

Fifteen years of the tropEd Masters in International Health programme: what has it delivered? Results of an alumni survey of masters students in international health

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Abstract

OBJECTIVES In 2010–2011, recent graduates (2008 or earlier) of the Masters in International Health (MIH) (as offered by over 30 universities and institutions collaborating in the tropEd network) were surveyed. We aimed to examine whether the competencies gained proved appropriate for alumni's current positions and to develop the programme according to alumni's needs.

METHODS An online questionnaire was sent to 327 alumni. One hundred and seventy-seven responded and 99 met the inclusion criteria. We calculated frequency distributions of the answers and performed a bivariate analysis of certain variables.

RESULTS Alumni feel confident in all areas covered by the MIH. Most competencies acquired are perceived as essential or very relevant to their current position. Many respondents (77%) changed jobs after graduation, mostly from curative care to public health. More African and Asian alumni work in their country of origin (66% and 63%, respectively) than alumni from other continents (42%). The respondents had mostly worked at a national or provincial level, but after graduating mostly worked at international or national level. Alumni said that the network's mobility and flexibility had important advantages and disadvantages.

CONCLUSIONS This is the first alumni survey of the MIH programme offered through the international network tropEd. The results suggest that competencies gained by graduates are relevant for their current careers. We recommend offering better guidance to students planning modules and to improve administration.

keywords world health, teaching, evaluation, public health, educational status, education

Introduction

TropEd is an international network of 31 international health higher education institutions. It began in 1996 with 13 European partners and has since extended to institutions in Africa, Asia and Latin America and more recently to Australia. The network has developed a framework for a post-graduate Masters in International Health (MIH) which aims to make use of the experience and expertise of the participating institutions. The programme is open to students with a bachelors or equivalent degree in a health-related field (i.e. medical doctors, nurses, social scientists) from around the world. Teaching is predominantly but not exclusively in English. A limited number of student grants are available each year through European (Erasmus Mundus) and national funding schemes (e.g. by the German Academic Exchange Service DAAD, the Swiss gov-

ernment and the Canton of Basel City). The programme is based on the mobility of staff and students, the sharing of experiences across health disciplines and the development of common standards in education. The MIH should prepare students to work effectively in an international, multicultural and multidisciplinary environment (tropEd 2012, www.troped.org). The MIH is a modular programme consisting of a core course, advanced modules and a research project submitted as a thesis (monograph or peer-reviewed publication) (Figure 1). Tuition fees vary considerably, from €6000 to €22 000, depending on the institution. The MIH is designed to be completed within 1-year full-time or 4–5 years part-time.

The students enrol for the MIH at one of the institutions offering a core course, referred to as the students' 'home institution'. TropEd students are expected to acquire some European Credit Transfer and Accumulation

