



Disseminating Science and Education through Social Media: The Experience of a Students' Editorial Team at the University of Padova

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INTRODUCTION

In today's job market, proficiency in communication is an important and often required skill of every professional path. Opportunities to instruct students in the scope and benefits of social media communication tools can be provided in higher education by combining academic instruction and learning using online communication platforms (1–5). In scientific fields, it is particularly important to teach students how to effectively communicate science so as to avoid misinformation or polarizations that can lead to the development of echo chambers (6, 7). Specific attention is needed to expose students to the essential elements of effective science communication (8, 9) with the use of a clear language and the appropriate choice of topics. Social media platforms are now commonly used to share content with multiple parties and to build virtual networks and communities within specific fields. Furthermore, social media networks can be used in higher education to promote collaborative learning, to enhance students' participation and engagement, and to increase the interaction between students and teachers (10, 11). Based on these premises, in 2019 the Department of Comparative Biomedicine and Food Science (BCA) of the University of Padova (Italy) launched a social media information exchange project to provide students and teaching staff with specialized training and to establish a social media editorial team. The principal aims of the project were to provide students with the basic skills for scientific communication via social media and to disseminate departmental activities to the general public. Further goals were to stimulate interaction among students and between students and teaching

staff and to promote a virtual community around departmental activities.

PROCEDURE

The social media information exchange project was presented to the students (about 350 in total) and teaching staff (about 70) in two bachelor courses and one master course at BCA. The first bachelor course, "Animal Care," is focused on animal care and welfare. The second bachelor and the master degree courses, "Food Safety and Hygiene" and "Biotechnology for Food Science," are both focused on food science. Despite having subject specific content, the three courses share several common topics of biology, microbiology, food chemistry, and animal science, in addition to sharing staff, organizational structures, and didactic spaces.

The social media information exchange project started with two training sessions conducted by two freelance professionals on science communication and on social media management (Appendix I in the supplemental material). The first session involved about 50 students and 28 teaching staff members involved in the three BCA courses who joined the project on a voluntary basis. Participants in this training session learned the value of accurate science communication, its forms and methods, and the relationship with the audience. Specific instruction on the correct use of social media as a channel for a targeted communication to an audience of young people was also provided.

At the end of the first session, 36 students (12 for each degree) were selected to participate in the second training session carried out through laboratory activities. The students were selected based on the trainers' feedback regarding the level of motivation and interest demonstrated during the initial training. The laboratory activities entailed defining communication objectives, content, and audience; creating an editorial plan; and transforming scientific content into posts. The students were also trained to pay attention to "risky" topics, to use different writing styles (formal, informal, scientific vocabulary), and how to elaborate with stylistic text and images (Fig. 1). Additional components

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FIG 1. Two Instagram posts produced by the SET that exemplify the topics covered, writing forms, and the style of the images.

TABLE I
 Statistics (June 20–September 21) of departmental social accounts managed by the Social Editorial Team

Post type	Facebook (n)	Organic reach ^a (n)	Engagement (%) ^b	Instagram (n)	Organic reach ^a (n)	Engagement (%) ^b
Student life	21	142 ÷ 1700	6 ÷ 24	36	319 ÷ 1312	25 ÷ 147
Research	13	121 ÷ 2800	7 ÷ 21	12	303 ÷ 658	32 ÷ 101
Science	38	132 ÷ 1800	5 ÷ 19	64	277 ÷ 852	27 ÷ 95
Followers	Facebook (n) ^c			Instagram (n) ^c		
Total	373			579		
June–December 2020	298			n.a. ^d		
January–June 2021	354			n.a.		
July–September 2021	373			n.a.		

^aThe number of people who have seen the content at least once; it should be noted that the posts are not sponsored. The data, obtained from Facebook Insights – Meta Business Suite, show the minimum and maximum number of people per post types.

^bThe percentage of people who saw a post and added a reaction (such as a “Like”), clicked on it, or shared or commented on it. The data, obtained from Facebook Insights, show the minimum and maximum number of people per post type. The data, obtained from Facebook Insights – Meta Business Suite, show the minimum and maximum % by post type. Organic reach and engagement are used by the editorial team to monitor the success of the editorial plan and adapt the contents. The number of Facebook followers shows a positive increase. Instagram tends to be preferred for the students’ life posts, while Facebook is preferred for research ones. The differences are probably related to the different ages of the followers, younger in the case of Instagram.

^cRetrieved from account.

^dn.a., not available.

of the training included correct management of discussions, hash-tag research, possible partner/competitor analysis, legal regulations, appropriateness of scientific sources, and the correct use of tools to create appealing social media posts. Two members of the teaching staff for each degree course were also involved in this second training session and were identified as the supervisors responsible for coordinating the editorial staff’s future activities. Details on training content and modalities are available in Appendix 2.

At the end of their training, students and supervisor teaching staff established the Social Editorial Team (SET). Instagram and Facebook were the selected platforms to host the posts created by the SET. It is known that these two social media platforms have different audiences in terms of age and composition (young people and mostly university students on Instagram, older users and institution and stakeholders on Facebook), which was considered relevant for the departmental social communication of which the SET was responsible. The posts included different topics related to student life (recreational activities, interest groups, didactic outings, didactic projects, etc.), faculty research projects, and science in general (seminars and conferences, scientific news, etc.).

To ensure the continuation of the project over time, at the beginning of each academic year the project was presented to the freshmen and a basic laboratory was offered to new students of the SET. Moreover, each year students were encouraged to share their learned experiences with the new student SET members. The official recognition of students’ activity in the team as curricular internship or additional graduation score was also important for maintaining student participation.

The project did not include any activities that posed safety risks.

CONCLUSION

From June 2020 to September 2021, the Social Editorial Team (SET) produced 72 posts on Facebook (BCA_campus_unipd, 373 Followers) and 112 on Instagram (bca_campus_unipd, 579 Followers; Table 1) demonstrating the students’ great commitment and sustained interest in the department’s social media information exchange project. This project resulted in at least 5 beneficial outcomes. First, the BCA departmental social media project enabled the development of a community of students with common educational and professional interests strengthened through peer communication. Second, the project fostered and expanded a community of department and university students, teachers, and researchers with common interests in science (11). Third, social media improved communication about departmental activities and resources among all departmental members. Fourth, the project increased public awareness of university and department activities and enabled an effort to stimulate public engagement, which still appears limited among some research institutions (12). Moreover, it provided a platform to share science-based information between students, university professionals, and the public, making science more accessible and engaging without losing rigor of information (13). Finally, the project provided students with the platform to raise awareness and disseminate information about issues of particular interest

to them. The department social media platforms have become a “place” for the virtual community of the department in which students, as both the “information producers” and the “audience,” have proposed and presented posts covering issues that are relevant to them.

In conclusion, the social media information exchange project built on the expansion of online resources for students and teachers developed during the pandemic (14), and it has resulted in the active interaction among students and between students and teaching staff in the Department of Comparative Biomedicine and Food Science. Consequently, the department’s social media has become valued by students, enhancing their sense of belonging to the department and university communities.

SUPPLEMENTAL MATERIAL

Supplemental material is available online only.

SUPPLEMENTAL FILE 1, PDF file, 0.4 MB.

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