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Empowering teachers in Maritime Education and Training (MET) through gender-equality training: A bottom-up approach for the implementation of current legislation

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Abstract: An increasing awareness of gender equality in the maritime sector is notable in recent years. While it is a good step forward, gender equality is often integrated into a diversity management agenda for leaders, but it is unclear how to apply the philosophy of gender equality in Maritime Education and Training (MET) led by teachers. It is evident that top-down approaches for the implementation of gender policies are often insufficient to achieve gender equality because they may fail to provide tools for an effective application and to recognize and consider the autonomy of practitioners who can actively contribute to gender equality with their work in different useful manners. The paper argues that bottom-up approaches can become an efficient method for the incorporation of gender mainstreaming by increasing the participation of practitioners and actively involving them in transforming their attitudes, practices and work methods. A balance between top-down and bottom-up approaches seems a desirable option as it combines the efficiency and leadership of the top-down approach with the collaborative advantages that come from the whole team. Finally, the paper addresses the role of the IAMU community to work together for gender equality in the context of MET.

Keywords: Maritime Education and Training (MET); gender mainstreaming; bottom-up approach; gender equality strategy

1. Introduction

In recent years, there has been an increasing awareness of gender equality in the maritime sector. Notable examples have been the World Maritime Day 2019 theme of "Empowering Women in the Maritime Community", set by the International Maritime Organization (IMO), and its follow-on action proclaiming an International Day for Women in Maritime, to be observed on 18 May every year. In addition, numerous initiatives and campaigns are arising within maritime organisations as the benefits of a gender-balanced workforce become more evident. All these actions serve to enhance efforts to achieve the United Nations Sustainable Development Goal 5 (SDG5) on gender equality and so promote the recruitment and retention of women, while trying to raise their profile within the maritime industry at the same time. Although these endeavours constitute a good step forward to strengthen the commitment towards gender equality in the maritime community, they do not always seem to obtain the needed results. One of the reasons behind this is that gender equality is often discussed and treated as a stand-alone issue, without the necessary and meaningful contextualisation that would be desirable.

Women make up half of the world population, yet they are dramatically underrepresented within the historically male-dominated maritime industry. According to the BIMCO and ICS (2021), the percentage of female STCW certified seafarers is estimated to be only 1.28% of the global seafarer workforce, which means 24,059 women out of 1.89 million seafarers currently serving the world merchant fleet. Although this represents an increase as compared with the 2015 report and, therefore, a positive gender trend, the female workforce representation in the sector continues to be scarce. The report warns that the industry must significantly increase training and recruitment levels in order to

avoid a serious shortage in the supply of officers by 2026. This officer shortfall can constitute a good opportunity to recruit more women for the maritime industry but, unfortunately, it is mirrored by an even worse shortfall of female students in MET. A study by Barahona-Fuentes et al. (2020), which examines the evolution of female student enrolment in different MET institutions between 2009 and 2018, concludes that there is no significant rising tendency in any of the universities analysed over that decade. In addition, the same study observes that gender equality promotion policies are still scarce or inexistent and have a limited effect on female enrolment figures. This raises the question of how the gender equality agenda can be implemented not only in the maritime industry but also in MET. To meet the increasing demand of seafarers, sea careers and MET must be promoted with a special emphasis on female recruitment and retention as maritime female students are an important asset to meet the industry's demand. This paper argues that the implementation of gender equality policies from a bottom-up perspective, thus complementing the more traditional top-down approaches, can constitute an effective way to achieve better results.

2. Defining top-down and bottom-up approaches in relation to policy implementation

Traditionally, public policy implementation literature has been split between two major schools, top-down and bottom-up. Top-down theorists consider policy designers as the central actors and focus on factors that can be controlled at central level whereas bottom-up theorists emphasise target groups claiming that policy is actually conducted at local level. However, as implementation research evolved, this dual conflict model has been followed by different attempts aiming at reconciling them (Matland 1995).

Top-down approaches treat implementation as an administrative process that begins with the objectives authoritatively set by policy-makers from which implementation will follow naturally in a linear fashion. Their main emphasis is on the designers of the policy and those aspects that can be handled from top positions while expecting a general benefit. Therefore, in top-down approaches, the number of actors involved is quite limited and so is the extent of change as policy implementation depends on lower-level institutions, to which policy designers hand the responsibility over. In addition, the expertise of local implementers is usually not only ignored but also seen as an impediment towards implementation (Abas 2019).

Bottom-up models developed as a reaction to top-down approaches, which ignored the key role of final implementers. These models focus on the actors involved in the final implementation arguing that policies are made at local level (Matland 1995). Due to their emphasis on target groups, a benefit of these approaches is the understanding of contextual factors within the implementing environment as actors and their goals, strategies and activities need to be understood for a successful implementation as well as the difficulties encountered in meeting the stated goals (Cerna 2013). In addition, bottom-up approaches assume that the formulation and implementation are a single integrated process (Matland 1995) and look for strategies to create a network that allows connections between local actors, decision-makers and top policy-makers (Sabatier 2005). Nevertheless, bottom-up models have not eluded criticisms, either. Firstly, it is considered that policy control should be exercised by those authorised by votes or position to do so and, secondly, these models are said to overemphasise local implementers autonomy (Matland 1995).