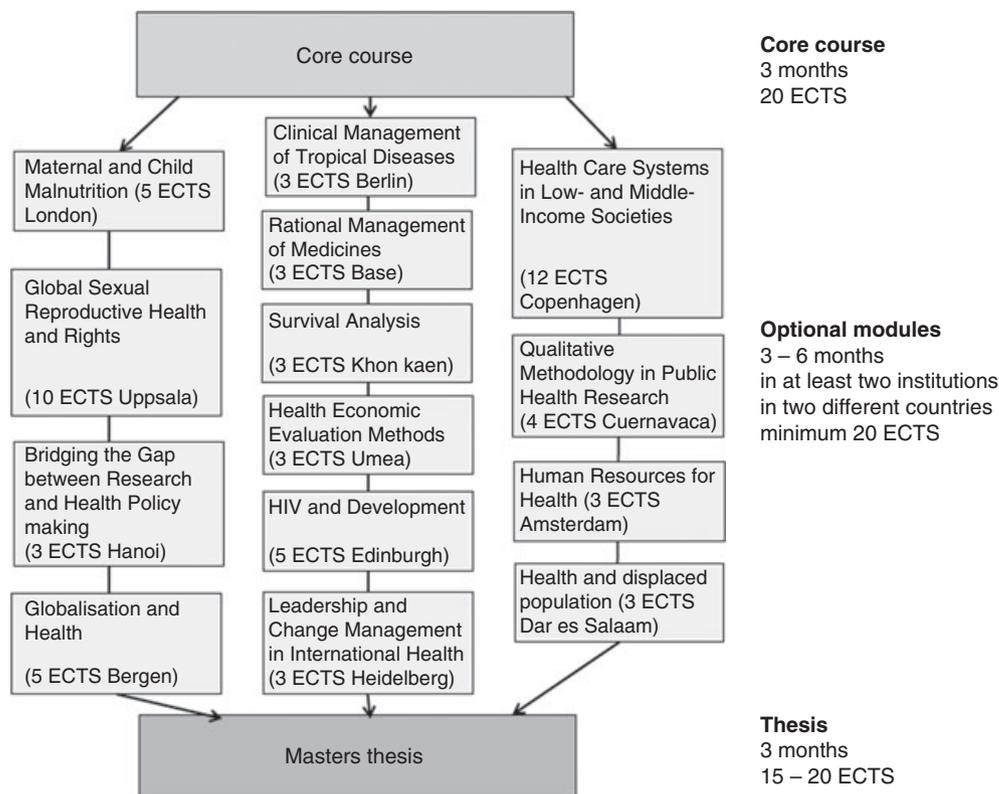


Figure 1 Schematic view of the tropEd Master in International Health programme with three examples of possible study programmes. These programmes need to be agreed with the Course Coordinator of the home institution and must be aligned with the intended learning objectives.

System (ECTS) credits through advanced modules at a tropEd institution outside the country of their home institution. The thesis component can be completed at their home institution or at another tropEd institution. The MIH degree is always awarded by the home institution. In addition to their MIH degree, students receive the tropEd recognition if they comply with the following criteria:

- A minimum of 2 years of professional work experience before graduation from the MIH programme, of which at least 1 year was spent in a low- and/or middle-income country/society;
- At least 10 ECTS credits earned through advanced modules accredited by tropEd, outside the country of their home institution; and
- Completion of studies within 5 years.

Although individual tropEd home institutions have evaluated the MIH programme for their own students, no network-wide alumni survey had been performed since the start of the programme 15 years ago. A literature search found several studies reporting how well Uni-

ted States (Davis *et al.* 2003; Petersen *et al.* 2005) and Vietnamese (Le *et al.* 2007) Masters programmes in Public Health and a UK Masters Programme in Global Health (Plugge & Cole 2011) meet the needs of their alumni, but no study reported on a MIH or on a Masters programme offered by a network of institutions of higher education. We therefore surveyed alumni of different home institutions to examine whether the competencies gained from the programme have proved to be appropriate for the alumni's current work situation; to further develop the tropEd MIH programme according to the needs expressed by the alumni; and to offer comparable programmes a format to evaluate their Masters.

Methods

An anonymous online questionnaire was designed with 29 items asking about demographics, educational background, current and previous work situation, confidence in and relevance of the competencies gained by the MIH and perceived strengths and weaknesses of the programme. The questionnaire was based on alumni surveys

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from the network's member institutions and was discussed during the quality assurance committee meeting and finally approved by a tropEd General Assembly meeting. The survey targeted alumni who had finished the MIH programme at least 2 years earlier, to allow time for students to use their newly acquired competencies and to find a new position after completing the programme. Initially, we intended to complement the alumni survey by an employer survey, but we did not reach an acceptable response rate in employers.

Each home institution made the survey available via free online tools (www.surveymonkey.com and www.quicksurveys.com) and advertised it to their MIH alumni between April 2010 and February 2011. The answers from all institutions were combined and analysed using Microsoft Excel 2010 and Epi Info 7 (CDC, Atlanta). Only respondents who reportedly had obtained tropEd recognition were included. Other respondents were excluded as they did not sufficiently use the mobility of the network, took longer than 5 year or had less work experience than students with tropEd recognition. Answers to open questions were coded and transformed into categorical variables. We performed a descriptive analysis with frequency distributions of categorical answers to multiple-choice questions. We also performed a bivariate analysis for the variables gender, part-time/full-time student, professional background MD yes/no, year start MIH programme and age, cross-tabulated against the following: working outside the region of origin, promotion, increased responsibilities, mobility scheme of the MIH and costs as a weakness of the programme.

