context, Master students benefitted from classes focused on specific practices and topics, aiming at increasing their ethical skills, such as the steps to follow to develop ethical protocols.

Figure 21: Assessment of skills before and after attending ITM - Master



Source: ITM Graduates Survey 2020

Figure 22: Assessment of soft skills before and after attending ITM - Master



Source: ITM Graduates Survey 2020

As expected in the Theory of Change, the results highlight that the gain in thematic, methodological, and ethical skills was also a factor that explained the greater soft skills. The Master graduates – in comparison to the other courses – also show the greatest increase in the development of their soft skills, specifically their critical reflection, intercultural communication and networking. Networking was thereby highly valued by interviewees, who see a clear advantage in the institutional set-up at ITM for networking through working groups, and availability of lecturers and supervisors. This is also the case for oral and written communication that have also improved from their time at ITM.

Furthermore, ITM aims for graduates to use their knowledge and the competencies to add value in their professional practice and interactions. The results for the Master graduates show that they use the competencies they gained at ITM, to make decisions and to solve problems in their daily professional practice. They also consider that they can use their language and rhetorical skills to support their point in arguments or disagreements at work. A significant number of Master graduates also indicate that they use the acquired knowledge to generate important changes in their organisation.

In addition, ITM expects that by conducting their research in or on their home country, the students will use the newly acquired competencies to add value in their professional interactions. In this regard, the results indicate that the graduates confirm that conducting their research in or on their home country has increased the added value of their skills in their professional practice. This have allowed them to continue collecting data on a topic relevant for the public health sector in their country and in their field of expertise. This ensured that their research is relevant.

Moreover, by studying in diverse cohorts, study groups or communities and engaging in peer-learning, ITM students should strengthen formal and informal networks for lifelong learning, exchange, and belonging after their graduation. The results show that this is the course format that leads to create the widest range of contacts, whether it is students from other regions/continents, with lecturers and staff

(82%) or students from other countries within the respective regions (n=168). The results from the survey show that among the Master graduates, 65.5% of the participants to the survey (n = 165) indicate they have not participated in alumni activities organised by ITM. However, the results show a greater engagement through informal means. The Master graduates are also the alumni group that shows the most frequent contacts with these groups, especially with students from the same countries, more so than with alumni from other countries from the same region and with alumni from other regions. This is supported by the qualitative data gathered during the case studies, during which the graduate highlighted that the contacts they made were mostly kept with people from the same countries.

4.2.5.2 Effectiveness of Short Courses

When asked about their perspectives on the selection process and criteria at ITM, the **graduates of Short Courses** are satisfied with the process. 97% of the participants in alumni survey (n=131) declare that the information about the application procedure (including deadlines, necessary documents etc.) was complete and that the communication was clear (97%; n=131). The participants also felt that the process was fair and that the criteria for selection were transparent (96%; n=118 and 96%; n=124, respectively).

With regards to the diversity of the cohort, the survey respondents stated that the cohorts were diverse in terms of geography, although the representation by continent was regarded as lower than country representation. In addition, the composition of the cohorts was also seen as diverse in terms of gender, work experience, and professional background.

In turn, the diversity in the educational environment has positive effect on the **exchange of knowledge and peer-learning**. In the survey, the highest the positive effects of the diversity are providing possibility for peer-learning, providing insights into different international contexts and settings and, providing insights into different systems (e.g., health programmes, disease control etc.). The interviews re-emphasised the importance of the educational environment at ITM as a factor for exchange. Indeed, the experience and background of the teachers are very valuable for discussions during the courses.

Through the Short Courses, ITM contributes to the development of thematic, methodological and ethical skills. When asked to rate their competency in these skills before and after their time at ITM, the alumni indicate that the greatest increase is in methodological skills. Examples for this in the interviews were the improved capacity to develop protocols as well as the increase of their knowledge of the evaluation of the performance of programmes and the use of science-based methods. The graduates also emphasized that they have gained thematic and ethical skills.

Furthermore, the results highlight that the gain in thematic, methodological, and ethical skills was a factor that explained the increase in soft skills, particularly decision-making and leadership. Despite not having shown a significant increase in soft skills in the survey, a potential explanation could be that it could take more time for soft skills to unfold. Nonetheless, the qualitative interviews showed some increase in specific soft skills, such as intercultural communication. This was supported by the relationship with the teachers that was more on an equal footing than what the graduates had known before.

Figure 23: Assessment of skills before and after attending ITM – Short Course

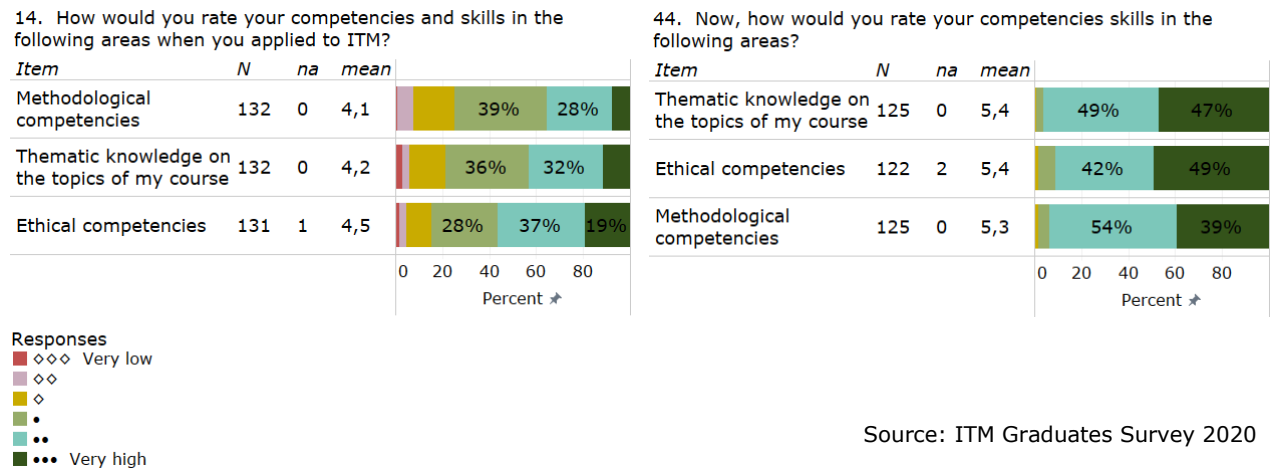
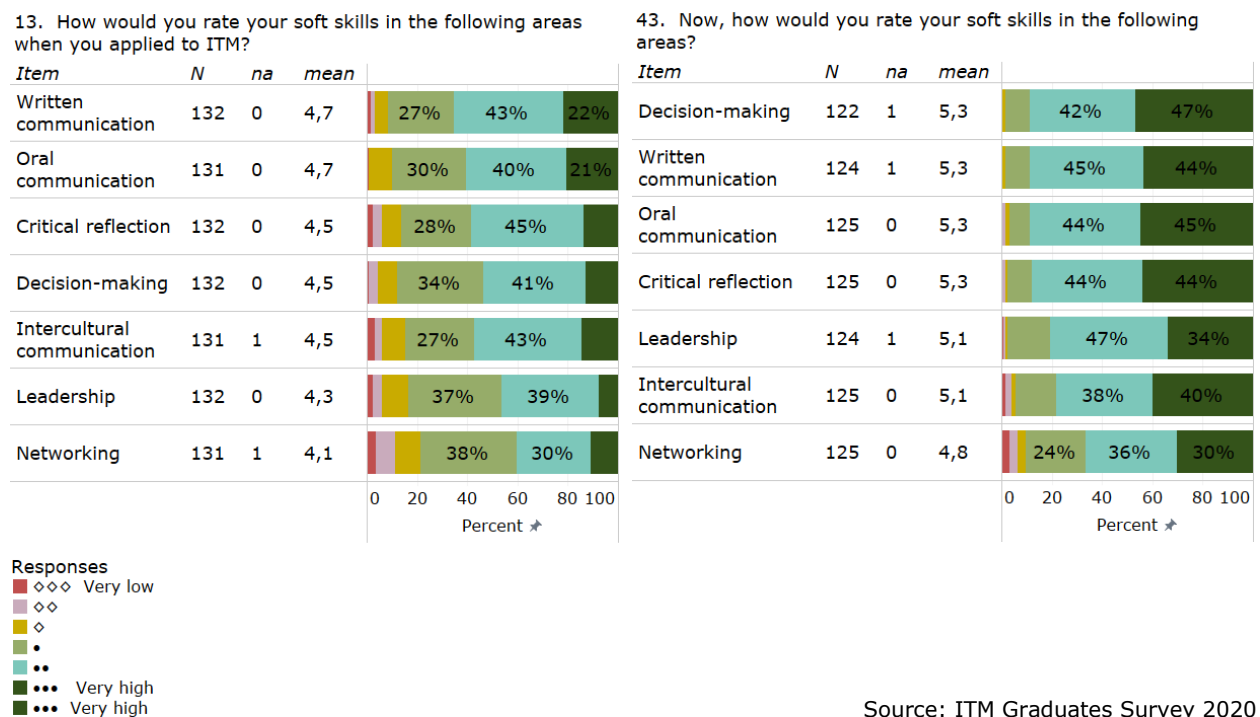


Figure 24: Assessment of soft skills before and after attending ITM – Short Course



Regarding the use of competencies they gained at ITM, the results indicate that Short Course graduates use them especially to make decisions and to solve problems in their daily professional practice. They are also able to use their skills to support their points in arguments or disagreements at work. To a lesser extent, they use the acquired knowledge to generate important changes in their organisation.

With regards to alumni contacts, the results for the Short Courses show a similar pattern as for the other courses. The results from the survey show that among the Short Courses graduates, 67% of the participants to the survey (n=124) indicate they have not participated in alumni activities organised by ITM. However, the results show a greater engagement through informal means. In that sense, contacts are created with students from other regions or continents, with students from other countries within the respective regions and with lecturers and staff. The creation of networks at the scale of the cohort was highlighted as having contributed to the integration of international students, who described their feeling of belonging. The nature of the contacts is mixed during the interactions between students, while

the contacts with ITM staff members are mostly of a professional nature. The graduates use the networks for professional advice, therefore supporting the expectation that they contribute to continuous learning.

4.2.5.3 Effectiveness of PhD

With regards to the transparency and fairness of the **selection process**, the results show that **PhD graduates** are generally satisfied with the process. 90% of the participants in the alumni survey (n=47) consider that the information about the application procedure (including deadlines, necessary documents etc.) was complete and that the communication was clear (94%; n=49). The case studies however show that for some PhD graduates, the selection process was considered somewhat “cumbersome” because they needed to apply to two institutions, ITM and the diploma-awarding institution. In addition, the result support ITM’s expectation that the selection is clear since PhD graduates consider the process transparent (95%; n=45). The results show that the application process is easier for candidates applying in the context of a framework agreement between a partner institution and ITM, which benefits from institutional embedding. This result could be explained by the alignment of the organisational context at the partner institution with ITM’s interests. The PhD candidate applying from the partner institute could therefore benefit from already belonging to a context with shared values.

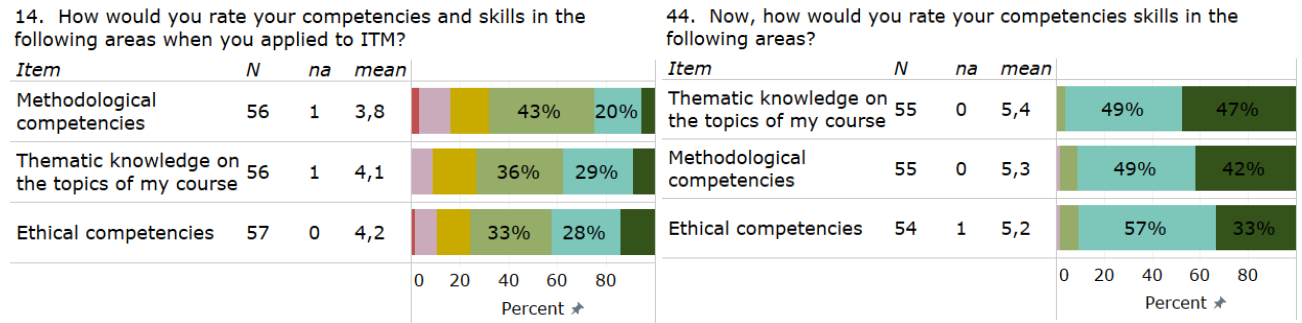
Regarding the diversity of cohorts, 73% of the participants to the online survey answered that the cohorts were diverse in terms of geographic representation, gender, work experience and professional background. Considering the set-up of the PhD course, the term “cohort” was referred to when PhD graduates mentioned encounters with other PhD students, either through common supervisors or attending the same short courses at ITM when coming to Belgium.

As expected by ITM, the results also show that for the PhD graduates, the diversity in the educational environment has positive effects on the **exchange of knowledge and peer-learning**. The results show that the diversity in the educational environment provides a possibility for peer-learning, insights into different systems (e.g., health programmes, disease control etc.) and into different international contexts and settings. The results also demonstrate that the PhD students see a positive effect of the composition of the cohort on providing insights into different disciplines. The graduates interviewed further added that the exchanges are motivated by a shared interest in a specific topic.

In terms of skills development, the PhD alumni indicate the greatest increase in thematic skills, followed by the methodological and ethical skills. Some of the graduates further highlight the improvement in their capacity to transfer the knowledge to junior researchers.

As envisioned in the Theory of Change, the results show that the gain in thematic, methodological, and ethical skills was a factor that explained the increase in soft skills of the PhD graduates, in particular regarding networking skills. This can be linked to the close contacts between the students and their supervisors during their research and the opportunity to be in contact with other colleagues in their field of interest during short classes and during their stays in Antwerp. The alumni rate their oral communication as being one of the skills that increased most. Finally, the interviews with PhD graduates also shed some light on the important gain they identified in terms of management skills, not only in research management but also time-management.

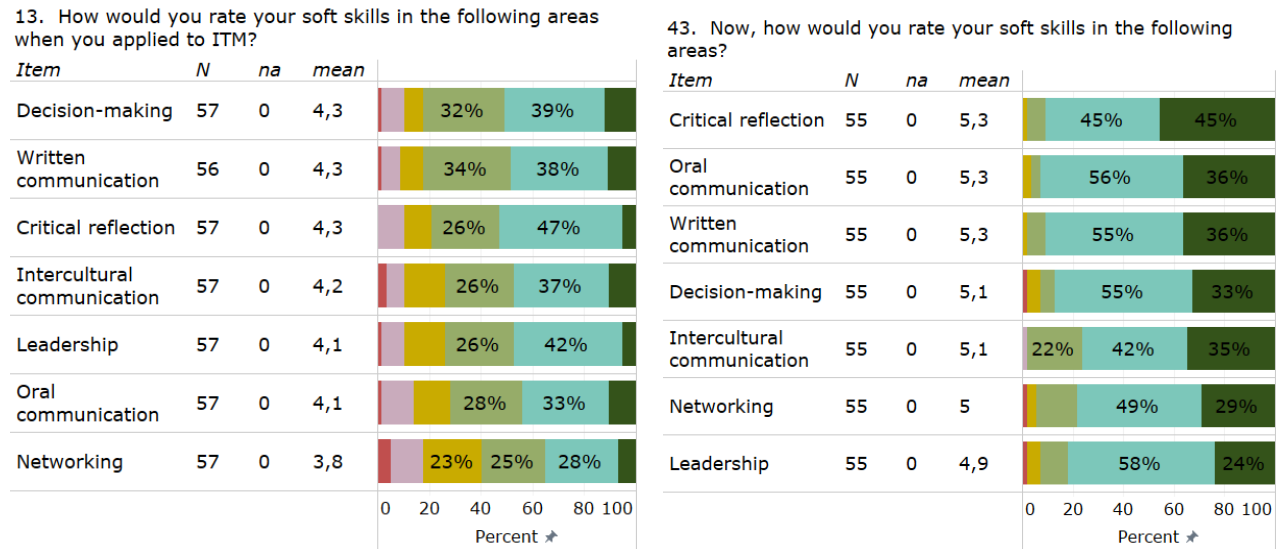
Figure 26: Assessment of skills before and after attending ITM



Responses
 Very low
 Low
 Medium
 High
 Very high

Source: ITM Graduates Survey 2020

Figure 25: Assessment of soft skills before and after attending ITM



Responses
 Very low
 Low
 Medium
 High
 Very high

Source: ITM Graduates Survey 2020

Once these competencies have been acquired by the PhD students, ITM expects that the graduates will use them to add value in their professional practice and interactions. The results for the PhD graduates show that they use the competencies they gained at ITM, particularly to make decisions and to solve problems in their daily professional practice. The PhD graduates also consider that they can use their skills to support their point in arguments or disagreements at work. In contrast, the use of the acquired knowledge to generate important changes in their organisation is rated lowest by them.

