

# Google Classroom. Security and Regulatory Compliance

**Abstract:** This application document to Google Classroom, as a suite of productivity tools including e-mail, documents and storage space, is generated from a data protection and security perspective.

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## 1 BACKGROUND

Google Classroom is part of the "G-Suite for Education" solution package offered by the manufacturer Google. The G-Suite for Education solution suite offers features common to all applications. The existing versions will be detailed later to understand the existing security features.

It is also important to bear in mind that the solution is offered in cloud mode and therefore the characteristics and links with the applicable regulations in Spain must be taken into consideration, which would initially be the National Security Framework itself and, in addition, the current regulations on Data Protection and the Guarantee of Digital Rights.

## 2 REGULATORY COMPLIANCE REQUIREMENTS

It is important to note that the use of an existing technology as a "cloud" technology service requires having obtained the corresponding Conformity according to the level of information management or service provision.

In the case of Google's cloud solutions; they have obtained the conformity for the National Security Framework "**High Level**", as referred to in the following URL of the manufacturer itself.

*<https://cloud.google.com/security/compliance/ens?hl=es>*

Within this list, as can be observed in the G-Suite set, the Classroom service (located in position 2 of this list) complies with this requirement.

In addition, and with the aim of confirming this fact, the list of entities accredited for this purpose in order to comply with the National Security Framework can be consulted, in which it can be observed that the company Google and its G-Suite services have obtained the conformity to the ENS for the HIGH category.

*<https://www.ccn.cni.es/index.php/es/docman/documentos-publicos/certificados-ens/124-certificado-de-conformidad-google-g-suite/file>*

On the other hand, and in accordance with the regulations for the protection of Personal Data, there is a commitment and declaration by the manufacturer to comply with them.

In this regard, you can observe the conditions set out in the following URL on the Google Cloud service and data protection compliance.

*[https://cloud.google.com/security/gdpr/resource-center/pdf/googlecloud\\_gdpr\\_whitepaper\\_618.pdf?hl=es-419](https://cloud.google.com/security/gdpr/resource-center/pdf/googlecloud_gdpr_whitepaper_618.pdf?hl=es-419)*

Additionally, and within the agreement on the protection of data from third countries with the European Union, it is necessary to understand the need to comply with the requirements regulated by European Regulation 2016/679 (RGPD) which, in its article 45, establishes the continuation of the agreements signed in 1995 between Europe and the United States for the protection of personal data and which are currently supervised through the "EU-U.S. Privacy Shield" programme.

The services offered by Google are limited to this programme with a certification obtained in September 2016 and the next certification review date is September 2020, as established by the 4-year review requirement.

*<https://www.privacyshield.gov/participant?id=a2zt000000001L5AAI>*

### 3 VERSIONS AND SECURITY

While taking into consideration the criteria set out above for compliance, it is necessary to assess the security capabilities offered by the solution.

In a first instance, it is necessary to know about the existence of two (2) different versions that offer features in incremental maintenance and security: G-Suite for Education and G-Suite Enterprise for Education.

The characteristics for both versions are listed below:

- **G-Suite for Education**
  - o Assistance 24 hours a day, every day, by phone, e-mail and online.
  - o Electronic detection for e-mails, chats and files.
  - o Retention and archiving for Gmail and Meet.

- Audit reports to track user's activity.
- Security and administration controls.
- Device management (Android, iOS).
- Data loss prevention for Gmail and Drive.
- S/MIME hosted for Gmail.
- Enterprise-level access control with mandatory security key.
- **G-Suite Enterprise for Education**
  - Assistance 24 hours a day, every day, by phone, e-mail and online.
  - Improved assistance.
  - Electronic detection for e-mails, chats and files
  - Retention and archiving for Gmail and Meet.
  - Audit reports to track user's activity
  - Security and administration controls.
  - Device management (Android, iOS).
  - Advanced mobile device management.
  - Data loss prevention for Gmail and Drive.
  - Data regions.
  - S/MIME hosted for Gmail.
  - Enterprise-level access control with mandatory security key.
  - Gmail administrator reports and logs in BigQuery.
  - Gmail's integration with compliant third-party archiving tools.
  - Security center.
  - Security research tool.
  - Anomaly detection (Beta).
  - Advanced Protection Program (Beta).
  - Security test area.

Initially, both solutions offer general features for the protection of information according to the current conditions of the ICT sector, such as the use of two-factor authentication processes.