Results

Response rate

Three of seven home institutions participated in the survey: The Royal Tropical Institute (KIT) in Amsterdam, The Institute of Tropical Medicine and International Health (ITMIH) in Berlin and the Swiss Tropical & Public Health Institute (SwissTPH) in Basel. The main reasons that other home institutions did not participate were a lack of staff and time. Also some institutions had joined the network only recently, so very few of their graduates had finished more than 2 years ago. 327 alumni were invited to participate, of whom 177 (54%) responded. Of these, 99 indicated that they had obtained tropEd recognition. All data presented below refer to these 99 alumni.

Demographics of respondents

Respondents started their MIH between 1996 and 2008 and had Berlin ($N = 63$), Basel (26) and Amsterdam (10)

Table 1 Characteristics of respondents to tropEd alumni questionnaire 2010–2011, $N = 99$

Characteristics	Respondents
Part-time study	50%
Average duration study	3.7 years
Fully self-funded	40%
Women	50%
Age group at start of study 26–35 years	67%
Region of origin	
Europe	43%
Asia	32%
Africa	17%
Latin America	5%
North America	3%

as their home institution. Most (72) students started between 2003 and 2007 and had a professional background in medicine (61%), nursing/midwifery (9%), social science (5%), dentistry (3%), pharmacy (3%) or other professions (19%). Alumni originated from 40 different countries in five continents (see Table 1).

Data are comparable to the characteristics of current tropEd MIH students, who may or may not gain tropEd recognition, except for continent of *origin*: *today* 60% of current tropEd students are from Europe, 16% from Africa and 17% from Asia.

Relevance of tropEd Masters in International Health

Alumni were asked to indicate the three main reasons they pursued a tropEd MIH. The most frequent answers were to improve their professional competency, develop a career in international health or validate their own experience (Figure 2). Other answers were desire to earn a higher salary, a superior recommended the MIH, won a scholarship and the option to study part-time.

Most respondents (77%) changed jobs after graduation, and 46% are currently working outside their country of origin. More alumni from Africa (66%) and Asia (63%) work in their country of origin (than alumni from other continents (43%). Before taking the tropEd Masters respondents mostly worked at national or provincial level (27 each), whereas after graduation 49 were working at international level (Figure 3).

Most MIH alumni indicated that they worked in clinical care and general public health care before graduating, while after graduation they mostly worked in programme management, monitoring and evaluation, and education and research (Figure 4).

Most alumni reported that their functions and tasks after graduation represented an increase in responsibilities, management, co-ordination, research and training

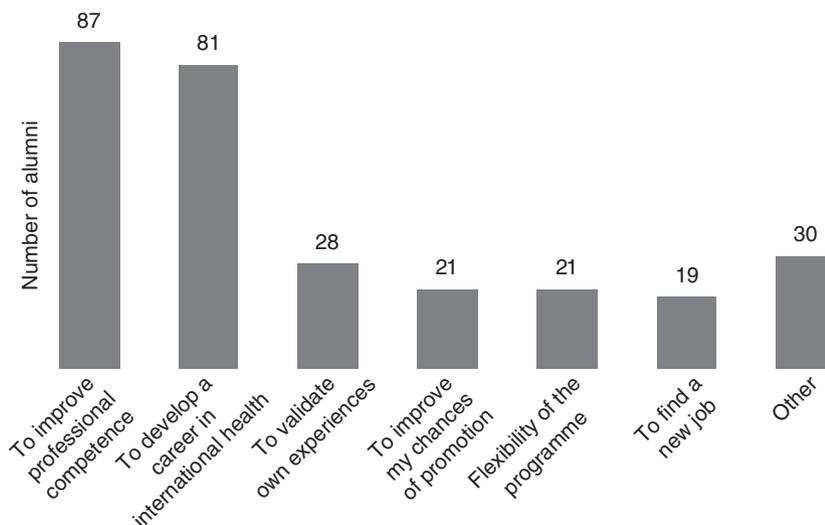
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Figure 2 Three main reasons for pursuing a tropEd Masters in International Health ($n = 99$; non-exclusive).

