

## Chapter 70

# Don't Trash Your Spam!

## Reasoning on Spam as a Way to Train Critical Thinking

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### ABSTRACT

*Some activities that are typically regarded as "a waste of time" may inspire useful experiences in school contexts. This is the case of spamming. As competent users of digital technologies, we do everything we can in order to block spam messages (e.g., by choosing, training and updating anti-spam filters), but as teachers we can find that also in spam there is an educative potential that it is worth cultivating. This chapter presents a reflection based on an educational experience realized in a lower secondary Italian school during a course on Digital Literacy aimed at making students aware of different synchronous and asynchronous communication tools. In the activity presented here, the focus was on the analysis of different spam and phishing messages. Interacting within a wiki environment, students had the chance to reflect on the different elements that should be taken into account to detect strange and dangerous e-mail postings.*

### INTRODUCTION

Drugs and herbs without prescription, porno material and pirate software, luxury watches and cars at competitive prices, offers for distance jobs, fast ways to achieve qualifications with very little commitment: receiving such undesired e-mail messages and deleting them is a daily experience for most of us.

Users of the Web normally consider spam<sup>1</sup> as an intrusive nuisance prejudicial to people's time

and susceptible to convey scam, steal personal data and identity and reuse private information for phishing purposes. Nevertheless, within the educational objective of discussing spam with the students of the third year of a lower secondary school, I found it delightful to rummage in the e-mail trash, looking for variegated and interesting examples for my students.

Why ever does one devote a teaching activity to spam? The first reason is that though many young students have a personal e-mail address,

DOI: 10.4018/978-1-4666-2122-0.ch070

they slightly use it and then are scarcely aware of the potential and risks involved. Despite advanced anti-spam filtering and trustworthy systems that warn of the scarce reliability of e-mail addresses and websites, one might run into unwanted e-mails and untrusted websites. Users of the web cannot enjoy the luxury of feeling completely protected by anti-fraud technology – they should always be on the lookout and become aware of the need for suspicion.

Then, because a hypothetic spam education could be a useful example of education about observation, critical analysis, suspicion and doubt. The major feature of spam concerns the absolute absence of the source and the difficulty of tracking them. This means its reliability depends almost exclusively on the analysis of the message header and text.

## CONTEXT

The experience took place at the D'Oria - Pascoli lower secondary school at Genova, Italy, and involved a third year class composed by 25 students engaged in a course on Digital literacy devoted to synchronous and asynchronous communication. The course on Digital literacy aimed at:

1. Getting to know and use the major asynchronous communication tools (SMS, e-mail, forum, wiki, blog, etc.).
2. Becoming aware of the effects that such tools might have on communication modalities, (e.g., *second orality* effects, cfr. Ong, 1982).
3. Being able to detect danger signals sometimes conveyed by such tools (e.g., spam and phishing).

Specific objective of the latter aim was the reflection on the elements that should be taken into account to detect strange and dangerous e-mail postings.

Even though the experience can be reproduced with other technologies or on paper, in this case a wiki was chosen for at least two reasons: it was useful to gather and share in a common environment all the students' impressions and it was useful to familiarize students with a communication tool supporting both synchronous and asynchronous communication. The wiki used for the activity was PbWorks, a piece of software from the US (<http://www.pbworks.com/>), which was used to immerse the students into an English language interface environment online. This tool is free (if used for teaching purposes), intuitive and easy to access and use. It was customized in order to allow access to authorized users only: each student was given a login and password and could work in a secure environment and monitor the contribution made by other authorized users. The choice of a wiki ensured a high degree of flexibility in the organization of the working time and guaranteed a unique repository accessible from anywhere by each participant.

The activity was run in the computer lab of the school. Each computer had a fast Internet connection to access the wiki environment that was previously set up by the teacher. In order to replicate an analogous experience, a collection of spam messages should be kept by the teacher or the adult in charge of the activity.

## BACKGROUND

Anti-phishing education is becoming an independent study sector together with the analysis of belief dynamics. It aims at investigating both the ways to protect oneself from phishing and to analyze the reasons why people fall into a trap, in order to design the key elements for sound and selected defensive strategies (Dhamija et al., 2006),

The "Spam & Spyware" course was held at Calgary University Computer Science Department in 2005 and is one of the most well-known and

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