In terms of networking, the results show greater contacts with lecturers and staff members than any other of the courses. Equally important are the contacts created with students from the same course (i.e. other PhD students) from other regions or continents. In addition, and contrary to the other courses, the PhD graduates show a greater tendency to make contact with students from other courses. This is supported by the qualitative data of the case studies, since the PhD are not part of a group as structured

as the Master students. The graduates use the networks for professional advice, therefore supporting the expectation that they contribute to continuous learning and exchange. They highlight that they rely more on the formal ITM alumni network than on the informal ones since they do not have as many opportunities to create informal networks due to the nature of the programme that requires more regular contact with supervisors than other students. Some PhD students noted that the sense of belonging to ITM was lacking in their experience. In this regard, some of the graduates interviewed mentioned they did not have an ITM email address like the rest of the courses did. They also did not have a badge, and some mentioned that no group structure was provided to them. The results from the survey show that among the Master graduates, 61.5% of the participants to the survey (n = 52) indicate they have not participated in alumni activities organised by ITM. However, the results show a greater engagement through informal means, especially through email, virtual meetings or messaging services.

4.2.5.4 Effectiveness of PGC

Through the PGC programme, ITM contributes to the development of thematic, methodological and ethical skills. The results show that the PGC consider they developed most notably their ethical skills. In this regard, the qualitative interviews give a different indication. The PGC graduates interviewed focused on the specific knowledge they have acquired in tropical medicine as well as global health and epidemiology, complementing their medical training. Some of the PGC graduates interviewed also highlighted the practical skills they acquired, such as laboratory training.

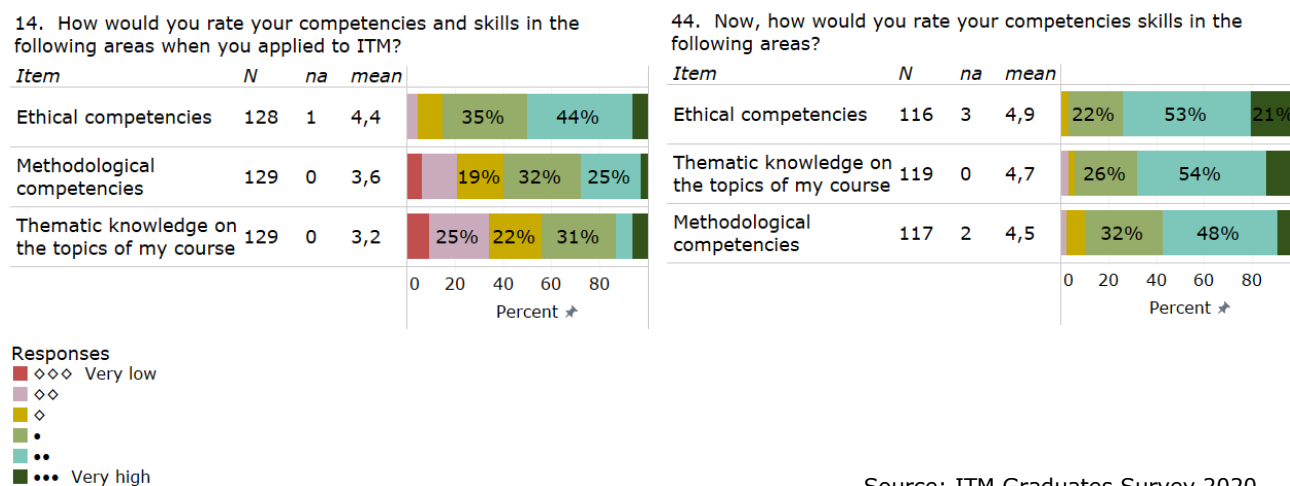
Furthermore, for some of the interviewed graduates, the PGC course was an introduction to the humanitarian settings. In this regard, they gained knowledge on NGO structures and project as well as disease management in low-resources countries. The graduates who underlined the knowledge they acquired with regards to humanitarian settings were provided with some important contextual elements such as cultural and religious differences and the different ways of approaching illness.

As envisioned in the Theory of Change, the results highlight that the gain in thematic, methodological, and ethical skills was also a factor that explained the greater soft skills. For PGC graduates, the development of soft skills was less noticeable than for graduates of other courses and programmes at ITM. This is explained by the fact that the initial assessment of the skills was already the highest across all programmes at the start of their studies at ITM. The greatest skill they have developed during their time at ITM is their leadership skill. They highlight that they wished for a specific class on this aspect while this was done from a cross-cutting perspective at ITM. Moreover, the qualitative interviews showed that particularly in the PGC course, reflecting on post-colonial as well as anti-racist rhetoric is an important topic to prepare students for potential work in low-resource contexts.

With regards to the use of the knowledge acquired at ITM, the results for the PGC graduates show that they mostly use the competencies they gained at ITM to solve problems and to make decisions in their daily professional practice. They can use their skills to support their point in arguments or disagreements at work. They rated lowest regarding the use of the acquired knowledge to generate important changes in their organisation, in the case of alumni that have already started working. This can be explained by the fact that PGC graduates are not at management level where they can implement changes at the level of the organisation. Indeed, data from the survey shows that around 41% of PGC graduates currently occupy operational field level positions.

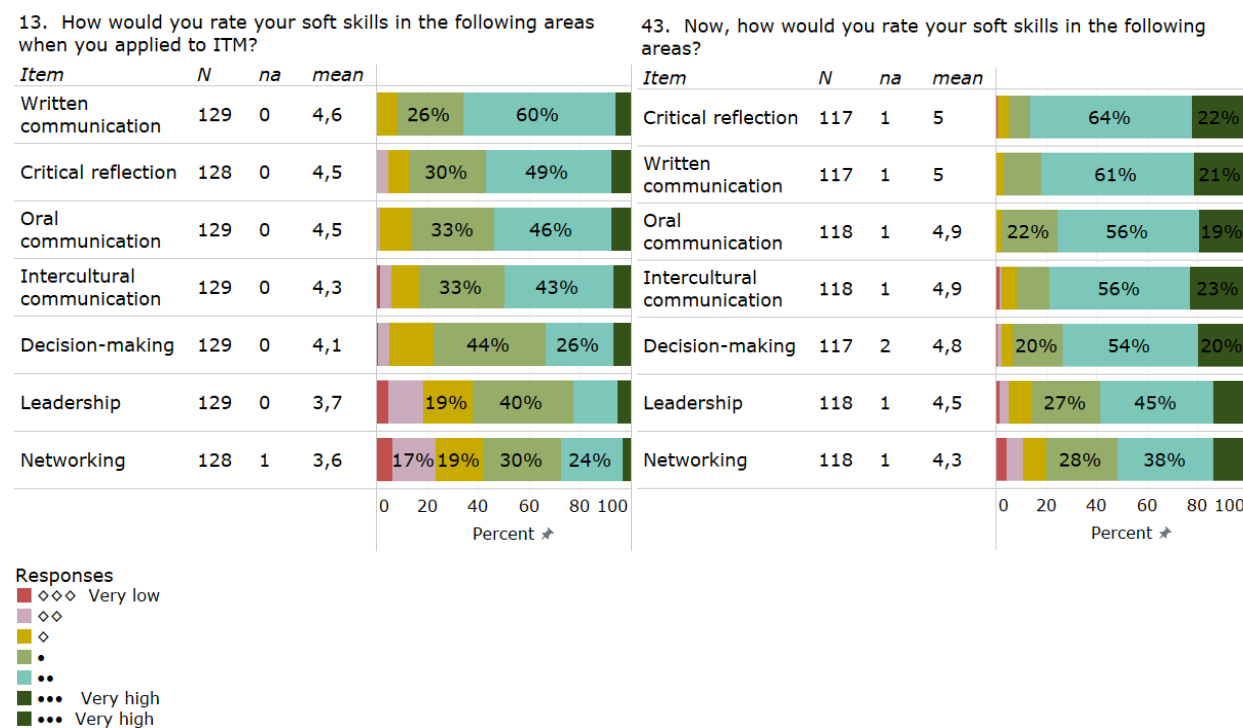
With reference to networking, this aspect is less applicable for PGC than for the other courses. As students are admitted on a first come first-serve basis, ITM does not have as much influence on the diversity of the cohorts as for the other courses. Nonetheless, the results show that the cohorts of the PGC courses were considered somewhat diverse, but less so than the other courses, especially in terms of geographic representation and continent representation (56% and 36%; respectively, n=126). The composition of the cohorts was only seen as somewhat diverse in terms of gender, work experience and professional background. This result is in line with the structure of the PGC that call for specific professional profiles to enter the courses.

Figure 27: Assessment of skills before and after attending ITM - PGC



Source: ITM Graduates Survey 2020

Figure 28: Assessment of soft skills before and after attending ITM – PGC



Source: ITM Graduates Survey 2020

The results from the survey show that among the PGC graduates, 89% of the participants to the survey (n=118) indicate they have not participated in alumni activities organised by ITM. However, the results show a greater engagement through informal means, such as social media, email or messaging services. The results show that PGC graduates have created more contacts with the students from their course, be it from the same country, from different countries within their region, or from other regions or continents, than with lecturers and students from other courses. The PGC graduates however do not keep in touch frequently, considering their interactions happen once a year or less with all categories of contacts. This is supported by the interviews, which show mixed results, as some interviewees describe frequent contacts with a handful of people from their course while others have followed a different

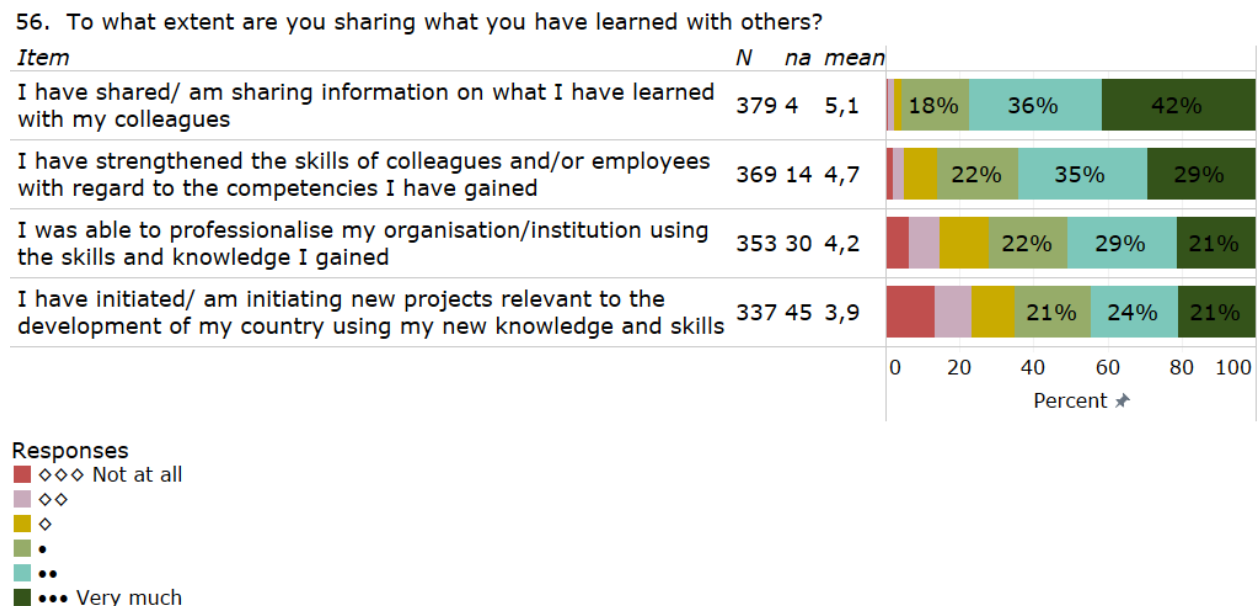
professional path and have not kept in touch. Further, the sense of community and belonging is less valued among PGC students. This can be explained by the fact that the majority of students in PGC courses are European, therefore experiencing less of a challenge integrating into European and Belgian culture while at ITM. They would tend to rely less on their classmate to integrate into Belgian, and more generally European contexts. The nature of the contacts they keep is mostly personal between students, while the contacts with ITM staff members are mostly of a professional nature, therefore supporting the expectation that they contribute to continuous learning.

4.3 Impact

The criterion of impact refers to: “The extent to which the intervention has generated or is expected to generate significant positive or negative, intended or unintended, higher-level effects”, according to the OECD-DAC evaluation criteria. The criterion thus aims to answer the question “What difference does the intervention make?”. Regarding this evaluation, we therefore analyse the question “What difference do the educational activities and scholarship programme make?”. In the analysis, the evaluation team looks at the extent to which ITM’s educational activities and scholarship programme have contributed to changes in the long-term, as defined in the Theory of Change (see section 2.7).

As presented in the Theory of Change, ITM’s alumni and staff should act as **agents of change that embody scientific, ethical, and professional attitudes and values**, by using and transferring knowledge. The realisation of this impact relies on the development of the graduates’ skills and their use to add value in their professional practice. The results on the sharing of knowledge shows that in general, they have transferred their knowledge with others, as shown in the figure below.

