

Developing Communities of Practice to Maximize the Usability and Impact of Clean Sport Education in Europe: IMPACT Project

LAZURAS, Lambros <<http://orcid.org/0000-0002-5075-9029>>, YPSILANTI, Antonia <<http://orcid.org/0000-0003-1379-6215>>, BARKOUKIS, V., STYLIANIDIS, P., POLITOPOULOS, N. and TSIATSOS, T.

Available from Sheffield Hallam University Research Archive (SHURA) at:

<https://shura.shu.ac.uk/28218/>

This document is the Accepted Version [AM]

Citation:

LAZURAS, Lambros, YPSILANTI, Antonia, BARKOUKIS, V., STYLIANIDIS, P., POLITOPOULOS, N. and TSIATSOS, T. (2020). Developing Communities of Practice to Maximize the Usability and Impact of Clean Sport Education in Europe: IMPACT Project. In: Internet of Things, Infrastructures and Mobile Applications : Proceedings of the 13th IMCL Conference. Advances in Intelligent Systems and Computing, 1192 A . Springer International Publishing, 1058-1064. [Book Section]

Copyright and re-use policy

See <http://shura.shu.ac.uk/information.html>

Developing Communities of Practice to Maximize the Usability and Impact of Clean Sport Education in Europe: IMPACT Project

Abstract. Over the last decade, the European Commission, the World Anti-Doping Agency and the International Olympics Committee have made significant investments for the development of evidence-based anti-doping education. Although this is an important step towards eliminating doping in amateur and professional, elite sport, still most of the existing projects operate in a fragmented manner and there is a considerable lack of synergies. Consequently, there has been little consideration of effective ways to manage and sustain the knowledge created in this area in ways that will further maximize and sustain the usability and impact of existing anti-doping education initiatives. For this purpose, project IMPACT was developed in order to deliver, for the first time, multi-stakeholder Communities of Practice for Clean Sport Education across Europe. Through the implementation of face-to-face and web-based communities of practice, IMPACT will provide a knowledge management framework that will transform existing anti-doping educational resources into meaningful, timely, and sustainable tools, and stimulate the generation of innovative anti-doping educational solutions. This will be achieved through a strategic partnership between academic experts in anti-doping research and online education, and international and national sport stakeholders (i.e., sport associations; anti-doping agencies; organizations for doping prevention in amateur sports).

Keywords: VCoPs, Anti-doping, Sports

1 Introduction

The use of prohibited performance-and-appearance enhancing drugs (PAEDs) is the most common doping method in both competitive/elite and amateur athletes. The extant research has shown that self-reported PAEDs use in elite athletes can range between 14% and 39%, (de Hon, Kuipers, & van Bottenburg, 2015), whereas higher prevalence, 43.6% to 57.1% , has been demonstrated in studies using indirect questioning methods, such as the random response technique (RRT; Ulrich et al., 2017). The use of PAEDs is prolific in young amateur athletes and gym goers too. A study in five European countries showed that approximately 1 in 5 amateur athletes and exercisers aged between 16 and 25 years had used PAEDs at least once, and a recent review of the extant research showed that PAEDs use can be initiated as early as the age of ten years (Nicholls et al., 2017). These figures suggest that a large population of young people engaged in sport and exercise are at-risk for, or have already initiated the use of PAEDs - a class of substances, such as anabolic steroids, that have been associated with both short and long-term health effects; mood changes and mental health difficulties; suicidal thoughts and attempts; and even early death (Hartgens &

Kuipers, 2004; Darke et al., 2014; Frati et al., 2015; Lindqvist et al., 2013; Pope et al., 2014; Quaglio et al., 2009).

One way to tackle the use of PAEDs in young people involved in sport and exercise is through concerted and evidence-based education. This is even more important in the context of amateur and grassroots sport where anti-doping education and related preventive measures are scarce, as compared to elite and organized sport (Barkoukis, 2015; Lazuras & Barkoukis, 2018). In recognition of this problem, different sport stakeholders, governing bodies and regulatory authorities have invested in the development of evidence-based (online, offline and blended) education against the use of PAEDs, and more than 30 research projects have been funded over the last 5 years. Furthermore, the World Anti-Doping Agency (WADA) recently issued the International Standard of Education (ISE) that mandates that regional and national anti-doping organizations develop and implement anti-doping education initiatives targeting both athletes and coaches (WADA, 2018). While this advance in anti-doping education is welcomed, still, the following challenges are faced: a) firstly, there appears to be a considerable fragmentation of the generated knowledge mainly because the different projects/stakeholders work on an isolated mode and synergies with other project teams across the globe are scarce; b) competing and overlapping projects exist and there is little effort in disentangling "what works" and identifying best practices in anti-doping education; c) most projects endure for 2 to 3 years and their findings tend to phase out after the lifetime of the project mainly due to lack of sustained funding.