A combined approach emerged drawing on the strengths of both approaches. Policy implementation occurs thanks to the interaction of a wide range of stakeholders at different levels (Cerna 2013). Therefore, as they are all equally important, the combination of approaches seems a natural option for a successful policy implementation. However, some authors suggest that implementation may vary according to policy areas and the content and type of policies (Suggett 2011), that is, the context and scope of the policy affect the design and strategies of the implementation plan. Other competing theories also emerged within the field of policy implementation such as the network theory (stemming from the bottom-up approach), the game-theory or the agent theory as more sophisticated ways of theorising about implementation (Cerna 2013). The debate as to the most appropriate policy implementation framework is still open as implementation research studies are a relatively new scientific field, which is continuously evolving. Hence, analysing each particular context and its needs, as well as the scope of the implementation, seems a good strategic response to provide the best solution and address any possible implementation problems and concerns.

3. Implementation of gender equality policies in MET institutions: top-down versus bottom-up approaches

This paper analyses the potentialities of collaborative bottom-up strategies in relation to the implementation of gender equality policies in MET institutions as an alternative and complement to more traditional top-down

approaches. In order to do so, existing cases of gender legislation implementation are discussed and later some examples of effective bottom-up goal implementation methods in the maritime sector are provided to assess the opportunities they offer for gender regulations.

3.1. Gender policy implementation in MET institutions

Different research findings emphasise the importance of increasing gender awareness in the MET curricula, with well-defined guidelines and good practices, in order to enhance the incorporation of female students and, thus, future female seafarers in the shipping industry. A study conducted by Barahona Fuentes et al (2020) gathered data concerning the figures of female student enrolment and graduation in sixteen MET institutions over a decade (2009-2018). The research discovered that despite all the international gender-equality legislation efforts, specific female student policies were still limited or inexistent in most MET institutions. This led to an equally insufficient implementation of such policies and low numbers of female students in the vast majority of institutions. Another research by Böstrom and Österman (2015) examined how gender equality is addressed in the curricula of tertiary maritime education in the five top-ranked countries according to the Global Gender Gap Index in 2013, revealing a lack of clear strategies on behalf of MET institutions for these matters. The authors conclude that, beyond the formalisation of gender-inclusive policies, additional tools for operationalising them are needed in order to successfully integrate them as part of the curricula. Otherwise, gender policies tend to be inefficiently used for improving gender equality. Further, the revealing IAMU research project to increase gender and cultural awareness in MET evaluated these issues in relation to human factors, shipping companies, ship management practices and MET institutions. The project report acknowledges the important role of MET institutions to increase gender and cultural awareness in their curriculum and instruction and so motivate women to join the shipping sector (Dragomir et al 2018).

Although significant research has been carried out on the difficulties and obstacles that deter the attraction and retention of women in the maritime industry (Kitada 2021; MacNeil and Ghosh 2017; Mackenzie 2015), much less is known about how to bring about an effective change in MET institutions, which constitute the source of supply of future maritime professionals. The role of MET institutions is crucial in molding future gender-sensitive seafarers, but this challenge entails more far-reaching actions than the issue of gender-inclusive policies and legislation. It is evident that top-down approaches for the implementation and enforcement of gender policies are often insufficient to achieve gender equality. Hence, a more collaborative approach would need to be applied to achieve an improved access and rate of female students to tertiary MET studies. The design of clear proactive measures together with the involvement of the different stakeholders in educational institutions may help towards a more effective implementation of gender policies. In line with this, recognizing and considering the autonomy of practitioners who can actively contribute to gender equality with their work in different useful manners can also constitute an important asset to meet the desired gender-equality in MET institutions, which would have at the same time a significant positive correlation with female participation in the maritime sector.

3.2. Bottom-up implementation methods in the maritime sector: an opportunity for gender legislation

The maritime sector is a strongly legalised area due to its numerous international regulations. Traditionally, most legislative implementations have followed top-down approaches but bottom-up ones are not new in this area. In fact, there are several examples of such, that appear to be successful. For example, Sampson and Zhao (2003) report that multinational crew developed “bottom-up English” as a common means of onboard communication in addition to the IMO Standard Marine Communication Phrases (SMCP), which were developed by IMO to facilitate effective communication on board (top-down implementation method). Another bottom-up example is from maritime innovation training where social learning methods empower international students undertaking the MSc programme at the World Maritime University to collaborate, innovate, and take actions on specific maritime challenges to achieve sustainable development (Bolmsten and Kitada 2020). On a global scale, IMO has been for many years adopting regional and national approaches to empower women in the maritime sector through its Women in Maritime Associations (WIMAs) which are active agents to work with the IMO member States to achieve the global goal (IMO 2021). IMO also recently undertook an exercise to evaluate gender equality in activities by using the Participatory Gender Audit methodology developed by the International Labour Organization (ILO), which communicates with

various levels of organisational hierarchy. All these bottom-up examples show how to create good synergies between global and local institutions while empowering practitioners for the inclusive culture of sustainable shipping.