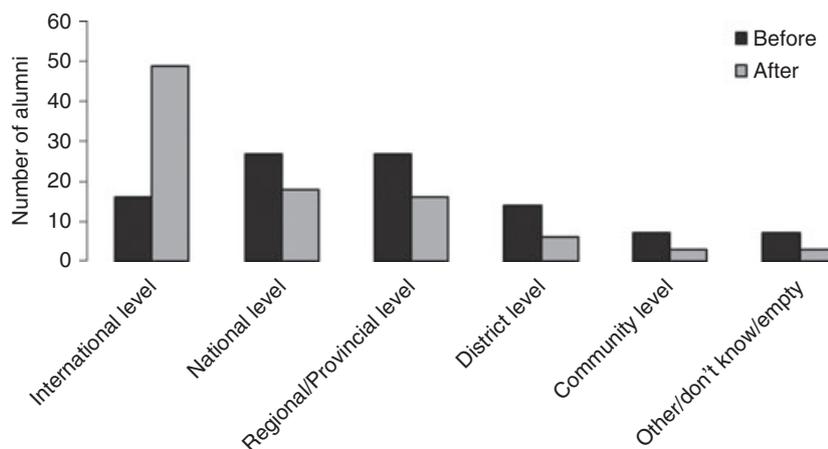


Figure 3 Level of employment of alumni before and after the tropEd Masters in International Health ($n = 99$).

and a decline in clinical work (Figure 5). Salaries increased for 57% and decreased for 9%.

Alumni still felt confident in all areas covered by the MIH. Alumni are least confident in identifying the influence of globalisation on population health and in formulating responses to complex international issues (Figure 6), and indicate that these competencies are the least relevant for their current work situation. Most competencies are perceived as essential or very relevant for their current position (Figure 7).

Nearly half of the alumni have published or are in the process of publishing. After completing their MIH 30% of alumni pursued further studies, with 25% either preparing for, currently studying for or having completed a PhD.

The bivariate analyses showed no significant associations except for gender and mobility. Mobility-related issues were mentioned as one of the top three strengths of the programme by 34 alumni (17 men and 17 women). One man and eight women alumni mentioned mobility as one of the top three weaknesses of the programme (risk ratio 8.1; 95% confidence interval (1.1–62.8).

Strengths and weaknesses of the tropEd Masters in International Health

The flexibility in timing and the offer of a broad range of optional modules were revealed to be major strengths, followed by the diversity of participants, the opportunities for networking and sharing of experiences. The mobility

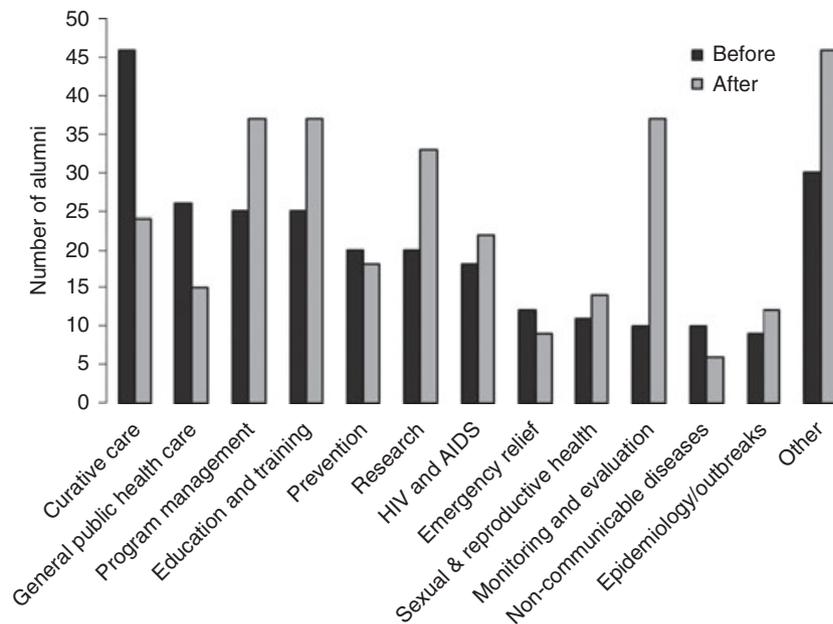


Figure 4 Alumni's reported three main areas of work before and after the tropEd Masters in International Health ($n = 99$; non-exclusive).