Figure 29: Multiplication of knowledge



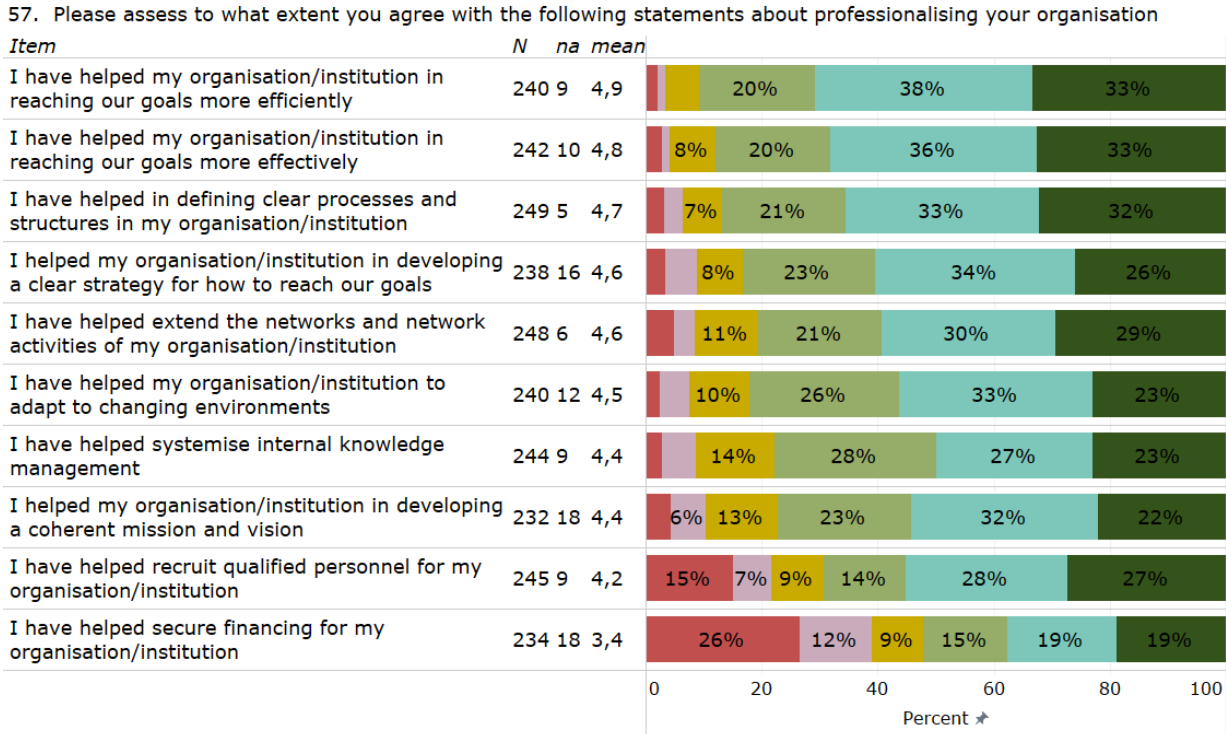
Source: ITM Graduates Survey 2020

In this regard, the knowledge has been shared mostly with colleagues (96%; n=379), which is supported by the information gathered from the qualitative interviews. The interviewed graduates report that knowledge acquired by ITM alumni upon their return to their organisations is systematically shared, in the form of debriefings to their team and sometimes to a larger audience. Some PGC graduates also conducted debriefings with doctors or nurses in their organisation, who were not necessarily direct colleagues. This knowledge sharing can lead to further multiplication of knowledge and approach from ITM to other colleagues, departments, institutions. Qualitative interviews have raised that further training of colleagues on specific topics or methods contribute to organisational capacity building. The

survey confirms these results, as 86% of the respondents have strengthened the skills of colleagues and/or employees regarding the competencies they have gained at ITM (n=369). The capacity development of colleagues who did not attend ITM can contribute to further disseminating the skills developed at ITM. The results of the survey also show that the respondents had an influence on the development of new projects relevant to their countries that would require their new knowledge and skills (66%; n=337).

ITM also strives to **strengthen organisations**, including partner organisations and ITM itself in their professional capacities to contribute to scientific and public discourse and practice relevant to their respective contexts. To that end, ITM’s graduates should contribute to changes at the organisational level, within the institutions where they are employed. In that context, the graduates identify that they have contributed, to a certain extent, to the development of their organisations (see Figure 30). In particular, they have helped the organisation or institution in reaching its goals more effectively and efficiently (89%; n=242 and 91%; n=240). In the graduates’ assessment, they also helped in defining clear processes and structures in the organisation or institution (86%; n=249). In addition, the results from the survey also show a medium correlation between the use of knowledge and organisational capacity building (across all dimensions of organisational capacity development presented in the figure below)⁶⁸. The qualitative interviews also confirmed these trends. Some of the partner institutes highlighted that the returning ITM graduates helped strengthen the laboratories using newly acquired techniques, applied newly acquired methodologies and brought a new perspective to disease.

Figure 30: Contribution of ITM graduates to organisational change



Responses
 ◆◆◆ Not at all
 ◆◆
 ◆
 ●
 ●●
 ●●● Very much

Source: ITM Graduates Survey 2020

⁶⁸ The correlation of the mean knowledge use and mean capacity building is r=0.50, p<0.01, n=244.

Based on the qualitative accounts of graduates and employers, ITM equips the graduates for the type of positions they are aiming for and to accomplish their tasks in a satisfactory manner. The graduates can introduce some changes in their professional environments, which mostly remain at the departmental level. For instance, alumni developed and implemented protocols or changes in standard operating procedures. Another example is graduates who improved the internal capacity of the institutions in terms of monitoring and evaluation and use of Theories of Change to keep track of the activities implemented as well as their effectiveness and efficiency. On some occasions, those are adopted by a whole organisation, but this is not systematically the case (see Section 4.2.3).

Furthermore, the results shed light on an additional mechanism to strengthen organisations, particularly partner institutes: by sending their staff and students overseas, partner institutes gain greater **international visibility**. Specifically, interviews with partner institutes show that it is important for home institutions to send their students overseas to acquire new skills, acquire a vision of other health systems and get in touch with international students, as described in section 4.1. The graduates returning to their institutions can contribute to raising the institute's reputation by using their connections for new international partnerships. In turn, interviews with the partner institutes also underline that the ITM graduates will continue to develop their skills and contribute to research by participating in research projects, thereby further reinforcing the reputation and visibility of the institutes towards potential future applicants. Greater contacts and partnership also have the potential to strengthen the alignment of the institutes with that of international partners. For instance, the greater exposure and relationship with European institute can also support partner institutions to increasingly use the same frameworks (such as the Bologna process).

As expected by ITM, the results show that the **networks created** while attending ITM are relevant to contribute to the objective of **continued exchanges after graduation**. The results show that in some cases, the networks created at ITM are used to implement changes, mostly at organisational level. As mentioned in section 4.2.4, there are two mechanisms in place that contribute to the creation of networks: a formal alumni network supported by ITM; and an informal network taking various shapes and scale, initiated by the graduates themselves. The graduates interviewed note that the formal networks are rather appreciated for their information-sharing and networking quality than as a channel for discussions on public health.

Moreover, as explained in 4.2.4, informal networks are the channels most used by alumni to contribute to **lifelong exchange**. With regards to the impact envisioned by ITM, the results show that the informal networks shape health discourse at local and regional levels to a certain extent and in some cases on the international level. As such, the graduates state that the networks are useful to ask questions about specific techniques in practice (for example in the response to COVID 19), for professional advice and job opportunities, such as presenting status of the epidemiological situation in their home country during the pandemic. The results also highlight that on some occasions, the networks were perceived as a mechanism to continue building the capacities of the participants, by keeping the group informed of developments regarding certain diseases or participating in conferences, which motivates them to keep abreast of new developments in the field. In addition, some graduates indicate that the longevity of the informal networks is also increased when lecturers or ITM staff members are also included in the groups. Their contributions to the discussions and interventions usually incentivize participants to react.

Good practice example: Networks for professional advice

An ITM graduate from DRC first returned to the rural hospital where he was previously employed. When faced with the decision of where to work next, he decided to appeal to the ITM alumni network of his cohort to ask for advice. They highlighted that with his previous experience coupled with the ITM Master, he could add value in the central health system of DRC. They underlined that his profile working in a governmental institution would allow him to propose more innovative ways of working and introduce changes that would have an impact on the practice. When he looked at the difference he could make in his work, and the contact he had with the ministry in the past, he judged he would have the greatest impact at the government position. He decided to follow their recommendation and applied for the

position at the health ministry corresponding to his field of experience, his knowledge and where other ITM alumni were posted. Upon finishing his six-months internship, he was supported by the Direction of the department, and he was ultimately designated focal point in epidemic emergency and disaster.

Furthermore, some experiences shared by graduates indicate that alumni can **leverage their participation in alumni networks** to contribute to the impact set by ITM to contribute to health worldwide. For instance, some graduates identified that the concentration of multiple alumni within one organisation seems to have enabled implementing changes. This was the case when three ITM alumni were leading three laboratories at a partner institute. Through their position, they are best placed to introduce new ground-breaking topics (for example intra-hospital infectious, antibiotic resistance), lead researchers, and contribute to teaching. The results therefore suggest that by concentrating an increasing number of young researchers trained at ITM in the same organisation, they will have a greater plausibility of introducing changes at the level of the organisation. This is supported by the result of qualitative interviews with partner institutions, who consider the support to young researchers as an important aspect to continue improving.

Good practice example: Connection between alumni in one country

Over the course of the DRC case study, the interviews have uncovered a great potential for the use of network on a wider scale. As DRC is one of the countries most represented at ITM, there is a great number of networks, which DRC nationals are involved in. According to the graduates interviewed, some of the professionals that have attended ITM have created small groups based on their field of specialisation. This is the case for professionals working in clinical laboratories, or those working on disease control for instance. There are also the networks that are created at the level of the cohort. Those concern the group of students for each course for each year. In this group, several types of organisations are represented and at different level of responsibility. Finally, several graduates mentioned that there is also an ITM alumni network created at the level of the country, where all recent alumni are automatically included, although this group is not very active.

In addition, one interviewee from a partner institute (one out of five partner institutes in DRC) also raised that the positioning of ITM graduates at strategic posts in the local health system had benefitted the interactions of the partner institute with the local administration on issues related to public health. It was argued that the common education at ITM facilitates the implementation of projects for the partner institutes and could eventually lead to the development of an MoU with the local health administration. This is facilitated through the common education received at ITM, which is perceived to make the understanding and sensitivity to the project and approach easier.

Ultimately, ITM intends to contribute to **improve health worldwide**. Since this intended change on the highest level follows a long causal chain, a plausibility analysis is conducted regarding ITM's educational activities and scholarship contribution to health worldwide. As the trainings strengthen capacities of students to act as qualified professionals, the results show that graduates are in position to collectively contribute to the improvement of health worldwide. In the graduates' opinion, their largest influence is on health services and health programmes (73%; n=344 and 70%; n=356, respectively). The alumni also stated they had a significant influence on health research and clinical guideline development, as well as health policy (67%; n=360, 59%; n=340, and 60%, n=346 respectively). When looking at the results of the survey for the comparison group, the data shows that the comparison group consider they also have an influence on health worldwide. The data for the comparison group shows that they perceive their greatest influence to be on health programmes (83%; n=52) and health research (80%; n=53). Similar to the ITM graduates, they also consider they have a certain degree of influence on health policy (58%; n=54) and clinical guideline development (40%; n=49).

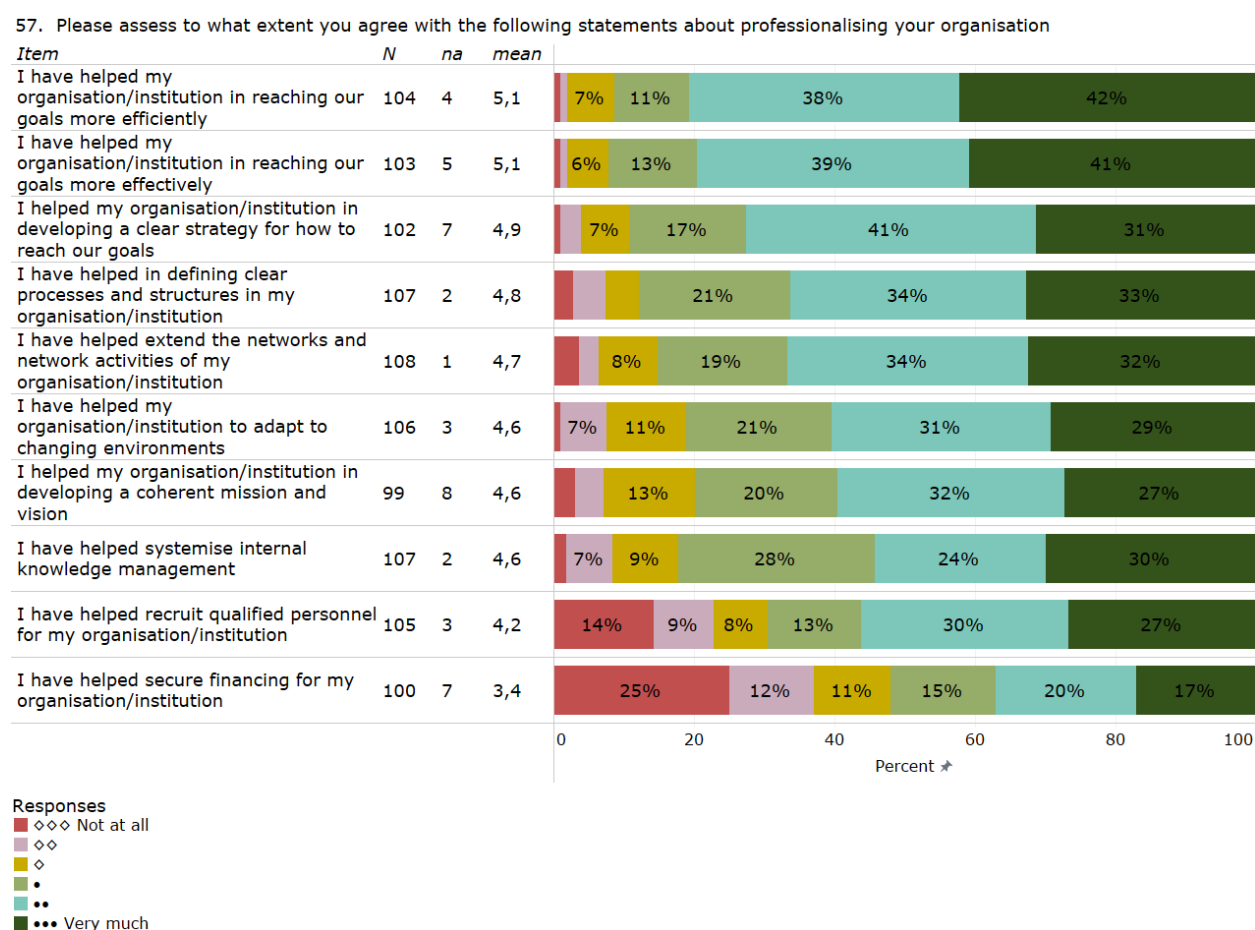
Based on results from section 4.1, 4.2 and 4.3, it is plausible that ITM equips the graduates with important skills for their professional practice and to a certain extent to contribute to further transfer their knowledge. It is also plausible that ITM contributes to worldwide health through the influence of its graduates on changes on the department level of the organisations and to some extent on the local level and regional level, but its holistic influence is less clear on the national and international level.

4.3.1 Differentiated results by course types

4.3.1.1 Impact of Master

As presented in the Theory of Change in section 2.7, ITM's alumni and staff should act as agents of change that embody scientific, ethical, and professional attitudes and values, by using and transferring knowledge. The realisation of this impact relies on the development of the graduates' skills and their use to add value in their professional practice. The survey results show that most graduates of the Master programme transfer their knowledge to their colleagues (97%; n=146) and thereby strengthen their capacities (91%; n=144). This is aligned with the interviews, where graduates report that they systematically share their knowledge acquired at ITM upon their return to their organisation. This takes the form of debriefings to their team and sometimes to a larger audiences, depending on the topic of the course. Furthermore, some ITM Master graduates train their colleagues on specific topics or methods.

Figure 31: Contribution of ITM graduates to organisational change - Master



Source: ITM Graduates Survey 2020

ITM also strives to strengthen organisations, including partner organisations and ITM itself in their professional capacities to contribute to scientific and public discourse and practice relevant to their respective contexts. To that end, ITM expects that graduates contribute to changes at the organisational level, within the institutions where they are employed. The graduates interviewed highlight the role they played in project management, which has led the organisations to manage funds better. Other graduates mention introducing new processes and methodologies into their organisation.