Therefore, there is a need to develop an approach that will enable synergies among different stakeholders and end-users of anti-doping education (e.g., educators, physical education teachers, personal trainers, coaches, athletes), facilitate the recognition of best practices and attendant knowledge transfer among interested parties, and foster the sustainability and long-term use of existing anti-doping education by introducing relevant projects to different populations (e.g., outside the consortium of a given project) and for longer periods of time (i.e., beyond the project's timelines). The main aim of this paper is to propose an innovative approach that will address these issues through the application of new learning technologies, namely Virtual Communities of Practice (VCoPs). The paper is structured as follows. The next section presents the idea of CoPs and why they are important for anti-doping education, and the subsequent sections present how physical/face-to-face and virtual communities of practice for clean sport education will be realized through project IMPACT, an international project that has been funded for two years by the Erasmus+ Sport Program of the European Commission.

2 Communities of Practice

According to Wenger (2009), communities of practice represent "groups of people who share a concern or a passion for something they do and learn how to do it better as they interact regularly". The guiding principle of a CoP is that learning is not necessarily a top-down process, with knowledge flows from an expert (e.g., educator) to recipients without prior knowledge on the subject matter (i.e., pupils; students; trainees). Rather, learning is "situated", knowledge flows are bidirectional, and knowledge is shaped and used dynamically as the members of a learning community share ideas, experiences and practices relevant to the subject matter they're interested in (Wenger, 2010). According to this perspective learning happens through social interactions and the active involvement of "learners" in the initiation, development, and sustainability of the community of practice (Lave & Wenger, 2000).

According to Wenger, McDermott, and Snyder (2002, pp. 8-10), the three key contentions of communities of practice are:

a) Knowledge resides in the "act of knowing": Expertise is the result of "static" knowledge, and of accumulated experience that has been gained through practice. Communities of practice serve as a dynamic and living repository of accumulated knowledge.

b) Knowledge is tacit as well as explicit: In addition to formal and explicit knowledge that can be delivered through manuals and formal training, tacit (or implicit) knowledge represents the accumulated knowledge that is embodied in experiences, and represents a deep understanding of complex and context-specific problems. Tacit knowledge is valuable and irreplaceable and should be treated as equally (if not more) important to explicit knowledge.

c) Knowledge is social and dynamic: Although the subjective experience of knowing a subject matter can be largely individual, knowledge itself is a social asset that we get to earn through social interactions with others with more expertise and different practices - in fact, the involvement of people/actors with different perspectives, knowledge assets and practices is often used to stimulate innovative solutions. Knowledge is also changing at a fast pace and individual actors (e.g., individual employees, individual organizations) cannot follow the fast-pacing knowledge generation. Communities of practice provide the framework where knowledge can be captured, contextualized, and re-used in ways that serve the individual and collective learning needs of involved parties.

There are three main reasons why Communities of Practice are important for clean sport education in both amateur and elite sport. First of all, situated learning is learning based on current practices and relevant training needs and policy objectives (Wenger, 2010). So defined, anti-doping education that is meant to make a significant impact in behavior change (i.e., reduce the prevalence and risk for doping use across levels of sports) and policy-making (i.e., enable the development of policies that will gradually eradicate doping from sports) cannot be abstracted from the very context it takes place, or the needs of actors and sport stakeholders that are meant to tackle doping in sports. Situated learning and more specifically, communities of practice, can provide a useful alternative to existing approaches to anti-doping education that have been largely guided by more "traditional" learning styles that involve top-down

knowledge flows (e.g., from academic experts to a limited number of sport stakeholders or athletes), and do not allow for meaningful social interactions among sport stakeholders that are directly involved in anti-doping practices as part of their regular operations.