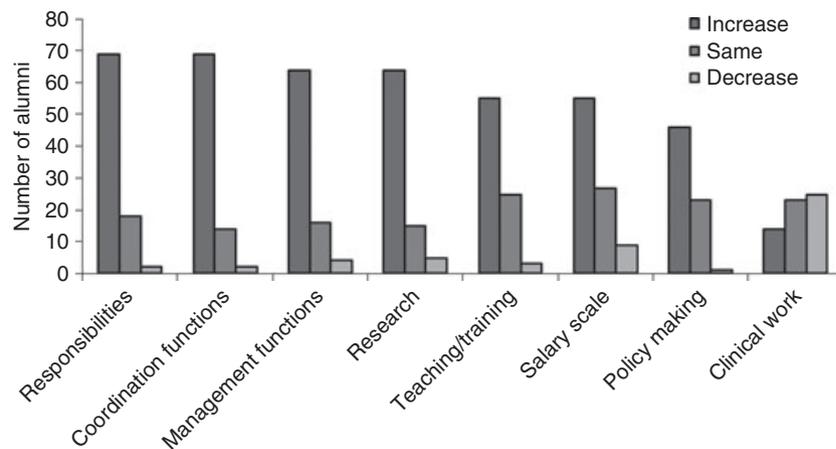


Figure 5 Alumni's reported change in functions/roles after completing the tropEd Masters in International Health ($n = 99$).

options allowed alumni to experience different approaches to international health and to benefit from the expertise of different institutions. The chance to live and study in different cultures and the general international nature of the course were both valued. Alumni appreciated the mix of theory and practice. Lectures were mostly perceived as being of high quality, and lecturers were considered to have relevant field experience. Interactive teaching, group assignments and interdisciplinary approaches were seen as the greatest strengths of the teaching methods.

The costs of the MIH programme including the course fees, subsistence and travel costs were perceived as high. Fees differ considerably between modules, so some students chose not the most suitable modules, but the most affordable ones. Travel may involve culture shock and the hassle of finding accommodation, arranging a visa, etc. The mobility aspect, compulsory for tropEd recognition but not required in all home institutions for the MIH, makes it harder to build sustainable professional and social relationships.

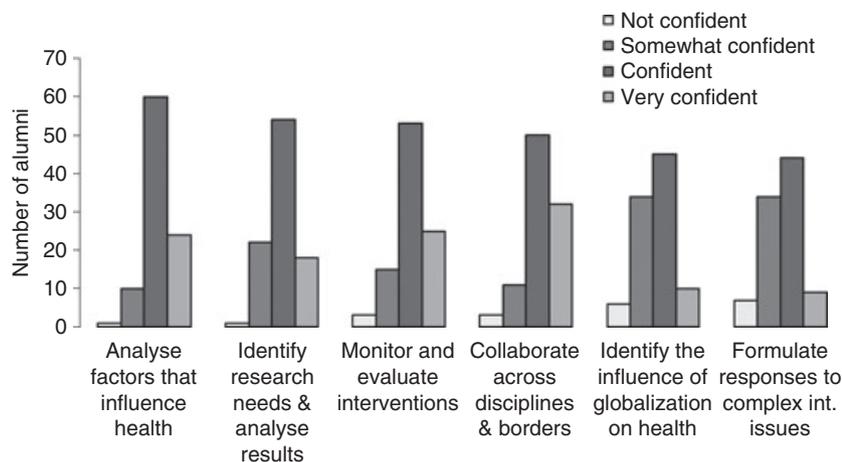


Figure 6 Alumni's reported confidence in Masters in International Health competencies ($n = 99$).