However, a number of more favorable conditions are observed in the Enterprise version, making it more likely to be used as a service in an environment of compliance with the National Security Framework.

- Use of data regions. Allows controlling the geographic location of G-Suite's idle data. For organizations that want more control over the geographic location of their information, the G-Suite data regions feature allows you to choose where data from specific G-Suite applications is stored at rest, whether it is distributed globally in the US or in Europe. This data control feature is not available in the basic version of the Suite.
- Traceability capabilities. As is well known, and depending on the assessment of the information categorization and service provided regarding the National Security Framework, one of the fundamental requirements for compliance is the Traceability dimension. Initially, the basic version of the solution may be considered insufficient in terms of characteristics for the activity log. However, the Enterprise version is not, as it provides all the capabilities for the correct monitoring of the activity of both users and system administrators.
- Evaluation against security incidents. The Enterprise version has the capacity to carry out a process of analysis against a security incident by using investigation mechanisms, specific to the solution, which does not imply having to extract the data and carry out independent treatment with correlation tools unrelated to the solution.
- Malware detection. The "Security Test Zone" function is an active element in the Enterprise version that allows the detection of malware through its virtual "execution" in a private and secure test zone environment. This allows an early detection capability, beyond the organization's own capabilities deployed for local or networked malware detection. Thus, from the very moment the files are uploaded or transmitted, detection capabilities will be implemented that would imply the "non-distribution" of malware from the solution, in addition to the local protection capabilities that the organization may have.

#### 4 SECURITY AND PRIVACY REVIEW IN THE G-SUITE ENVIRONMENT

Google Classroom is a part of Google's G-Suite for Education offering, so both administrators and users have at their disposal several sections related to the overall security and privacy management of the Google package.

We will list the most relevant ones to check on the security and privacy tabs in the Google environment and specifically in Google Classroom.

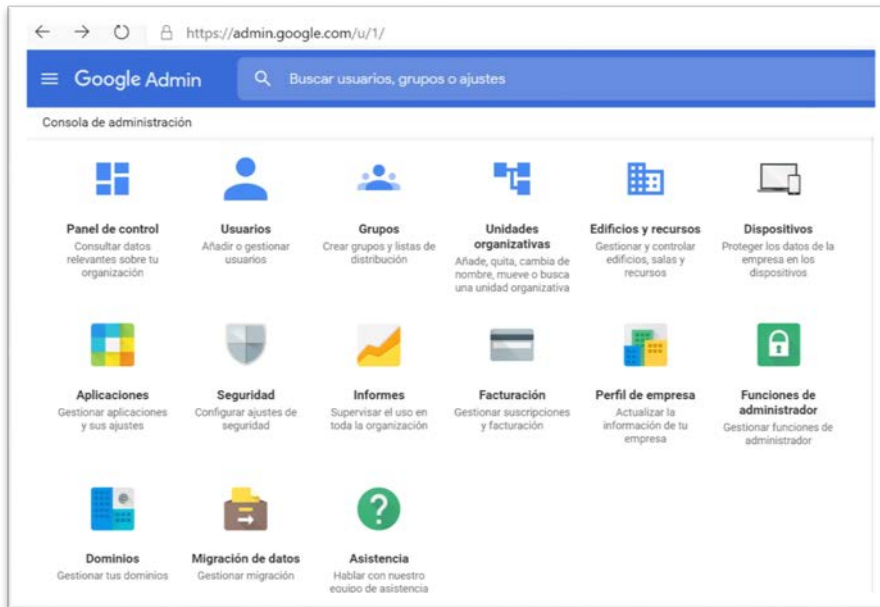


Illustration 1.- Administration Console

As a good practice, we recommend users to review their security and privacy settings for their Google Account.