Good practice example: Strengthening organisations

An ITM graduate from the Short Course on "Qualitative Research Methods", now pursuing a PhD in another country has been able to apply the knowledge acquired and add value at work. Through the

knowledge acquired, the alumni introduced adjustments to a research protocol to include a greater number of regions therefore increasing the scale of the impact of the work. In addition, the alumni was also able to increase the acceptance level by communicating research results at district level.

According to the Theory of Change, informal and formal alumni networks are intended to contribute to lifelong learning and exchange as well as shape discourse on health worldwide on national, regional, and international levels. Regarding the contribution of networks to lifelong exchange, the results show that the changes occur on a smaller scale than anticipated by ITM. Nevertheless, Master graduates keep much more regular contacts with other ITM alumni than graduates of other courses. They keep strong networks and are in contact monthly to multiple times a year, be it with students and teachers. The results also show more regular contact with alumni from their own course from the same home country. The interviews provide some examples where the existence of an ITM community has led to shaping national and regional health discourse. In that regard, the graduates interviewed generally provided examples of the scope of changes being largely at the level of the organisation they work in and at local level, and in some cases at national level. Some mention particular instances, where ITM alumni work at different levels of a health administration system, therefore facilitating contacts between different actors in the field of public health (private, not for profit, public). In particular, in the cases of partner institutions, there seems to be a greater understanding of the approach adopted by the partner institutions, which is supported by ITM, with ITM alumni in the public administration of public health than with other interlocutors.

Ultimately, ITM intends to contribute to improving health worldwide, which is its highest level of impact. This is based on the skills the graduates have acquired and their positions at work. At this stage, the results shed light on the plausibility of this impact based on the results mentioned until this point. The results show that the Master graduates identify their greatest influence at the level of health programmes and health services. This is aligned with the results showing that Master graduates are mostly employed in Health or Disease Control Programmes.

4.3.1.2 Impact of Short Courses

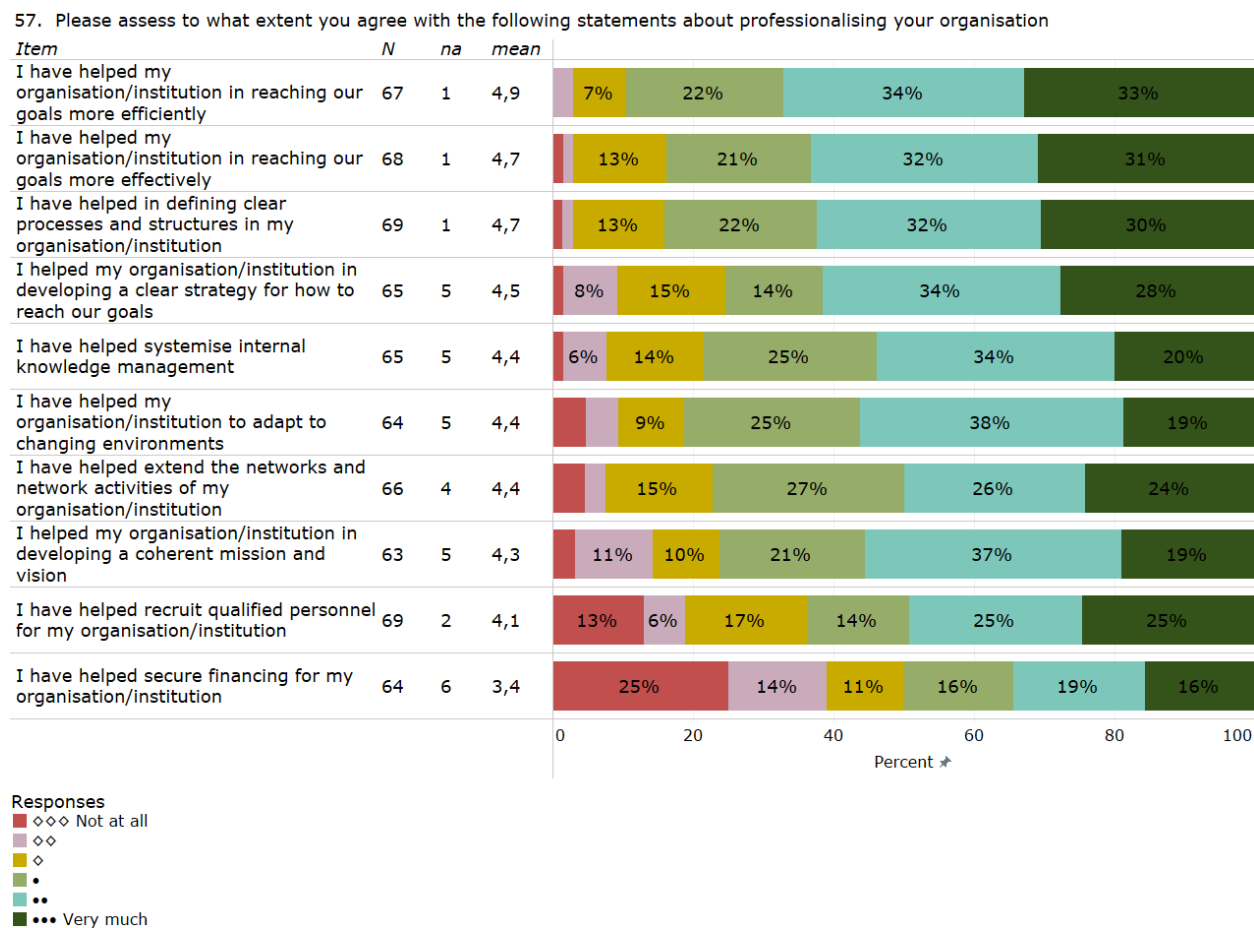
The results regarding the status of ITM alumni as agents of change show that the knowledge acquired at ITM through their Short Courses has been transferred to colleagues for most of the participants (95%; n=93) and the capacities of the colleagues have been strengthened to a large extent (91%; n=93).

With regards to strengthening organisations, the survey results show that Short Course graduates help their institution in reaching their goals more efficiently and effectively. This is exemplified by graduates who have introduced new practices, such as the use of information for decision making.

Regarding the contribution of formal and informal networks to lifelong exchange, the Short Course graduates keep in touch with ITM alumni and staff once to several times a year, mostly with the students from their own courses and to a certain extent with teachers, more than with students from other courses. This is corroborated by the interviews, as graduates explain that they have more frequent contacts with other graduates from the same country because the topics and research are more easily shared, for example in the field of clinical research.

Ultimately, ITM intends to contribute to improve health worldwide, which is the highest level of impact. This is based on the skills the graduates have acquired, as well as their positions. At this stage, the results shed light on the plausibility of this impact. The results show that the Short Course graduates identify their greatest influence at the level of health research and health services. This is in line with the results on their current occupation, which shows that Short Course graduate are mostly employed in the field of health research and clinical work. The qualitative interviews with the graduates highlight that some graduates have led the development of protocols and guidelines in the health sector, some of which have been used across regions within a country and on some occasions across countries.

Figure 32: Contribution of ITM graduates to organisational change – Short Courses



Source: ITM Graduates Survey 2020

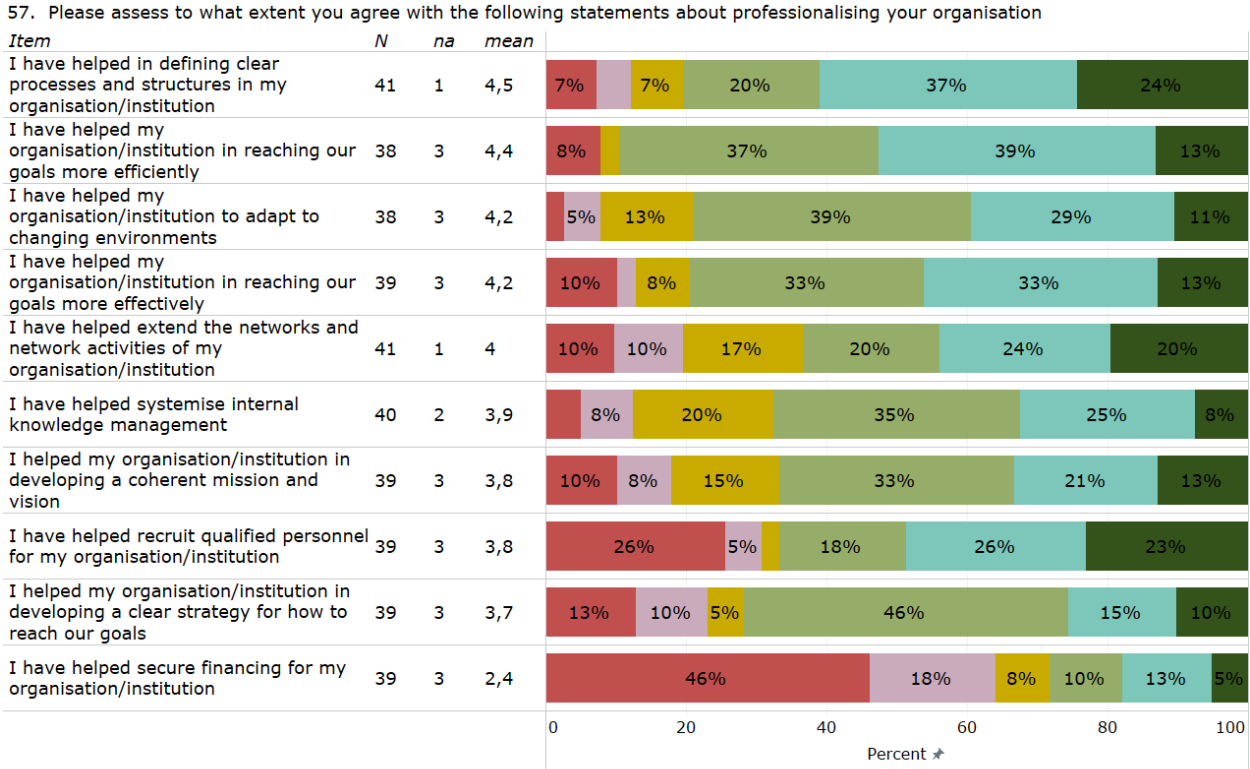
4.3.1.3 Impact of PhD

In terms of making ITM alumni agents of change, the results show that the knowledge acquired at ITM through their PhD has been transferred to colleagues for a large proportion of the participants (98%; n=37) and the capacities of the colleagues have been strengthened to a large extent (95%; n=35). The PhD graduates also report to have a large influence on the development of new projects relevant to their countries that would require their new knowledge and skills (94%; n=34; and 90%; n=33, respectively). Compared to the other courses, PhD graduates' rate highest on all aspects of the transfer of knowledge. This can be explained by the occupation of the PhD graduates in research and teaching where they are most actively involved in training students using their skills.

The survey results regarding organisation strengthening show that PhD graduates help their institution in defining clear processes and structure in their organisations. The results also highlight that the PhD graduates have a great influence on networks and networking activities in their institutions. They also rate higher than any other course on their ability to secure financing for their organisations. The graduates interviewed mention that they have introduced new tools in their organisations, for instance a tool to assess the technical capacities of teams. The graduates who work in laboratories, clinics, and other similar organisations mention that their impact is rather localized to the organisation they work in and in their field of expertise.

of debriefing sessions organised in their organisation upon their return, but no other actions were mentioned.

Figure 34: Contribution of ITM graduates to organisational change - PGC



Responses
 Not at all
 (light purple)
 (yellow)
 (light green)
 (medium green)
 Very much

Source: ITM Graduates Survey 2020

ITM also strives to strengthen organisations, including partner organisations and ITM itself in their professional capacities to contribute to scientific and public discourse and practice relevant to their respective contexts. To that end, ITM envisions its graduates to contribute to changes at the organisational level, within the institutions where they are employed. The results show that PGC graduates consider that they help their institution in defining clear processes and structure in their organisations and in reaching goals more efficiently. The qualitative interviews have gathered varying accounts of organisational strengthening, mainly depending on the occupation of the PGC graduate. For the graduates in the public health system or in NGOs, they have had some traction in shifting strategy during a public health response but do not estimate they have an influence on the entire organisation. However, PGC graduates in other positions, such as teaching, feel they have greater influence through their teaching occupation, such as the structure of the classes they give and their pedagogical approach.

According to the Theory of Change, ITM expects that informal and formal alumni networks are intended to contribute to lifelong learning and exchange as well as shape discourse on health worldwide on national, regional, and international levels. Even though this impact is less applicable for PGC, graduates keep in touch with the students from their own courses, with whom they interact once to multiple times a year. The results show that for PGC, the career paths are a clear factor into keeping in contact. The PGC graduates that have continued with a career in humanitarian settings, in particular at MSF, have kept more regular contact with other graduates that have the same occupation. Their interactions are

mostly linked to job opportunities, according to the PGC graduates interviewed and are less likely to tackle global discourse on health practices worldwide.

Ultimately, ITM intends to contribute to improve health worldwide. This is the highest level of impact intended by ITM. This is based on the skills the graduates have acquired and whether they are in a position to contribute to the improvement of health worldwide. At this stage, the results shed light on the plausibility of this impact based on the results mentioned until this point. The results show that the PGC graduates identify their greatest influence at the level of health services. This is in line with the results on the current occupation of PGC graduates, which show that the majority of them are employed in clinical work. The structure of the course also explains that this result since the PGC are especially targeted at doctors and medical staff with the objective to further professionalize their profile in medical practice. It is therefore less geared towards the shaping of international discourse.

4.4 Coherence

The evaluation criterion coherence addresses the question of “how well does the intervention fit?”. In the context of this evaluation, we analyse both internal coherence and external coherence. In this evaluation, internal coherence, entails the consistency of the educational activities and the scholarship programme with the objectives set by DGD. External consistency, in turn, entails whether ITM’s activities are aligned with similar actors in the same context. Further, the comparison with peer institutions allowed to identify unique factors that distinguish ITM from its peers.

4.4.1 Internal coherence

As the scholarships, which are the focus of this evaluation, are funded by DGD, they should contribute to the overarching objectives of DGD. To understand whether ITM’s scholarships are coherent with DGD’s strategies, we first analysed whether ITM thematically contributes to DGD’s objectives and second, whether the educational activities and scholarship programme are within the geographic priorities of DGD.

First, the analysis of DGD’s priorities and ITM’s activities, effects and impacts shows that overall, ITM is aligned with the thematic priorities of DGD. Analysing DGD’s thematic priorities shows that **health** is a priority sector. Furthermore, key areas in this priority sector are strengthening the human resources available for healthcare and the integrated fight against specific and neglected diseases. As the previous sections have shown, ITM’s educational activities and scholarship programme contribute to human resources in health care. Specifically, the survey results show that ITM educates people who did clinical work (42%), worked in health or disease control programmes (29%), or in health services or system management (23%) before their studies (n=435). After their studies, graduates still worked in these fields (38%, 29% and 26% respectively, n=392). Therefore, ITM’s educational activities can contribute to DGD’s objective of strengthening human resources in health care, as graduates work in this sector and can use their skills (see Section 4.2). In addition, ITM addresses DGD’s priority issue of battling neglected diseases with the educational activities offered. In this regard, ITM offers specific Short Courses, which address this issue, for example the Short Course “Malaria & Neglected Tropical diseases Control and Elimination”.

In addition to the emphasis on health, DGD seeks to improve education, particularly higher education in its joint strategic frameworks. Contributing to this, ITM is a key actor in higher education in the field of tropical medicine and public health. The online survey shows that after completing their ITM education, 38% of respondents work in research and 24% work on teaching (n=392). This is confirmed in the qualitative case studies, where graduates added that they were able to use the skills learned at ITM to improve their research and teaching (see Section 4.2). For example, interviewed graduates described that they used the teaching methods that they benefitted from at ITM, such as case-based learning, to improve their own teaching activities.