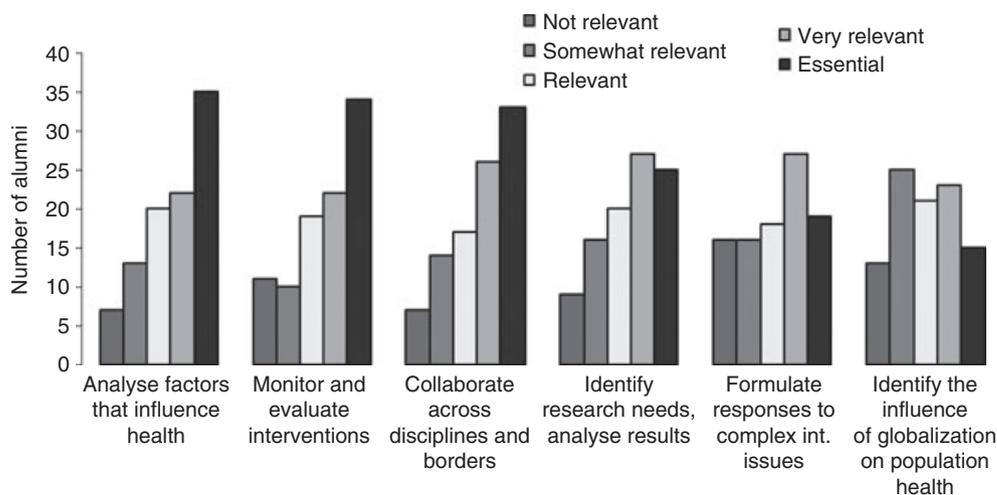


Figure 7 Alumni's reported relevance of competencies for current work ($n = 99$).

Administrative procedures differ between institutions, which can be confusing. Registration and the issuing of grade reports, transcripts and diplomas can take a long time. The MIH programme is flexible, and students are required to propose a study plan for their advanced modules and a thesis subject to the MIH coordinator in their home institution. Alumni felt that it was not easy to create such a study programme because of the large number of modules to choose from, currently over 150, and felt more guidance is needed. The lack of one consistent grading system in all institutions was reported as another weakness. ECTS grades are used officially everywhere, but not always as relative grades, as they are intended, and students still feel there are major differences between

the ways assignments are marked in different institutions. The tropEd website was criticised for making it difficult to search for advanced modules, for example, of a certain topic. Alumni suggested that the tropEd network increases its public relation efforts, because they feel the MIH is still not as well recognised as a Masters in Public Health (MPH).

Discussion

Limitations

Respondents cannot be regarded as representative of all past MIH students who finished their degree at one of

the TropEd institutions, as only those who gained tropEd recognition are included. Respondents therefore have used more mobility than the average MIH student. Students from Basel, Berlin and Amsterdam may have different experiences in the network than students from other home institutions, as the core course, thesis process and type and level of guidance may differ. Many part-time students who started after 2005 were not included in the survey, as they may not have finished their Masters more than 2 years before the survey. The tropEd MIH Programme has evolved during the past 15 years, but the survey results will reflect the situation as it was several years ago, and recent changes will not be reflected in the results.

Respondents were only asked about their current confidence in competencies, so this study does not allow comparing this to their level of competencies prior to their study. Current confidence depends not only on confidence at graduation but also on the use of competencies since graduation.

Although students were not asked about specific personal identifiers, and results were analysed anonymously, in some instances the country of origin would have made it possible to identify the student. Therefore, students may have given socially desirable answers, especially to questions about the programme's strengths and weaknesses, to keep good relationships with the network. As most questions did not ask for sensitive information, we feel that most results will not be affected by this potential bias. As for the gender difference regarding mobility, this result has to be interpreted with caution. The answer was coded 'no' if mobility was not mentioned as a top three weakness, but mobility may have been considered a weakness by others as well, even if not ranked within the top three positions. Confounding may explain the association between gender and mobility to some extent.