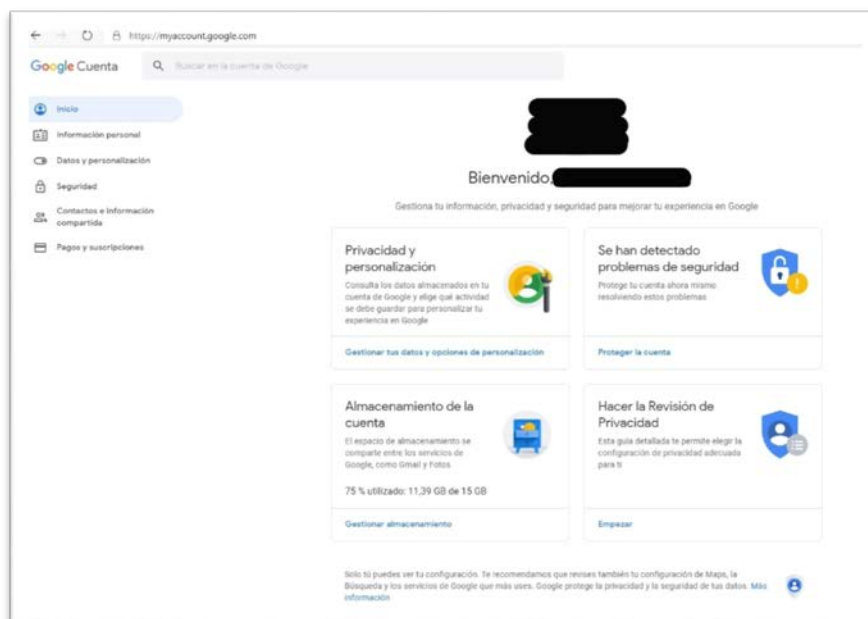


Illustration 2.- User account configuration

The different options are shown with a green check mark when the relevant revisions suggested by Google have been reviewed and completed.

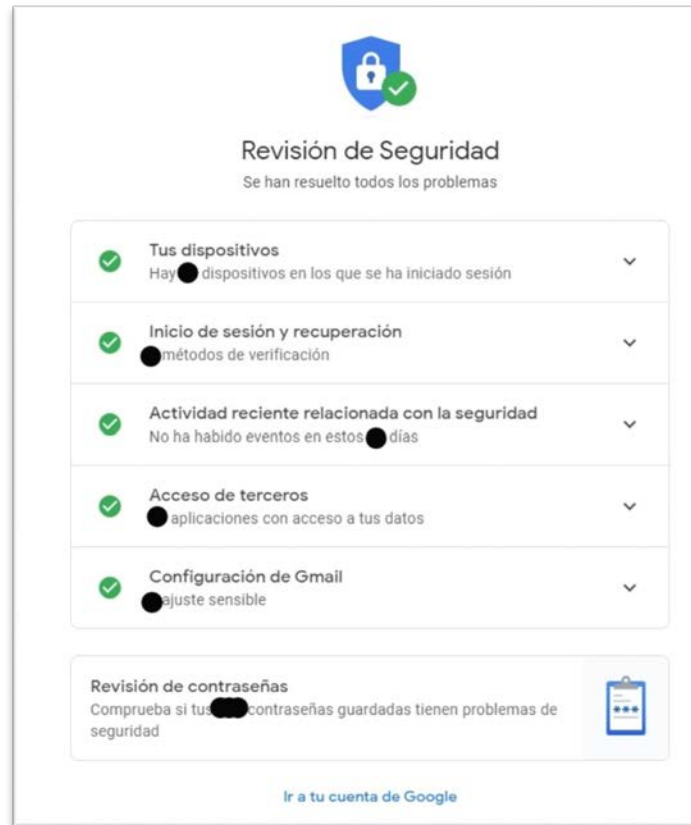


Illustration 3.- Security check

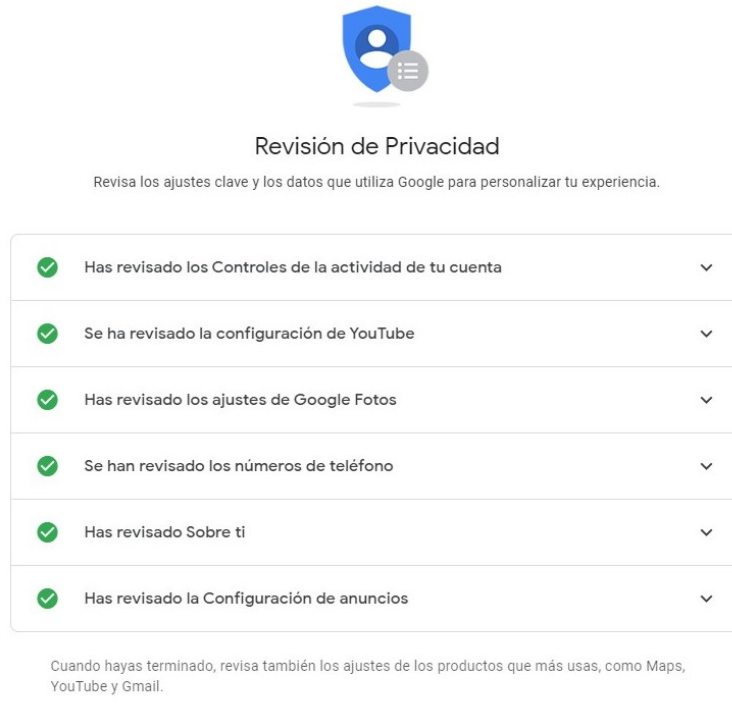


Illustration 4.- Privacy review

## 4.1 Configuring Classroom Data Access

The G-Suite administrator can decide whether domain users can allow other applications to access their classroom data through OAuth.