Secondly, although a large number of anti-doping education projects have been funded by the European Commission, the International Olympics Committee, and the World Anti-Doping Agency in the last 5 years, there have been little synergies and collaboration between them. It appears that there has been an overemphasis on anti-doping knowledge creation at the expense of knowledge management. Unless knowledge is further utilized beyond existing project's lifetime, it is rendered obsolete and its impact is undermined; unless knowledge is stored and integrated in diverse contexts (e.g., cultural, organizational); and unless knowledge on anti-doping is contextualized to different training and policy needs, then it becomes abstracted from (and quite possibly irrelevant to) the social contexts that are in need of it.

A large body of research in diverse settings, ranging from secondary education, to medical education, and organizational innovation has demonstrated that communities of practice significantly improve knowledge management processes and can enable the creation of innovative solutions - this is a really important asset in today's knowledge-driven economy (Cruess, Cruess, & Steinert, 2018; Goodyear & Casey, 2015; Pattinson & Preece, 2014; Wenger, McDermott, & Snyder, 2002). Communities of Practice have also been applied to help translating innovative research findings into actual clinical practice in the healthcare context (Thompson, Schneider, & Wright, 2013). Importantly, communities of practice yield such benefits in organizational knowledge management and utilization in a cost-effective (i.e., without bearing the costs of formal education and training) and efficient manner (i.e., without hierarchy concerns and bureaucracy; Ji, Sui, & Suo, 2017). Our contention is that Communities of Practice for Clean Sport Education can provide the infrastructure for effective and sustainable management of anti-doping education knowledge. So far, the concept of communities of practice has never been applied in this area.

3 Aims & Objectives of Project IMPACT

Project IMPACT will utilize the concept of Communities of Practice for the first time in the context of clean sport/anti-doping education, through the strategic partnership between key academic experts who possess a large intellectual capital on developing and evaluating anti-doping education, and international and national stakeholders and key actors from the world of sports (sport associations; anti-doping agencies; organizations for doping prevention in amateur sports). Essentially, project IMPACT applies the principles of the Triple Helix Model (Etzkowitz & Leydesdorff, 2000) which enables the synergies between different stakeholders, such as academics, governmental authorities and end-users/civic society. IMPACT's approach will further enable the social dialogue on combatting doping in sports at a larger and pan-European scale and will also help in translating knowledge exchange and synergies

into more effective, reflective and impactful joint anti-doping ventures. The specific objectives of project IMPACT are to:

- Identify and utilize relevant empirical evidence to guide the development of the first community of practice for clean sport education in Europe.
- Develop face-to-face and virtual communities of practice for clean sport education to enable synergies and collaborative learning about state-of-art clean sport education among key sport stakeholders, anti-doping organizations, and expert academics.
- Enable knowledge sharing and the emergence of best practices with an emphasis on protecting clean athletes from doping use; minimizing risk and harmful practices in athletes involved in or at-risk for doping use; identifying new areas for policy intervention; and developing strong anti-doping social norms through whistleblowing promotion across levels of sports, ethnic minority groups, and types of sport.
- Increase awareness of anti-doping organizations and sport stakeholders across Europe about the bene-fits of using communities of practice for clean sport education, policy-making, and research, and for stimulating future innovative anti-doping education practices.

4 Future Work

The main goal is the design and implementation of the digital infrastructure that will support the virtual community of practice of project IMPACT, and this includes: (a) designing and developing the virtual community of practice platform based on an open source content Management System; (b) designing and creating the content to be included in the virtual community of practice; and (c) evaluating the structure, content, and functionality of the virtual community of practice.

This work process will include the following activities:

- Virtual community of practice design and development: This activity focuses on transforming the needs into implementations of a virtual community of practice that aims to support Clean Sport Education along the dimensions/areas that will emerge from the offline communities of practice.
- Creation of educational content: This activity aims to transform and create educational content that will be used in order to be included in the virtual community of practice.
- Evaluation of the virtual community of practice: This activity pertains to the evaluation of the virtual community of practice by the sport stakeholders participating in IMPACT's consortium (i.e., iNADO, Dopinglinkki, CyADA, and SS Lazio Cycling), and by members of our national communities of practice in Finland, Italy, Greece, Cyprus and the UK.

5 Acknowledgement

This project has been funded with support from the European Commission's 2018 Erasmus+ Sport Program. This publication reflects the views only of the author, and the Commission cannot be held responsible for any use which may be made of the information contained therein.

The authors of this research would like to thank IMPACT team who generously shared their time, experience, and materials for the purposes of this project.