Regarding the geographic focus and priorities, DGD focusses on certain priority countries. With these countries that are mostly least developed countries in Africa, DGD pursues to maintain long-term partnerships. In contrast to this strategy, ITM's educational activities aim to have students from as many low- and middle-income countries as possible to foster exchange in diverse student cohorts. Thus, there is a contradiction between DGD's narrow and specialised geographical focus and ITM's broader geographical focus. To address this contradiction, the interviews showed that ITM and DGD have reached a compromise, whereby the majority of ITM's DGD scholarships are awarded to citizens from the DGD's priority countries, but they are open for other students from low and middle-income countries. As a result, the student population data shows that the cohorts are mostly diverse, as intended by ITM, but many students⁶⁹ are funded from DGD's priority countries.

4.4.2 External coherence

To understand whether ITM is externally coherent with similar actors, it is analysed whether these actors have similar objectives as ITM and to what extent these objectives are aligned with each other. Moreover, we analyse whether there are mechanisms in place to ensure the (future) alignment of activities. Further, unique factors are analysed that distinguish ITM from its peers. For the purpose of this evaluation, similar actors were identified as VLIR and ARES, which also run scholarship programmes funded by DGD. VLIR is a network of universities that supports partnerships between universities in Flanders and the Global South, while ARES brings together the higher education institutions of the Federation Wallonia-Brussels. Moreover, the Royal Tropical Institute (KIT) in the Netherlands was analysed, as it has a similar education and scholarship scheme, as well as a similar focus regarding its educational activities. The Royal Tropical institute (KIT) is an independent Dutch institute for applied knowledge that focusses on public health and tropical medicine.

Through its educational activities, ITM aims to contribute to health worldwide. In a similar vein, the Royal Tropical Institute (KIT) envisions "a world where everyone can realise their full health potential".⁷⁰ To achieve this goal, KIT offers similar educational activities as ITM, namely Master courses and Short Courses in the fields of public health and tropical medicine. To support students in their studies, KIT also offers scholarships for students from low- and middle-income countries. Thus, ITM and KIT offer similar educational activities and scholarship programmes in the field of public health and tropical medicine, but in two different countries, namely Belgium and the Netherlands. To coordinate these activities, both institutions developed a coordination mechanism – the **tropEd Network**, which encompasses multiple institutions for higher education in global/international health from Africa, Asia, Australia, Europe and Latin America. The TropED Network aims to achieve consistency between the educational programmes of the participating institutions by aligning their course structures and contents. It consists of a network of various institutions focusing on international health, through which students can individually structure their studies by combining different courses from different participating institutes and complete their studies at their home institute. For this purpose, the tropEd Network creates a common framework, which defines common minimum academic and quality assurance structures, content and criteria the nationally accredited degree must adhere to. They offer joint degree programmes to promote a multicultural environment and a flexible structure. Thus, through the coordination mechanism, ITM and KIT, as well as other institutions in the tropEd Network can offer joint degrees and therefore create synergies between their aligned activities.

In addition, through its DGD-funded scholarship programme, ITM intends to offer students from low- and middle-income countries the opportunity to study in Belgium. In this regard, it is similar to VLIR and ARES, which are the other two organisations in Belgium offering DGD-funded scholarships to students from the Global South. Nonetheless, ITM offers a unique set of activities, as it is an institute focussed on education in tropical medicine and public health, while ARES and VLIR offer scholarships in a wide range of fields for students to study at different universities. Specifically, VLIR aims to strengthen the individual capacities of students and the capacities of universities by educating their staff. To achieve

⁷⁰ KIT, 'Global Health', accessed 9 June 2021, <https://www.kit.nl/global-health/>.

this double objective, VLIR's first scholarship programme is aimed at PhD students of the participating institutions. In this sense, it is similar to ITM's institutionally funded PhD programmes, which are also integrated into institutional partnerships. In contrast to VLIR, however, ITM's institutional partnerships and PhD programmes are concentrated in the fields of tropical medicine and public health. With its second scholarship programme, VLIR aims to enable students to become "actors of change" in their home countries.⁷¹ In this regard, it is also very similar to ITM, which aims to enable students to be agents of change that embody scientific, ethical, and professional attitudes and values, but in the field of tropical medicine and public health. To achieve this objective, VLIR offers scholarships to students from 31 low- and middle-income countries to do their Masters at a Flemish university. Furthermore, the individual scholarships are also offered to applicants for Short Courses aiming at already professionally active applicants from universities, research centres or NGOs. Thus, in funding students for Master courses and Short Courses, ITM and VLIR also have similar target groups.

Furthermore, in line with ITM and VLIR, ARES aims to enable graduates to face developmental challenges, and to strengthen the capacities of partner institutions. In total, it offers three main types of scholarship programmes for Master students, internship holders, PhD students and Belgian students, two of which are similar to ITM's scholarship programme. The first scholarship programme addresses international Master students and interns who want to study at a francophone Belgian university and who are part of an institutional partnership with the Global South. Thus, the programme is similar to ITM's scholarship programme that is run through the institutional partnerships. Nonetheless, as mentioned above regarding the comparison to VLIR, ITM focusses its partnerships on the field of tropical medicine and public health, while ARES addresses a broader range of fields. The second programme is a mobility programme, which offers international PhD students the opportunity to do their PhD in Belgium. Similar to ITM's PhD programme, this programme is based on a sandwich structure and aims to maintain a link with the respective home countries, which enables students to be both engaged in activities in Belgium and their home countries. Again, however, ARES' PhD programme is not focussed on one academic discipline and is thus less specialised than ITM's PhD programme.

To coordinate these similar efforts, the three institutions, **ITM, VLIR and ARES, have established a Common Strategic Framework (CSC - Cadre Strategique Commun)** as their main coordination mechanism. This CSC has been recently developed but is not yet approved. It is based on a jointly developed Theory of Change with a major focus on scholarships to foster mutual exchange and to improve the effectiveness of their activities. In this framework, ITM, VLIR and ARES agree on common individual and institutional goals and develop a platform for mutual exchange and learning. While DGD has not put in place strict guidelines on the objectives of the scholarship programme, the interviewees stated that the donor side also values alignment of the institutes. The interviewees mentioned, for example, that DGD requested to develop a common policy to address common challenges during the Covid-19 pandemic. To further promote collaboration between the institutes as well as to include DGD in the coordination processes, DGD, ARES and ITM are also collaborating via the ARES policy support programme. The support programme established a research group, which supports DGD with the expertise of the involved institutes. This could be, for example, the formulation of a policy brief on a specific topic DGD needs advice on. ITM collaborates mainly with its liaison officer in this mechanism (see chapter 4.4.1).

Besides common factors of ITM and its peer institutions like comparable scholarship programmes, a similar thematic focus and the promotion of intercultural exchange, the comparison with the peer institutions identified **unique factors**.

ITM's **thematic expertise** is a positive factor that distinguishes ITM from its peers. This was repeatedly highlighted during the interviews with the peer institutions. Its long-standing focus on tropical medicine and public health as well as its focus on students with a professional background supports the development of high-quality courses taught by experienced lecturers. ITM's strength in its thematic

⁷¹ VLIR-UOS, 'Scholarships for Master programmes', accessed 9 June 2021, [https://www.vliruos.be/en/scholarships/scholarships_in_flanders/scholarships_for_master_programmes_\(icp\)/114](https://www.vliruos.be/en/scholarships/scholarships_in_flanders/scholarships_for_master_programmes_(icp)/114).

expertise was already highlighted in the relevance chapter (see chapter 4.1.1), as graduates assessed the thematic focus and the experienced staff as one of the key aspects influencing their satisfaction with their studies. ITM furthermore **leverages its thematic expertise** in tropical medicine and public health through the **DGD liaison officer**, who directly provides the expertise to DGD. This position enables ITM to translate its specific expertise into policy briefs and thus support the development of the health policy sector, both in Belgium and internationally (see chapter 4.4.1). This position and ITM's commitment to support DGD with its expertise was pointed out as a unique factor by the institutes interviewed. At the same time, the thematic expertise is a limiting factor to ITM in terms of its professional diversity. The focus on a specific target group (mainly physicians with professional experience) was mentioned by the peer institutions to be a **limiting factor** in ITM's professional diversity. Other organisations like KIT or VLIR, for example, address a broader target group to enhance the diversity of their cohorts and support mutual learning or include more master students with a Bachelor as an entry requirement in their programmes. While ITM ensures a high diversity in terms of gender and geographical origin of the students, the professional diversity was sometimes considered to be rather limited both in the case studies and in the interviews with the peer institutions.

Further, ITM distinguishes itself from other institutions in terms of its **diversity**. Specifically, the **gender and geographical diversity** of ITM's cohorts were emphasised as a positive unique factor. This was already highlighted by the graduates included in the online survey and during the case studies, the interviewed peer institutions confirmed this aspect to be a unique factor. ARES, for example, mentioned a higher participation rate of female students in ITM's study programmes than in its own scholarship programmes. The allowances that were granted to family members as part of an ITM scholarship are considered a crucial factor in creating incentives for female applicants to apply for an ITM study programme and therefore enhancing female participation.

Another unique factor is relatively **secure funding of ITM** which allows ITM to build long-lasting partnerships and to offer the opportunity to maintain the alumni networks. In comparison to other institutions and scholarship agencies, ITM's institutional partnerships, educational activities and scholarship programme build on long-lasting partnerships with the Belgian Government and long-term funding commitments. The management agreements with various Flemish and federal ministries amount to approximately 55% of ITM's total revenue.⁷² External competitive grants, medical services, and student tuition and registration fees make up the rest of the total revenue. This allows ITM to build and maintain long term and strategically planned institutional partnerships for capacity development. In addition, interviewees from peer institutions pointed out the funding for ITM's alumni activities, while the budget of other institutions does not allow for significant investments in alumni activities.

ITM's overall **support structures** to assist its students to successfully manage their studies abroad were another unique factor raised during the evaluation. The interviewees, for example, pointed to ITM's dedicated housing support for its students. Besides the financial support in form of the DGD scholarship, the social and academic support structures were also highlighted as particularly relevant to the students (see chapter 4.1.1). Combined with the perceptions of staff at similar institutions highlighting this aspect, this underlines ITM's support structures as a unique factor that positively distinguishes ITM from its peer institutions.

⁷² Institute of Tropical Medicine, 'ITM Institutional Policy Plan 2020-2024. "Global Science for a Healthier World"', 7.

5 Conclusions and Recommendations

This chapter presents the conclusions and recommendations by the evaluation team. These are based on the results presented in the previous chapter and address evaluation questions along the criteria of relevance, effectiveness, impact and coherence.

The main data sources for the results and the analysis are a survey of the alumni and a comparison group, four country case studies with interviews with alumni, their supervisors, partner institutes and educational experts, interviews with comparable institutes and PGC alumni, as well as focus groups with ITM staff and alumni.

5.1 Conclusion

Regarding the evaluation criterion relevance, the evaluation analysed to what extent ITM's educational activities meet the needs of its students and of the employers of graduates. The evaluation team concludes that **ITM's educational activities are relevant**, as students learn relevant and useful skills for their professional practice to add value in the fields of public health and tropical medicine. Specifically, ITM enables students by conveying soft skills and practical skills, which are strongly needed by student and employers who work in the fields of public health and tropical medicine. Through the wide range of courses offered at ITM and the modular structure, the educational activities are relevant to different students with different needs. For example, those who want to gain expertise in particular topics can complete a Short Course, while those who want a broader education and have more time resources can do a Master programme. Moreover, ITM allows students to follow multiple courses, such as combining Short Courses and Master courses, so that graduates can build up skills over a longer time span. On the level of partner institutions and employers, ITM also supports student mobility and is therefore relevant for partner institutions who need to become more visible in the global public health community.

In addition, the evaluation analysed the relevance of the DGD-funded scholarship programme by assessing to what extent it is aligned with scholarship holders' financial needs. Furthermore, it was analysed to what extent the scholarship programme creates access to education. In these regards, the evaluation team concludes that the programme is highly relevant and effective, as it gives students the necessary financial resources to access education and focus fully on their studies. In this sense, many students would not have alternative sources of funding, so that the scholarship programme gives access to the educational activities. Furthermore, the financial structure of the programme, which incorporates additional costs such as for visa, flights or dependants is mostly appropriate for students' needs and therefore relevant. As a result, many do not have financial problems or concerns during their studies, which allows them to focus on their studies and strengthens the effect of the educational activities. Nevertheless, the evaluation also uncovered that the allowance is not always sufficient, especially to cover research costs during PhD programmes. In this regard, the evaluation results point to a potential area of action, as specified in recommendation 2.

To understand the effectiveness of the educational activities and scholarship programme, the evaluation team analysed the extent to which the activities have led to the achievement (or not) of the expected results (outputs) and changes (outcomes). In this context, the hypotheses that were outlined in section 2.7 were analysed.

In Outcome 1, ITM aims to strengthen of formal and informal networks for lifelong learning, exchange and belonging. In this regard, the evaluation results show that overall, **long-lasting connections between graduates as well as staff** are created. To achieve this outcome, the ToC suggests that *if students study in diverse cohorts, study groups or communities and engage in peer-learning, they can strengthen formal and informal networks for lifelong learning, exchange, and belonging after their graduation (Hypothesis OC1-OP1)*. This hypothesis is partially confirmed by the evaluation results, as they show that diverse cohorts, study groups and communities contribute to exchange, which can be maintained over a long time. In addition, students from different cohorts, but the same countries

connect to each other, thereby strengthening an informal alumni network across generations of students, but not necessarily between students of different courses who are at ITM at the same time. Nonetheless, the networks are mostly created and maintained through informal processes, such as joint WhatsApp groups on cohort, course or national levels. These are useful to stay informed about current events or discuss job opportunities. Moreover, when multiple graduates work in the same field and in the same country or region, these connections can be used for cross-organisational collaboration. As a result, on an impact level, graduates have the potential to act as agents of change in fields of tropical medicine and public health, but this is dependent on the connections and support that they have from their organisations. Regarding the formal alumni networks, however, which entail a variety of channels, including the alumni platform, the evaluation concludes that it is appreciated and a well-known mechanism, but it is not being used to its full potential yet. To establish a formal alumni network, the diverse cohorts are the only explanatory factor, because activities from ITM regarding alumni the alumni platform and further alumni activities are also needed. Thus, Hypothesis OC1-OP1 can be partially confirmed in the evaluation, but is not sufficient to explain the creation of formal alumni networks. In this context, the evaluation team also needs to mention that the alumni platform was only started in 2020, so that it was in place for around a year at the time of data collection for this evaluation.

Next to the creation of networks, ITM aims for graduates to further develop their soft skills (Outcome 2). In this regard, the evaluation results show that ITM's educational activities are **largely effective in developing skills and competencies** among students of all course types. To understand the development of soft skills, the Theory of Change suggests three potential mechanisms. First, *if students, invited lecturers, ITM staff, and graduates exchange knowledge and perspectives based on different disciplines, traditions, and field experience, and students study in diverse cohorts, study groups or communities and engage in peer-learning, they further develop their soft skills* (Hypothesis OP2-OC2). The data analysis confirmed this connection, as the interactions between students and staff were identified as a crucial factor for developing soft skills. Thus, the diverse cohorts, as well as the range of experiences of lecturers and staff are valuable factors to ensure the achievement of Outcome 2. Second, the ToC holds that *if students conduct research in their home countries and/or at partner institutes and/or at ITM, they further develop their soft skills* (Hypothesis OP3-OC2). In this regard, the evaluation team concludes that by conducting their research in their home countries, graduates' ties to their home countries were strengthened, which can be understood as one dimension of soft skills. Moreover, by conducting research activities, certain soft skills, such as presentation skills were strengthened. Nonetheless, the evaluation found that next to the conduct of research, the educational activities' explicit focus on soft skills is a vital mechanism to strengthen soft skills. In this regard, the evaluation team concludes that focussing on soft skills in modules, including practical exercises, is crucial to further develop the soft skills of ITM graduates. Third, ITM intends that *through gaining thematic, methodological, and ethical competencies and capacities in the areas of public health, biomedical sciences, or clinical sciences they further develop their soft skills* (Hypothesis OP4-OC2). This hypothesis could be confirmed in the evaluation, as the results show that graduates can use their newly acquired skills in combination, re-enforcing each other. In this regard, the evaluation results support the value-driven approach at ITM, according to which soft skills and hard skills are intertwined.