Discussion and conclusions

Alumni of the tropEd MIH changed jobs, have increased responsibilities, moved into more international settings and work more often in programme management, monitoring and evaluation, education and training and research than before embarking on their Masters training. Although this suggests that the MIH programme is highly beneficial to its alumni, this study does not allow us to attribute with certainty these changes to the MIH programme alone. Changes in careers might have happened regardless of the MIH just by gaining seniority. The observed career changes may not be specific to the tropEd MIH, as any MPH programme might have had the same effect. However, the reported relevance of the competen-

cies gained through the MIH for the alumni's current work suggests that the tropEd MIH has contributed to the career changes. Moving away from curative care to public health is not considered a natural development in the career of health workers and might be the result of the Masters Programme. This is in line with a study of graduates of the MIH core course at the Swiss Tropical and Public Health Institute in Basel and the MPH for Developing Countries at the London School of Hygiene and Tropical Medicine (both carried out in 1998/1999) which shows that more than half of the graduates advanced or changed their career after the course, often from a curative to a public health context (Peterhans 1999). Another study of MPH graduates in Vietnam showed that many students reported being promoted after completing their Masters Programme (Le *et al.* 2007).

Alumni indicated that mobility in the network has important advantages and disadvantages: enrichment of the learning process on the one hand and financial and logistical challenges on the other. Visa issues remain a challenge, especially for citizens of countries outside the Schengen area. A tropEd course handbook with the administrative and logistical details of each institution is now available and is supposed to help students in organisational matters. The programme's flexibility has its pros and cons as well: it allows students to design their programme based on their background and future job aspirations, but they can easily get lost in the large number of modules on offer and the huge number of possible combinations; some of which are not allowed by the home institution. In Vietnam, lack of flexibility of the curriculum was seen as one of the weaknesses of the Masters of Public Health programme (Le *et al.* 2007). In order to profit from the tropEd programme's flexibility, students should have sufficient opportunity to discuss their options and choices with their student advisor in their home institution. In 2012, key words were added to the modules on the website, which will facilitate searching for modules by content. Based on the exit interviews conducted with graduates, we believe that in the past 5 years the tutoring system at the home institutions has improved and is now better equipped to help the students to select their advanced modules.

An important strength of the tropEd MIH according to the alumni is the interdisciplinary approach and diversity of participants. A study of an MPH programme in Alabama showed that the lack of an interdisciplinary approach was seen as a major weakness of the programme, limiting the ability of alumni to use the information and skills in professional practice (Petersen *et al.* 2005). We believe that the tropEd consortium is an excel-

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lent framework for receiving an interdisciplinary training, as the core course teaching draws on a range of experts from various disciplines and institutions, and the students themselves can select their advanced modules in a way that exposes them to the methods, contents and paradigms of a range of disciplines. Alumni did not mention problems related to the recognition of credits obtained in tropEd institutions other than their home institution, in contrast to other Master's students who take modules in different countries in Europe (Schüle 2006). In the past few years, the tropEd network has worked hard to improve procedures regarding course registration and issuing grade reports and diplomas. The network's extensive quality control and accreditation procedures (Zwanikken PAC, personal communication) seem to be effective in ensuring trust that ECTS credits obtained elsewhere represent relevant content and quality teaching. Even though many alumni were international students, they did not report problems regarding language, unlike international alumni in other English-taught MPH programmes in the UK (Plugge & Cole 2011).

Although credits and grades are transferred using the ECTS system, alumni criticised the lack of a common grading system in the member institutions. In Europe, the diverse educational systems have developed different approaches to grading, often deeply rooted in their pedagogical and cultural traditions (European Commission 2009). Often misinterpreted, the ECTS system does not harmonise the way students' performance is evaluated, but makes their performance transferable between different institutions. ECTS grades, correctly used, are not absolute but relative grades, which express the performance of students in comparison with the performance of other students for the same topic or module over a period of time. In many European countries such relative 'grading' has no history and is therefore often in contrast to the performance measures in use. This is a shortcoming not only of the tropEd MIH programme, but of all programmes following the principles of the Bologna process.

Recommendations

As the competencies acquired through the tropEd MIH seem relevant to current careers, they need not be changed based on this survey. The fact that many students are employed in programme management, monitoring and evaluation, education and training and research should encourage the network to trust that the study programme

addresses these fields sufficiently. It is recommended that employers and other major stakeholders be surveyed to discover whether their views concur with the alumni.

The future challenge for the network will be to address the disadvantages of mobility and flexibility. TropEd home institutions should enhance guidance for students to develop and follow their individual study programme. Establishing and strengthening alumni networks may be a new way to offer support to current students.

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