6 References

1. de Hon, Olivier & Kuipers, Harm & Van Bottenburg, Maarten. (2014). Prevalence of Doping Use in Elite Sports: A Review of Numbers and Methods. *Sports medicine* (Auckland, N.Z.). 45. 10.1007/s40279-014-0247-x.
2. R Nicholls, Adam & Madigan, Daniel & Backhouse, Susan & Levy, Andrew. (2017). Personality traits and performance enhancing drugs: The Dark Triad and doping attitudes among competitive athletes. *Personality and Individual Differences*. 112. 10.1016/j.paid.2017.02.062.
3. Hartgens, F., & Kuipers, H. (2004). Effects of androgenic-anabolic steroids in athletes. *Sports medicine*, 34(8), 513-554.
4. Darke, S., Torok, M., & Duflou, J. (2014). Sudden or unnatural deaths involving anabolic-androgenic steroids. *Journal of forensic sciences*, 59(4), 1025-1028.
5. Frati, P., P Busardo, F., Cipolloni, L., De Dominicis, E., & Fineschi, V. (2015). Anabolic androgenic steroid (AAS) related deaths: autoptic, histopathological and toxicological findings. *Current neuropharmacology*, 13(1), 146-159.
6. Lindqvist, A. S., Moberg, T., Eriksson, B. O., Ehrnborg, C., Rosén, T., & Fahlke, C. (2013). A retrospective 30-year follow-up study of former Swedish-elite male athletes in power sports with a past anabolic androgenic steroids use: a focus on mental health. *Br J Sports Med*, 47(15), 965-969.
7. Pope Jr, H. G., Kanayama, G., Athey, A., Ryan, E., Hudson, J. I., & Baggish, A. (2014). The lifetime prevalence of anabolic-androgenic steroid use and dependence in Americans: Current best estimates. *The American journal on addictions*, 23(4), 371-377.
8. Quaglio, G., Fornasiero, A., Mezzelani, P., Moreschini, S., Lugoboni, F., & Lechi, A. (2009). Anabolic steroids: dependence and complications of chronic use. *Internal and emergency medicine*, 4(4), 289-296.
9. Barkoukis, V. (2015). Moving away from penalization: the role of education-based campaigns. In V. Barkoukis, L. Lazuras, and H. Tsorbatzoudis (Eds.), *The Psychology of Doping in Sport*, (pp. 215-229). Abingdon: Routledge.
10. Lazuras, L., & Barkoukis, V., (2018). Performance and Appearance Enhancing Drug Use in Sports: A Psychological Perspective. In G. Tenenbaum, R. C. Ecklund (Eds.), *Handbook of Sport Psychology* (4th edition). New York: Wiley Blackwell.
11. Wenger, E. (2009). Communities of practice. *Communities*, 22(5).
12. Wenger, E. (2010). Communities of practice and social learning systems: the career of a concept. In *Social learning systems and communities of practice* (pp. 179-198). Springer, London.
13. Wenger, E., McDermott, R. A., & Snyder, W. (2002). *Cultivating communities of practice: A guide to managing knowledge*. Harvard Business Press.

14. Cruess, R. L., Cruess, S. R., & Steinert, Y. (2018). Medicine as a community of practice: Implications for medical education. *Academic Medicine*, 93(2), 185-191.
15. Goodyear, V. A., & Casey, A. (2015). Innovation with change: Developing a community of practice to help teachers move beyond the 'honeymoon' of pedagogical renovation. *Physical Education and Sport Pedagogy*, 20(2), 186-203.
16. Pattinson, S., & Preece, D. (2014). Communities of practice, knowledge acquisition and innovation: a case study of science-based SMEs. *Journal of Knowledge Management*, 18(1), 107-120.
17. Thomson, L., Schneider, J., & Wright, N. (2013). Developing communities of practice to support the implementation of research into clinical practice. *Leadership in Health Services*, 26(1), 20-33.
18. Ji, H., Sui, Y. T., & Suo, L. L. (2017). Understanding innovation mechanism through the lens of communities of practice (COP). *Technological Forecasting and Social Change*, 118, 205-212.
19. Etzkowitz, H., & Leydesdorff, L. (2000). The dynamics of innovation: from National Systems and "Mode 2" to a Triple Helix of university–industry–government relations. *Research policy*, 29(2), 109-123.