Finally, ITM aims for graduates to use their acquired competencies to add value in their professional practice and interactions (Outcome 3). The evaluation concludes that overall, **ITM graduates use their acquired competencies**. In their work environments, the graduates mostly pass on their knowledge to their colleagues and implement changes, so that the effect of ITM extends to the organisations at which graduates work. These changes mostly occur at lower organisational levels, however, such as introducing new guidelines or processes at team- or departmental levels. To achieve changes at higher organisational levels, the evaluation has found that many graduates face challenges, such as the confinement of their particular positions or organisational inertia, where colleagues or supervisors are not willing to implement changes. Nonetheless, the evaluation has also found that when multiple graduates work at the same institution, they can leverage their skills and contribute to organisational change, leading to impacts. For Outcome 3, the theory of change suggests three mechanisms, namely the exchange between students and staff (Hypothesis OP2-OC2), research that is conducted in home

countries (Hypothesis OP3-OC2), and the increase in thematic, methodological and ethical competencies (Hypothesis OP4-OC2). In the analysis, Hypothesis OP2-OC2 could be confirmed, meaning that the exchange among students and staff contributes to graduates adding value in their professional practice and interactions. Specifically, this is facilitated by the close academic support and high levels of expertise of lecturers. The evaluation team concludes that the long-lasting support of ITM staff also supports the use of knowledge by graduates. Furthermore, the diverse experience of students and lecturers is crucial for knowledge exchange and gaining insights into different health systems and practices. Next to the interactions between staff and students, the evaluation concludes that conducting research at home contributes to value addition to some extent. Specifically, because students conduct research in their home countries, they tend to work in their home countries afterwards and can therefore add value in their local contexts. Thus, if Outcome 3 is interpreted as “adding value in their professional practice in their home countries”, this connection can be confirmed. In terms of the third mechanism, the evaluation finds that the practical, hands-on orientation of ITM’s education is crucial to ensure that thematic, methodological and ethical competencies can be used in the professional environment. Since this orientation is a key component across ITM’s educational activity, this hypothesis can be confirmed through the evaluation results.

Finally, ITM aims for its graduates to be regarded as competent actors and valuable assets by and to the scientific and public health community (Outcome 4). In this regard, the evaluation team concludes that **graduates are only viewed as valuable assets to some extent**. Specifically, the analysis of ITM’s effectiveness and relevance has shown that ITM graduates are generally seen as valuable assets by their employers. Moreover, graduates progress in their careers graduating from ITM and can become valuable assets in the public health community, which is illustrated by the fact that they get higher positions, some in influential places, such as ministries or international organisations. Nevertheless, ITM is not consistently widely known in the scientific communities in some countries, meaning that ITM graduates do not benefit from a widely known reputation. Thus, the evaluation concludes that Outcome 4 is not fully achieved through the educational activities and scholarship programme. To improve the achievement of Outcome 4 and subsequent impacts one area of action is utilising the alumni network (see Recommendation 10).

Overall, the analysis has shown that one of the added values of ITM is its diverse cohort and the high quality of its student profiles, which are essential for knowledge exchange and learning. This is achieved through a **smooth and fair process**, which leads to select a highly qualified, yet diverse cohort. Nonetheless, the evaluation has also found that no concrete mechanism is set up in the application process to account for the socio-economic background of the applicants, except for their countries of origin. This could be an important factor in the future, particularly in the light of the global Agenda 2030, which emphasises “Leaving No One Behind”. As outlined above, the evaluation has found, however, that once selected, the scholarships and educational activities are very effective in taking into account the financial needs of the students. In addition, once selected, students receive high levels of academic and social support, thus ensuring that all students feel welcome and supported at ITM. Therefore, after the selection process, the scholarships provide equitable access to education.

To assess the internal coherence, the evaluation team analysed the consistency of the educational activities and scholarship programme with the objectives set by the DGD. By contributing to health worldwide through education, ITM furthermore contributes to DGD’s overarching goals of health and higher education. Thus, the evaluation team concludes that on a thematic level, ITM is **internally coherent with DGD**, which is the main funding body of the scholarship programme. Regarding the geographical focus, the internal coherence has been achieved to some extent, as DGD-funded scholarships are mostly awarded to students from DGD priority countries. Nonetheless, the evaluation team concludes that there is a discrepancy between ITM’s aim to foster student interaction in diverse cohorts, which are key for the quality of the education and the development of competencies, and DGD’s aim to focus its activities on priority countries. Regarding the external coherence, ITM and VLIR, ARES and KIT strive towards contributing to sustainable development through higher education. To work on these joint objectives and achieve synergies, they use effective coordination mechanisms, namely the

DGD framework agreements for the coordination with VLIR and ARES and the joint membership in the tropEd Network. Furthermore, through the comparison to these three institutions, the evaluation team could further confirm unique and valuable factors identified above, namely ITM's thematic expertise, its geographic and gender diversity, and its secure funding situation, which allows to build long-lasting connections.

5.2 Recommendations

Overall, the evaluation team concludes that ITM's educational activities are relevant, effective and coherent. In the evaluation, areas for improvement were identified, as well as areas where existing practices should be maintained or strengthened. As such, the evaluation team makes the following recommendations, which are grouped by the actors addressed:

5.2.1 Recommendations for DGD and ITM

1. DGD should continue funding the diverse range of educational activities at ITM through its scholarship programme.

Overall, the evaluation has found that the combination of scholarship programme and educational activities is relevant and effective. Through the scholarship programme, students get access to education, which enables them to learn and use knowledge and skills on a wide range of topics in their work environments in the fields of tropical medicine and public health.

2. DGD and ITM should maintain the financing structure of the scholarship programme, which considers visa costs, flight costs, as well as a small allowance for dependents, but review the research allowance.

Regarding the financial support, the evaluation has shown that it is mostly adequate in duration, amount as well as scope. Therefore, the structures should be largely maintained and continued. In this way, students can focus on their studies while at ITM and do not have to worry about financial matters at the same time. Thus, the scholarship does not only provide access to education, but also enhances the effects of education. Nonetheless, for the PhD students, the allowance for research should be reviewed to ensure that the research costs during the PhD can be covered.

3. DGD should continue funding scholarship recipients from a range of countries, as the diversity in cohorts is a crucial factor to facilitate capacity development.

In the evaluation, it has become apparent that the diversity of students within cohorts is important for the exchange of knowledge and experience between students. As such, students can learn about different health systems or practices in different countries and contexts, which is crucial for their learning experience. This is one of the aspects that positively distinguishes ITM from other comparable institutes and organisations. For these reasons, funding students from a wide range of countries should be continued.

5.2.2 Recommendations for ITM

4. ITM should maintain its diverse range of courses offered, which combines Short Courses, Master courses, post-graduate certificate courses and PhDs, as well as the modular structure within the courses.

The evaluation has found that ITM's range of educational activities meets the needs of different students or of students in different phases of their lives. As such, Short Courses provide short but in-depth insights into specific topics or methods, while Master courses allow for a broader range of topics and competencies, and the PhD programme allows for a deeper dive into a specific research topic. The different course types also align with different personal situations, where Short Courses

are an opportunity for students who cannot be away from their family or their job for an entire year. Moreover, the post-graduate certificate courses offer an opportunity for an additional target group, namely doctors and nurses from the Global North to gain insights into tropical medicine and public health in the Global South.

5. In its educational activities and scholarship programme, ITM should continue its emphasis on close academic and social support.

The evaluation has found that one of the very effective and distinguishing features of ITM is the close support that students get academically and socially. During their studies, students benefit from the social support structures, including support with housing or visa and social activities. Moreover, the evaluation has shown that the close academic support and personal connections between lecturers and students is crucial for the learning experience at ITM and for the long-term connections of students with ITM.

6. ITM's emphasis on values, critical thinking and soft skills should be maintained and strengthened in its educational environment.

In the evaluation, it has become clear that ITM's emphasis on values, critical thinking and soft skills addresses the needs of employers and students alike. The emphasis on values and critical thinking entails reflections of different approaches to medicine and public health. This critical reflection could be expanded on, particularly in the PGC course, where anti-racism and post-colonial reflections might be particularly relevant. In these, ITM's Commission on Decolonisation (CODECO) could be engaged. Furthermore, the emphasis on soft skills allows students to thrive in their working environment and contribute to positive organisational change. Therefore, the evaluation team recommends that soft skills should continue to form an integral part of the ITM curriculum.

7. ITM should strengthen the diversity of lecturers and staff.

The evaluation has shown that students benefit from the wealth of knowledge and experience of ITM staff. This is derived from the professional and geographic diversity of lecturers. In the future, this diversity, especially the geographic diversity, should be strengthened, for instance by involving alumni and staff of partner institutions as guest lecturers in courses.

8. ITM should maintain its selection process overall but consider integrating the Leave no one Behind agenda.

Regarding the selection process, the evaluation has found that overall, the application is fair and selects appropriate candidates for the studies. To strengthen the access of disadvantaged groups further, the evaluation team suggests the following steps. First, ITM should agree on joint understanding of disadvantaged groups. This can include aspects, such as country of origin (already included in the selection criteria), financial means, disability, educational background of the family, or ethnic minorities. To facilitate the process, it could build on existing efforts by other scholarship-providing institutions, such as the Mastercard Foundation or the German Academic Exchange Service, who are also addressing this issue. Second, ITM can increase advertising for its programmes, also targeting disadvantaged groups. Thus, in the advertising strategy, aspects like high levels of social, academic and financial support should be emphasised to lower potential barriers to application. Third, ITM should establish a mechanism to especially consider disadvantaged groups in the selection process. The evaluation has found that such a mechanism exists to specifically select female candidates. Thus, the evaluation team suggests building on this to include previously defined aspects on potential disadvantages in the selection process.

9. ITM should create more joint activities between courses, especially between the Post-Graduate Certificate courses and other courses.

To fully benefit from the wealth of courses described above, ITM should foster interaction between courses. In this sense, the evaluation has found that much interaction at ITM and afterwards takes place within courses and cohorts. This recommendation applies particularly to the PGC students, who also usually live off campus. ITM could facilitate cross-cultural learning and exchange, for example on different health systems and practices between MPH students and PGC students. This could also strengthen the connections and networks formed at ITM.

10. To leverage its alumni network for impact, ITM should further develop its alumni strategies and activities.

The evaluation has shown that graduates are well connected, but the formal alumni network does not play the most important role in this connection. Therefore, ITM could keep on developing its alumni strategies and activities. In this strategy development, there should be an emphasis on leveraging the network for impact, meaning that connections are created and maintained between students at regional, national or local levels for professional exchange. These could then be used to facilitate organisational changes at higher organisational levels and across organisations, as the results have shown that more persons and connections in a network strengthen such changes. Furthermore, the network could be used more deliberately for marketing activities, to ensure that ITM is known to a wide range of potential applicants. In this process, ITM should continue building on the engagement of lecturers, who can play an instrumental role in connecting alumni with each other.

6 Annex

6.1 Design and Methods

6.1.1 Theoretical Background

For the theoretical framework of this evaluation, we conducted a literature review. Thus, in this chapter we explain our understanding of the outcomes that a training programme (and scholarships) are supposed to have, the factors that influence these outcomes, and how we understand the learning transfer. Based on this theoretical framework, Syspons developed the Theory of Change of ITM's educational activities and scholarship programme subject to this evaluation, the evaluation matrix which operationalizes the evaluation questions, the data collection instruments and especially the online survey.

In its proposal for carrying out this evaluation, Syspons suggested to use the **Kirkpatrick model** to measure the outcomes of ITM's educational activities and scholarship programme. This model describes the effect of educational programmes on four levels: Trainees' reactions to the implementation of a course, acquisition of knowledge or competencies by the trainees (learning), behavioural changes of the trainees (behaviour), and the resulting changes in organisations (results).⁷³

Despite its extended use in evaluations, the Kirkpatrick model has been subject to criticism.⁷⁴ According to various authors, the Kirkpatrick model overlooks factors that influence the transfer of knowledge before, during, and after a training programme.⁷⁵ For instance, the model does not consider the motivation and support trainees have in an organisation.⁷⁶ Furthermore, critics argue that the Kirkpatrick model is merely a taxonomy (not a theory or a model) and that there is no empirical corroboration for the assumed causal and linear connection between its four levels is lacking.⁷⁷

A range of theoretical models have been subsequently developed, including Holton's three level evaluation model,⁷⁸ the transfer model by Thayer and Teachout,⁷⁹ the IPO model⁸⁰ of Bushnell,⁸¹ the CIPP model⁸² by Stufflebeam, the CIRO model⁸³ of Warr, Bird and Rucham,⁸⁴ and Brinkerhoff's six stage

⁷³ Donald Kirkpatrick and Kirkpatrick, *Evaluating Trainign Programms* (Berret-Koehler Publishers, Inc., 1959).

⁷⁴ George M. Alliger and Elizabeth A. Janak, 'Kirkpatrick's Levels of Training Criteria: Thirty Years Later', *Personnel Psychology* 42, no. 2 (June 1989): 331–42, <https://doi.org/10.1111/j.1744-6570.1989.tb00661.x>; R. O. Brinkerhoff, *Achieving Results from Training* (San Francisco, CA: Jossey-Bass, 1987); J. Hilbert, H. Preskill, and D. Russ-Eft, 'Evaluating Training', in *What Works: Assessments, Development, and Measurement* (Alexandria, VA: American Society for Training and Development, n.d.); Elwood F. Holton, 'The Flawed Four-Level Evaluation Model', *Human Resource Development Quarterly* 7, no. 1 (1996): 5–21, <https://doi.org/10.1002/hrdq.3920070103>; Kurt Kraiger, J. Kevin Ford, and Eduardo Salas, 'Application of Cognitive, Skill-Based, and Affective Theories of Learning Outcomes to New Methods of Training Evaluation.', *Journal of Applied Psychology* 78, no. 2 (1993): 311–28, <https://doi.org/10.1037/0021-9010.78.2.311>; Dean Spitzer, Malcolm Conway, and American Society for Training and Development, *Link Training to Your Bottom Line* (Alexandria, VA: ASTD, 2002); Richard A. Swanson, *Assessing the Financial Benefits of Human Resource Development*, *New Perspectives in Organizational Learning, Performance, and Change* (New York: Basic Books/Perseus Pub, 2001).

⁷⁵ Reid Bates, 'A Critical Analysis of Evaluation Practice: The Kirkpatrick Model and the Principle of Beneficence', *Evaluation and Program Planning* 27, no. 3 (August 2004): 341–47, <https://doi.org/10.1016/j.evalprogplan.2004.04.011>; Holton, 'The Flawed Four-Level Evaluation Model'.

⁷⁶ Bruno Broucker, 'Defining the Impact of Public Administration Programmes for Public Sector Organizations', *Teaching Public Administration* 33, no. 2 (July 2015): 193–207, <https://doi.org/10.1177/0144739414561331>.