It is evident that this partnership between top-down and bottom-up approaches can be an effective alternative to implement goals and regulations, because increased participation and active involvement of practitioners help in transforming their attitudes, practices and work methods to achieve goals. Another example of this is illustrated by an innovation project to incorporate gender mainstreaming in teaching developed by Barcelona School of Nautical Studies. So as to incorporate gender mainstreaming in all Catalan Universities, the Catalan University Quality Assurance Agency (AQU) published the *General framework for the incorporation of the gender perspective in university teaching* (AQU 2018). In line with this, the Governing Council of the Universitat Politècnica de Catalunya (UPC) approved the incorporation of the new transversal competence on gender perspective to all bachelor's and master's degrees taught at the university. To comply with this mandate, the Commission for Gender Equality of the Barcelona School of Nautical Studies developed an innovation teaching project for the creation of a web platform with resources for the incorporation of the gender perspective in their Nautical, Marine and Naval engineering bachelor and master's degrees.

This innovation teaching project intended to design solutions that could help teachers develop the necessary abilities to transform their curricula in a more gender-sensitive way. Therefore, the project included not only the provision and development of gender-equality resources and materials but also the delivery of specific gender-sensitive teacher training. This teacher training would serve to make teachers reflect on gender-equality issues and feminist pedagogies and to empower them to transform their teaching in different manners. The different course activities were aimed at aiding teachers assess and detect gender inequalities and so avoid the use of bias or stereotypes, modify course contents and examples in a more gender-sensitive way by including women as role models and balanced references, use more inclusive language and develop more gender-sensitive teaching methods and assessment. The feedback received from the teacher-training activities was used to refine the valuable materials developed so that they could be included in a repository on the project platform as a guide and example for other MET teachers.

This gender-equality training constitutes a further example to illustrate how bottom-up approaches are a valuable method to implement governmental and institutional legislation. Incorporating gender mainstreaming in MET is a challenge that can be overcome with creative solutions. In this particular case, this gender-focused training became an efficient attempt to contribute towards this challenge by actively involving practitioners in changing their attitudes, practices and work methods. In addition, this initiative served not only to empower the teaching staff at Barcelona School of Nautical Studies to transform their teaching but also to create a sense of community by working together towards bridging the gap in maritime education.

4. Discussion and conclusion

The traditional top-down legislation implementation approaches in the maritime sector have been essential to regulate a vast number of maritime affairs. Authority figures have defined goals and ways to achieve them, which have then been filtered to lower levels in the organisational hierarchy to be applied. Nowadays, the urge to implement the gender agenda impulses more creative and varied methodologies to achieve the desired goals. Combining different methodologies, namely, top-down and bottom-up approaches has contributed to obtaining more effective results, as the examples provided in the paper suggest. This combination of strategies increases the involvement of all the stakeholders and generates better synergies between them while contextualising and adapting gender legislation to each unique environment.

In addition, bottom-up approaches may serve to give a voice to lower levels of the organisational hierarchy, usually women, with respect to the implementation of goals and regulations. Women's voices and experiences will help the maritime community to better understand their needs and perspectives and so address issues that may have been neglected or underestimated so far. In the light of this, new considerations developed at lower levels may be gradually integrated into the higher-level framework of decision-making to design more efficient policies to enhance gender equality.

MET institutions may benefit from bottom-up methodologies in relation to the implementation of gender equality legislation in different ways. Fostering knowledge-based actions at lower levels may not only encourage practitioners

to actively participate in the implementation of such policies but also enhance the participation of women, usually occupying a higher percentage of lower-level positions. Further research would be required to see if the use of bottom-up methodologies that give women a voice may also help to reverse the present male dominance in senior and leadership positions as a result of this women empowerment. If so, this could constitute a successful way to increase women's promotion to senior positions in MET institutions with its corresponding salary increase to help reduce the present pay gap.

Concerning the incorporation of gender mainstreaming in teaching in MET institutions, bottom-up approaches are a good opportunity to encourage and empower MET teachers to develop a more gender-sensitive training in their routine of work. This way, they are not passive receptors of decisions made at a higher level in the organisational hierarchy but actors actively involved in assuming responsibilities and making decisions in their particular context. In addition, teaching and training non-experts becomes necessary to build knowledge to avoid gender biases, stereotypes and patriarchal practices in teaching, while formulating new methodologies and practices to engage more female students in MET and so help to bridge the existing gender gap. Finally, it becomes crucial to disseminate all these actions and practices so that they can spread and grow within the IAMU community to work together for gender equality in the context of MET.

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