⁷⁷ Alliger and Janak, 'KIRKPATRICK'S LEVELS OF TRAINING CRITERIA'; Bruno Broucker, 'Knowledge Transfer of Educational Programs in Public Management: Transfer-Inhibiting and Transfer-Enhancing Factors in the Belgian Public Sector', *Journal of Public Affairs Education* 16, no. 2 (June 2010): 231–53, <https://doi.org/10.1080/15236803.2010.12001595>; Ya-Hui Elegance Chang, 'An Empirical Study of Kirkpatrick's Evaluation Model in the Hospitality Industry' (Educational Leadership, Florida International University, 2010), <https://doi.org/10.25148/etd.FI10120807>; Hilbert, Preskill, and Russ-Eft, 'Evaluating Training'; Holton, 'The Flawed Four-Level Evaluation Model'.

⁷⁸ Holton, 'The Flawed Four-Level Evaluation Model'.

⁷⁹ Mark S. Teachout and Paul W. Thayer, 'A Climate Transfer Model' (Brooks Air Force Base, Texas: Airforce Materiel Command, 1995).

⁸⁰ IPO stand for input, process and output.

⁸¹ Daniel L. Stufflebeam, 'The CIPP Model for Program Evaluation', in *Evaluation Models: Viewpoints on Educational and Human Services Evaluation*, ed. George F. Madaus, Michael S. Scriven, and Daniel L. Stufflebeam (Dordrecht: Springer Netherlands, 1983), 117–41, https://doi.org/10.1007/978-94-009-6669-7_7.

⁸² CIPP stands for context, input, process and product evaluation.

⁸³ CIRO stands for context, input, reaction and output.

⁸⁴ Peter B. Warr, Michael William Bird, and Neil Rackham, *Evaluation of Management Training: A Practical Framework, with Cases, for Evaluating Training Needs and Results*, A Gower Press Special Study (London: Gower P, 1970).

model by,⁸⁵ among others. The evaluation team, together with ITM, has decided to use **Holton's three level model** to measure the outcomes of ITM's educational activities and scholarship programme for two reasons. First, Holton's model is a comprehensive framework for studying the impact of training programmes. It does not only describe the effects of educational programmes (on three levels), but it also considers several factors that influence the transfer process. As explained below, some of these factors relate to internal characteristics of the trainee (e.g., personality traits or motivation), to the environment in which the trainee should apply the learned content (e.g., peer or supervisor support) or to the training programme (e.g., the extent to which there is a coherence between the training content and the job requirements). Second, Holton's model is widely recognized among academics and practitioners. As such, the model has been extensively cited in academic papers over the last decades, it has repeatedly been tested empirically and the results have, in general, supported its theoretical construct.⁸⁶

Holton's model (Figure 35) stipulates that the outcomes of training programmes can be observed at three different levels:

- 1 Learning: "Achievement of learning outcomes desired in a [Human Resource Development] (HRD) intervention"⁸⁷
- 2 Individual performance: "Change in individual performance as a result of the learning being applied on the job"⁸⁸
- 3 Organizational results: "Results at the organizational level as a consequence of the change in individual performance"⁸⁹

These three outcome levels are influenced by secondary influences, motivation, environment, and ability (see left side of Figure 35). The different influences within these categories are explained below.

⁸⁵ Brinkerhoff, *Achieving Results from Training*.

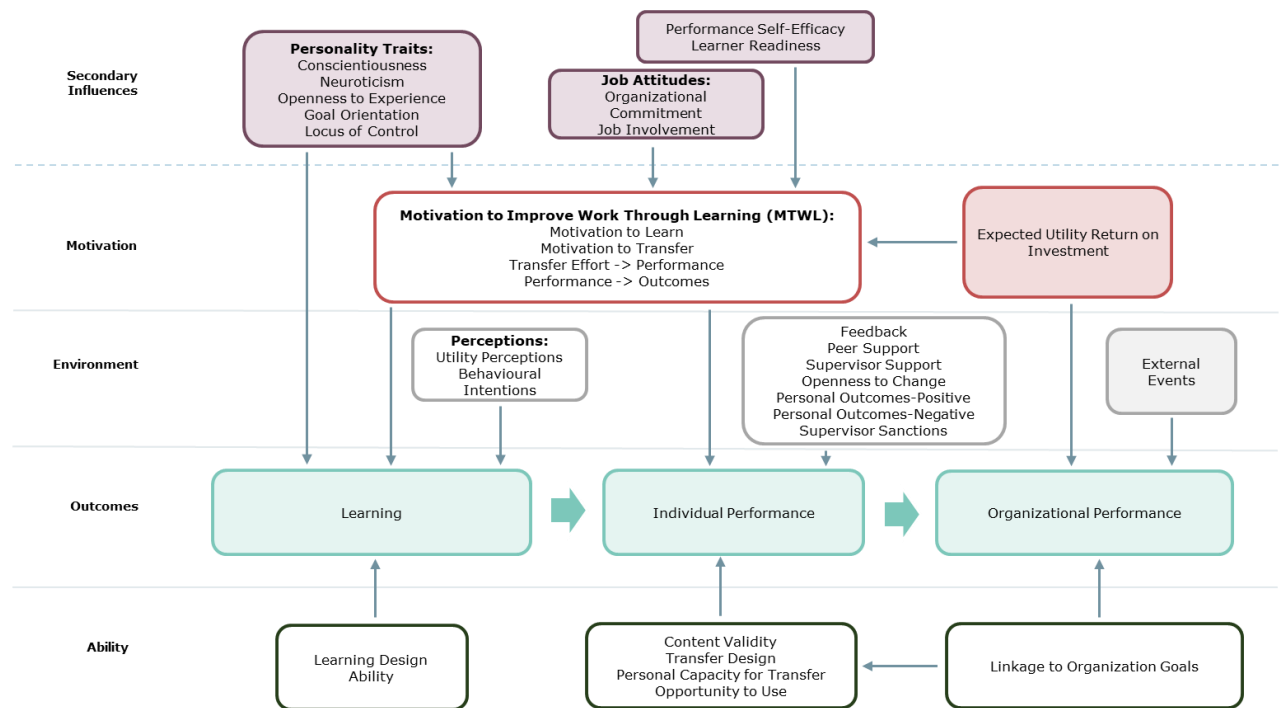
⁸⁶ Elwood F. Holton, 'Holton's Evaluation Model: New Evidence and Construct Elaborations', *Advances in Developing Human Resources* 7, no. 1 (February 2005): 37–54, <https://doi.org/10.1177/1523422304272080>; Cyril Kirwan and David Birchall, 'Transfer of Learning from Management Development Programmes: Testing the Holton Model: Transfer of Learning from Management Development Programmes', *International Journal of Training and Development* 10, no. 4 (27 November 2006): 252–68, <https://doi.org/10.1111/j.1468-2419.2006.00259.x>.

⁸⁷ Holton, 'The Flawed Four-Level Evaluation Model'.

⁸⁸ Holton, 'Holton's Evaluation Model'.

⁸⁹ Holton, 'Holton's Evaluation Model'.

Figure 35: Holton's Three-Level Model



6.1.2 Influences on learning outcomes

The achievement of outcomes at this level is influenced, by **personality traits of the trainees** (secondary influences). Some of these traits are three of the so-called “big five factors” that have received wide support in the literature: Conscientiousness, neuroticism, and openness to experience.⁹⁰ Moreover, the achievement of outcomes is also influenced by the goal orientation of the trainees. In this regard, Holton understands that “a learning orientation is associated with more positive learning outcomes, whereas a performance orientation is associated with negative or neutral learning outcomes.”⁹¹ Also, the locus of control plays a relevant role in this regard. The model indicates that trainees “with an internal locus of control tend to have more positive attitudes and motivation toward training because they are more likely to believe that they can change their abilities and motivation through their own actions.”⁹²

In a similar manner, the **ability and learning design** influences the learning outcomes of a training programme. The literature shows support for the influence of trainee’s mental ability.⁹³ since it “promotes self-efficacy and performance, and it helps a great deal with skill acquisition.”⁹⁴ Moreover, learning design should assure that, for instance, the training methods and instructional strategies are adequate for trainees to acquire new knowledge (internal curriculum consistency).⁹⁵ In addition, the curriculum should be coherent with stakeholders’ perceptions. This means that the programme’s

⁹⁰ Holton, ‘Holton’s Evaluation Model’.

⁹¹ Holton, ‘Holton’s Evaluation Model’.

⁹² Holton Holton’s Evaluation Model’.

⁹³ Timothy T. Baldwin and J. Kevin Ford, ‘Transfer of Training: A Review and Directions for Future Research’, *Personnel Psychology* 41, no. 1 (March 1988): 63–105; Malcolm James Ree and James A. Earles, ‘Predicting Training Success: Not Much More than G’, *Personnel Psychology* 44, no. 2 (7 December 2006): 321–32, <https://doi.org/10.1111/j.1744-6570.1991.tb00961.x>.

⁹⁴ Eduardo Salas and Janis A. Cannon-Bowers, ‘The Science of Training: A Decade of Progress’, *Annual Review of Psychology* 52, no. 1 (February 2001): 471–99.

⁹⁵ Salas and Cannon-Bowers.

intended learning outcomes are in line with supervisors' understanding of the challenges in the organisation.⁹⁶

Furthermore, the **job attitudes** also influence the learning outcomes (and to a certain extent also the individual performance level, see second level of the Holton model). The job involvement "has been the most frequently researched job attitude variable and has consistently been shown to be a significant predictor of motivation" (Holton, 2005). Furthermore, the organizational commitment can allow or hinder that the trainee learns new knowledge.

6.1.3 Influences on individual performance outcomes

The main factors that affect the achievement of outcomes at this level (and to a certain extent also the achievement of outcomes at the learning level, see figure above) have been systematized in the **Learning Transfer System Inventory (LTSI)**⁹⁷ and will be shortly introduced since they were used to develop the evaluation matrix. Since the LTSI was initially developed in the context of short-term training programmes in the private sector, it is used as basis in this evaluation, but adapted to the context.

To begin with, trainee characteristics should be considered when studying the impact of training programmes: On the one hand, the model foresees the influence of the **performance self-efficacy**, which relates to the individual's belief whether he/she is able to change personal performance outcomes. On the other hand, the model contemplates the **learner readiness**, which considers whether the trainees are "ready" or prepared to access and participate in a training program.

Moreover, the "Motivation to Improve Work Through Learning"⁹⁸ also influences the impact of a training programme. There are four central elements that are related to the motivation. First, the motivation to transfer learning relates to the effort done by the trainees to use the acquired knowledge in their jobs (for instance, measured by the intensity of these efforts). Second, the transfer effort-performance expectations indicate the extent to which the trainees believe that the transfer efforts will generate real changes in their job performance. Third, the performance-outcomes expectations relates to "the expectations that changes in job performance will lead to outcomes valued by the individual."⁹⁹ Fourth, the trainees' motivation to learn new knowledge and skills is also considered by Holton's model, even if this factor is not explicitly included in the LTSI.

The LTSI also foresees seven work environmental factors that influence the achievement of outcomes of training programmes. Outcomes are influenced, firstly, by the feedback, namely the organizational perception (and its communication) of the performance of the trainees in their workplaces. Moreover, the support or sanctions from supervisors due to the application of learned skills also influence the transfer process. In a similar manner, peer support is crucial to improving individual performance in the organisation and the resistance or openness to change will determine the influence of "group norms," which cause individuals to struggle (or not) to use the acquired knowledge.¹⁰⁰ Also, the perception whether the application of the acquired knowledge will lead to positive or negative consequences also plays a central role in the transfer.

Moreover, the LTSI includes factors related to the ability of the trainees. In this sense, the opportunity to use learning indicates whether the trainees have (or are provided) with job-related tasks in which they can use the acquired knowledge. Also, the personal capacity for transfer examines whether the trainees have sufficient resources (namely time, energy and mental space) in order to carry out the

⁹⁶ Joseph Kessels, 'A Relational Approach to Curriculum Design', ed. Jan van den Akker et al., *Journal of Curriculum Studies* 31, no. 6 (1999): 679–709, https://doi.org/10.1007/978-94-011-4255-7_5.

⁹⁷ Elwood F. Holton, Reid A Bates, and Wendy E A Ruona, 'Development of a Generalized Learning Transfer System Inventory', *Human Resource Development Quarterly* 11, no. 4 (2001): 333–60, [https://doi.org/10.1002/1532-1096\(200024\)11:4<333::AID-HRDQ2>3.0.CO;2-P](https://doi.org/10.1002/1532-1096(200024)11:4<333::AID-HRDQ2>3.0.CO;2-P).

⁹⁸ Holton, 'Holton's Evaluation Model'; Sharon Naquin and Ed Holton, 'Motivation to Improve Work through Learning in Human Resource Development', *Human Resource Development International* 6, no. 3 (September 2003): 355–70, <https://doi.org/10.1080/13678860210154431>.

⁹⁹ Broucker, 'Knowledge Transfer of Educational Programs in Public Management'.

¹⁰⁰ Broucker; Holton, Bates, and Ruona, 'Development of a Generalized Learning Transfer System Inventory'.

changes required for the transfer to take place.¹⁰¹ Furthermore, the perceived content validity relates to the extent to which the trainees consider that there is a match between the training content and the job requirements, while the transfer design indicates the extent to which the design of the training programme fosters trainees' use of learned knowledge in their jobs.

6.1.4 Influences on organisational performance outcomes

Finally, Holton's model foresees that training programmes generate outcomes with regards to the organisational performance. In the first place, Holton indicates that "organisations should not engage in HRD interventions unless the expected utility or payoff warrants investment of the resources,"¹⁰² since this would reduce the impact of the training course in the organisation. Second, external factors can also influence whether transfer occurs or not (e.g., a financial crisis that affect an organisation). Third, Holton indicates that "HRD interventions that are not linked to organisational mission, strategy and goals are unlikely to produce results and particularly results that are valued by the organisation."¹⁰³

Definition of transfer

Since the evaluation focuses on studying the extent to which **learning transfer** takes place, it is also necessary to present the working definition that is used in this evaluation, especially for the development of the evaluation matrix and the data collection instruments. One of the most used definitions of transfer is the "effective and continuing application, by trainees to their jobs, of the knowledge and skills gained in the training, both on and off the job."¹⁰⁴ In the last decades, this definition has been further developed and for this evaluation it is understood that the "ultimate goal of transfer is to improve performance, not to apply knowledge" *per se* (Broucker, 2010). The improvement of the individual performance (see second level of Holton's model), namely the added value generated by the application of the acquired knowledge, can be derived from **seven types knowledge use** according to Weis (1979):¹⁰⁵

- Knowledge-based refers to the instrumental use of knowledge to make small decisions at the workplace.
- Problem-solving is when the acquired knowledge is used to solve a concrete problem at the workplace.
- Political indicates the use of knowledge to support a (political) decision in an organisation.
- Interactive relates to the process of finding and using the most useful knowledge available.
- Intellectual enterprise refers to the process of simultaneously considering the various solutions that one problem might have.
- Strategic is when the trainee decides explicitly not to transfer knowledge, since it might be more strategic to postpone the use of the acquired knowledge.
- Enlightenment refers to the application of knowledge over a large period by several persons in an organisation. This type of use seems to have a major impact on organisations.

As can be deduced from the previous types of "knowledge use", transfer can be manifested in concrete actions of the trainees or in their cognitive reflections. Moreover, transfer does not necessarily have to take place in a systematic manner. On the contrary, the added value might be generated "only" at specific moments.¹⁰⁶

¹⁰¹ Broucker, 'Knowledge Transfer of Educational Programs in Public Management'.

¹⁰² Holton, 'The Flawed Four-Level Evaluation Model'.

¹⁰³ Holton, 'Holton's Evaluation Model'.

¹⁰⁴ Mary L. Broad and John W. Newstrom, *Transfer of Training: Action-Packed Strategies to Ensure High Payoff from Training Investments* (Reading, Mass: Addison-Wesley Pub. Co, 1992).

¹⁰⁵ As these seven types of knowledge use are not an exhaustive list, they will be used as a starting point in the evaluation.

¹⁰⁶ Broucker, 'Knowledge Transfer of Educational Programs in Public Management'.

6.1.5 Evaluation Focus

In the evaluation, the OECD-DAC criteria relevance, effectiveness, impact, and coherence will be used to guide and structure the evaluation questions. Based on the terms of reference, the analysis of documents and the explorative interviews, we developed an evaluation matrix (see Annex). In the following, we describe how the evaluation criteria are understood in the context of this evaluation and which questions will be analysed.

The evaluation criterion **relevance** will be addressed in the evaluation on two levels: The individual level and the institutional level. The individual level addresses the extent to which the educational activities of ITM and the scholarships respond to (potential) students' and scholarship holders' needs. Further, we analyse alternative pathways of alumni had they not been accepted to ITM. In addition, the institutional level addresses the extent to which the scholarship programme and the scholarship respond to institutional needs. In this regard, we will analyse both the needs of ITM's partner institutions and the needs of graduates' employers.

Furthermore, to analyse the **effectiveness** of ITM's educational activities and scholarship programme, we focus on the activity, output and outcome levels of the Theory of Change and analyse explanatory factors (see Section 2.1). Firstly, on the activity level, students' motivation for their studies as well as the selection and application process are analysed. In addition, we will analyse students' and graduates' satisfaction with social support structures, courses, academic support structures and alumni activities. Regarding the course satisfaction, the analysis will focus on overarching features, such as the practical orientation of many courses and the value-driven approach. It will, however, not analyse the academic quality of education, as this is comprehensively analysed in the NVAO evaluations. Secondly, on the output level, we analyse the extent to which the five outputs in the Theory of Change are achieved. For instance, this entails the extent to which students gain thematic, methodological, and ethical competencies, or the extent to which students obtain their degree, certificate, or doctorate. Thirdly, on the outcome level, we analyse the extent to which outcomes are reached, potential explanatory factors for these outcomes and whether ITM's activities lead to unintended effects. For the explanatory factors, we analyse whether the outputs contribute to achieving outcomes and we also analyse other explanatory factors that are suggested in the literature on knowledge transfer (see Section 6.1.1).

On the next level of the Theory of Change, we will analyse the **impact** of ITM's educational activities and scholarship programme. For this, we will examine the extent to which impacts are reached, emphasising stories of change and qualitative accounts. Since intended changes on the last impact level follow a long causal chain, we analyse the plausibility of ITM's educational activities and scholarship contribution to health worldwide. For this, we will synthesise the evaluation results, interpreting the plausibility by considering the literature on the impact of higher education and the relative importance of ITM as an institution in higher education for public health.

Regarding the level of **coherence**, the evaluation will analyse the extent to which ITM's scholarship programme is complementary with VLIR, ARES and the Royal Tropical Institute (KIT) in the Netherlands, where the scholarships (external coherence). For this, the scholarships of the three institutions will be compared. In addition, we will analyse the extent to which the scholarship programme is coherent with DGD policy and strategic priorities (internal coherence).

Based on the findings, the evaluation will develop **recommendations** for the further development of ITM's educational activities and scholarship programme. Depending on the findings, these recommendations can relate to the selection process, selection criteria, diversification of applicants, diversity of staff, relevance of ITM's education, management of student data, networking activities, or other fields.

6.1.6 Evaluation Design

To address the evaluation questions outlined above and detailed in the evaluation matrix, we suggest an evaluation design that combines contribution analysis, stratified cohort, and a counterfactual approach. In the following, we describe how these will be employed in combination.

To understand the effectiveness and impact of ITM's activities, we employ a **contribution analysis**. This is a concrete analytical approach that assesses whether realised effects can be ascribed to an intervention and which factors acted as drivers or inhibitors to realise the observed effects.¹⁰⁷ This approach was developed by John Mayne to assess the extent to which observed changes can be attributed to a project or programme. The analysis is based on an explicit Theory of Change or intervention logic and examines the underlying hypotheses as intended in the Theory of Change.

Briefly, the implementation of a contribution analysis as articulated by John Mayne can be broken down into six steps:

- **Set out the attribution problem to be addressed:** As described in the terms of reference, the evaluation aims to assess the social, developmental, and professional impact of educational activities on alumni competencies, capacities, and networks. In the inception phase of the evaluation, we defined and operationalised these intended impacts.
- **Develop a Theory of Change:** In the inception phase of the evaluation, we developed a Theory of Change for ITM's education activities. We constructed the Theory of Change in close collaboration with the Steering Committee, the Course directors, and other relevant ITM staff.
- **Populate the model with existing data and evidence:** Data to populate the model will be collected through quantitative and qualitative methods. These include an online survey of alumni and current students, as well as interviews and focus groups with students, alumni, and supervisors.
- **Assemble and assess the "performance story":** Based on the collected data and the evidence, the performance story of the ITM educational activities is developed, and the underlying impact hypotheses are reviewed. The preliminary results will be continuously reflected upon together with ITM to identify areas for further investigation.
- **Seek out additional evidence:** The results of the reflections with ITM are used by Syspons to identify avenues for further data collection in areas where findings are inconclusive or explanatory factors have not been identified. For this, new data, and evidence to adjust the Theory of Change will be gathered during the field missions in an iterative process to close data gaps from the online survey.
- **Revise the "performance story":** In an iterative process, the performance story of ITM's educational activities and scholarship programme will be refined and elaborated in the final report. To this end, the Theory of Change may be adjusted. Based on the revised performance story, strengths and weaknesses of the project will be identified and recommendations for future action will be derived.

To understand the long-term effects of ITM educational activities and scholarship programme, we will collect data in a **stratified cohort**. To our knowledge, there is no panel data available on ITM students and alumni. Therefore, we will produce an artificial approximated longitudinal design by collecting data on students from different cohorts. With this methodological approach, we will compare cohorts who graduated more recently to those whose graduation date was longer ago. In this way, we can assess the long-term changes, for example on career development. This survey can therefore form a basis for the future longitudinal survey.

In addition to the contribution analysis and stratified cohort, the evaluation employs a **counterfactual approach** to analyse the effectiveness of ITM's educational activities and scholarship programme. According to the counterfactual model, everyone has a potential outcome in each treatment state, even though only one outcome and one treatment state can be observed. In the context of this evaluation, this means that we can only observe the development of individuals who attended ITM or those who did not, but we cannot observe the development of ITM students had they not attended ITM's education.

¹⁰⁷ John Mayne, 'Addressing attribution through contribution analysis: using performance measures sensibly', *The Canadian Journal of Program Evaluation*, 2001.

Therefore, we estimate average causal effects by using a comparison group that is like ITM's students. Concretely, in this evaluation, we use an adapted combination of a difference-in-difference and a regression discontinuity design. The difference-in-difference design combines two counterfactuals, namely the before-and-after counterfactual and the treatment-comparison group counterfactual and thus compares the changes or development in outcome of the treatment to the comparison group. In this case, as we do not have baseline data, we will ask individuals to recall their competencies and their professional position at the time of their application. We will then compare this data to their self-assessed competencies and professional position (and other intended outcomes) at the time of the evaluation for the limitations of this approach). The regression discontinuity design, in turn, uses situations where allocation of treatment is determined by a specific cut-off point of a continuous variable.¹⁰⁸ In this case, the assignment variable is the ranking or admittance of students for their studies or scholarship programme. We will therefore compare students who attended ITM to those who were shortlisted but were not offered a place at ITM for their studies. Specifically, the comparison group must be similar regarding the time of application (academic year in which they wanted to start) and the programme that they wanted to attend. Data on the comparison group will be collected in an online survey, which contains some of the same questions as the survey for students and graduates, namely background data, such as age or gender and data on outcomes, such as their career development.

6.1.7 Ethical Aspects to the Methodological Approach

To understand the ethical dimensions of the evaluation project, we need to assess the research study participants, the type of data being collected and potential risk or harm, as well as the ethical implications of sampling and recruiting methods. These considerations are also outlined in the submission to the Institutional Review Board (IRB) of ITM.

In terms of the **research study participants**, our evaluation project involves human beings, namely ITM students and alumni, including scholarship recipients, as well as individuals working at relevant institutions (ITM itself, ITM partners and non-partner institutions). In addition, the evaluation project involves a comparison group, comprised of individuals who applied to ITM, but did not start their studies. The above proposed groups involved in the research project are university-educated individuals in various countries. Therefore, they are in the position to fully understand information on the evaluation, as well as its implications. Moreover, they have the capacity to give informed consent and revoke it at any time if they wish to do so (see strategies below).

As part of the evaluation, we will **process personal data**, such as names or email addresses. For instance, we process personal data when contacting individuals for participating in the surveys and in qualitative interviews or focus groups. When analysing the data, we will anonymise it, so that the information provided by the research participants cannot be traced back to them.

Potential risks or harm to the study participants include psychological stress caused by the questions and possible deception. For instance, when we ask personal questions on career development or socio-economic background, this may cause stress for some participants. To reduce this potential stressor, we will ask open questions that are less intrusive. For example, regarding the career development, we do not ask for specific amounts to measure income, but we ask for income brackets.

In addition, regarding the **risk of deception**, current students may assume that the survey or the focus groups can be traced back to them and reflect on them and their chances to succeed at ITM. To address this misconception, we will clearly state in the information sheet that personal information will not be shared, and that the evaluation is concerned with ITM's activities and not with the performance of individual students. We will also reinforce this issue at the beginning of every interview or any focus group and address any questions or concerns that may arise.

Finally, we aim to reduce the ethical implications of **sampling and recruiting methods**. For the sampling in the online survey, we propose to use a census method, meaning that we will contact all

¹⁰⁸ Donald L. Thistlethwaite and Donald T. Campbell, 'Regression-Discontinuity Analysis: An Alternative to the Ex Post Facto Experiment', *Journal of Educational Psychology* 51, no. 6 (1960): 309–17, <https://doi.org/10.1037/h0044319>.

students and alumni that fall in the time frame of this evaluation. In this way, we mitigate any risk of biased recruiting for this research method. For selecting the case studies and interview partners, we suggest using pre-defined criteria, so that we minimise the risk of bias.

To address the ethical dimensions of the evaluation project, the strategies follow the General Data Protection Regulations (GDPR). Accordingly, one of the main strategies to address the ethical dimensions of the evaluation project is to obtain **informed consent** from all research participants. In this way, we can ensure that all participants know which information they are sharing and how their data is processed. The consent can – of course – be revoked at any point in the evaluation project, for example by emailing or calling us. We include information sheets in our online questionnaires and in the qualitative interview or focus group guides, that we routinely send to interview partners in advance.

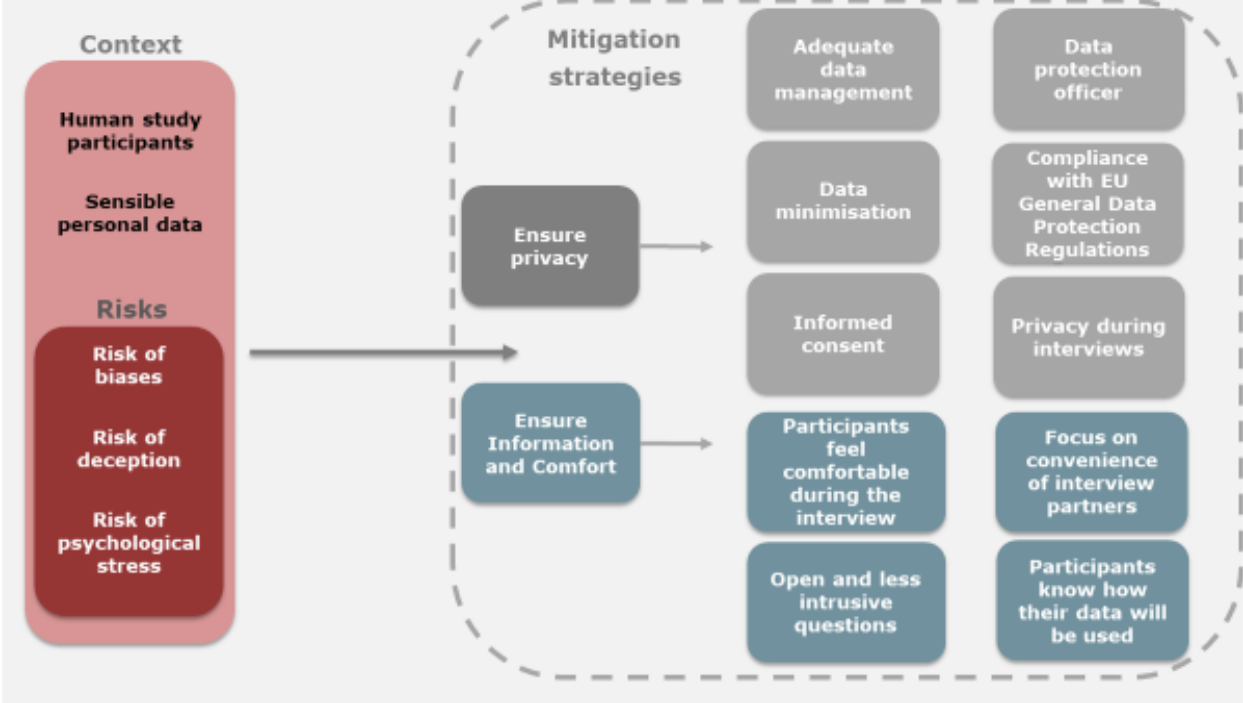
To ensure the **privacy** of our research participants, we only ask for the information that is required for the research, following the principle of data minimisation. In addition, we conduct all qualitative data collection in closed rooms to avoid any additional persons listening in during the interviews. This also includes interviews or focus groups that are conducted online and from home. In the same way, we encourage interview partners in virtual meetings to go to a private room, so that they can speak freely during the interview or focus group.

Regarding issues of **data protection**, we have multiple technical and organisational measures to safeguard the rights of the research participants. These include our data protection officer Oliver Scheller, who is consulted in every phase of the evaluation. Moreover, they include access control, admission control, data entry control, data forwarding control, and availability control. All our technical and organisational measures to ensure data protection are described in detail in the data processing agreement, which is an annex to the Service Agreement, signed by Syspons and ITM in September 2020.

As part of our data protection strategy, we ensure adequate **data management**. We will anonymise all survey and interview data once data collection has been completed. In this way, we can ensure research participants that their information cannot be traced back to them. For data transfer, we suggest using systems trusted by ITM, if such systems are in place. This may include safe cloud storage, through which documents and contact data can be shared.

To protect the **health and safety** of participants, we also suggest multiple measures, which are mostly relevant to qualitative data collection. In non-intrusive data collection, health and safety measures are most relevant in interview and focus group settings, where we want to ensure that participants feel comfortable. In this way, we show respect and gratitude for the time that they are lending us, and they are more likely to trust us and share their opinions with us. For example, when we conduct longer online meetings (usually more than two hours), we always take breaks during the meetings, encouraging participants to get water, coffee or tea and maybe get some fresh air. In addition, when scheduling meetings in different time zones, we only suggest times that are convenient for the respective time zone of the interview partners.

Figure 36: Measures to ensure Ethics and Integrity



6.2 Evaluation Matrix

See attached Document.

6.3 Bibliography

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