To configure the Classroom data access policy, the administrator must check the box next to the Classroom API under "Data Access" to allow users to grant access permissions to their Classroom data.

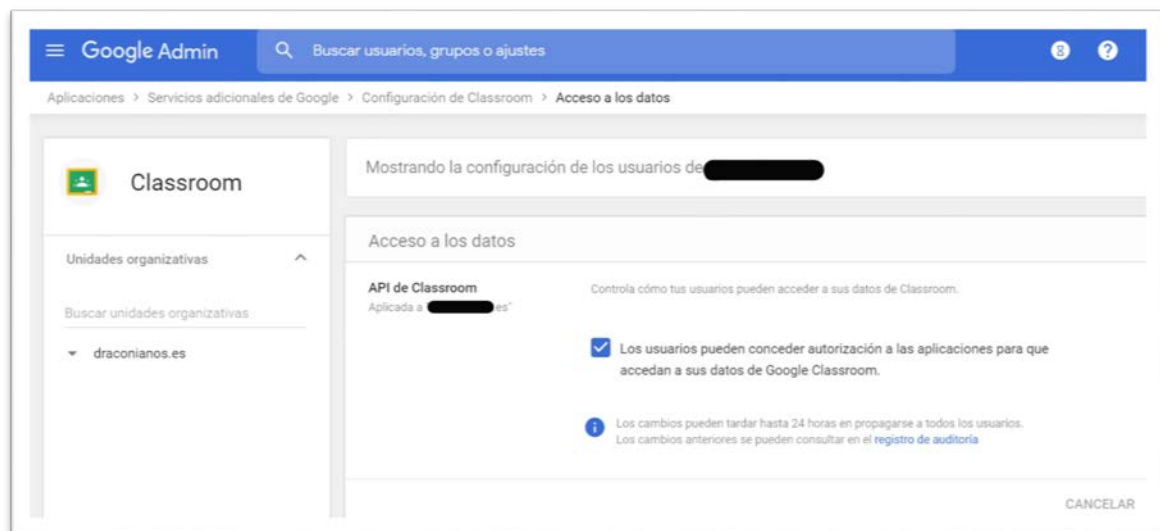


Illustration 5.- Data access

## 4.2 Verifying the identity of teachers and defining permissions

The first time users log in to Classroom, they identify themselves as teachers or students. Users who identify themselves as teachers are automatically added to the Classroom teacher group.

Users who have identified themselves as teachers should be verified to give them access to the Classroom functions they need and to define permissions for teachers.

This prevents non-teacher users from creating classes and verified teachers from viewing and managing tutors.

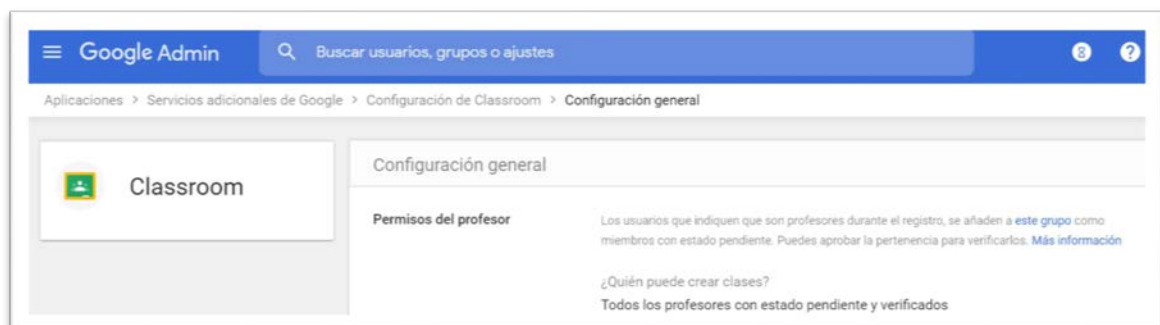


Illustration 6.- Teacher's permission

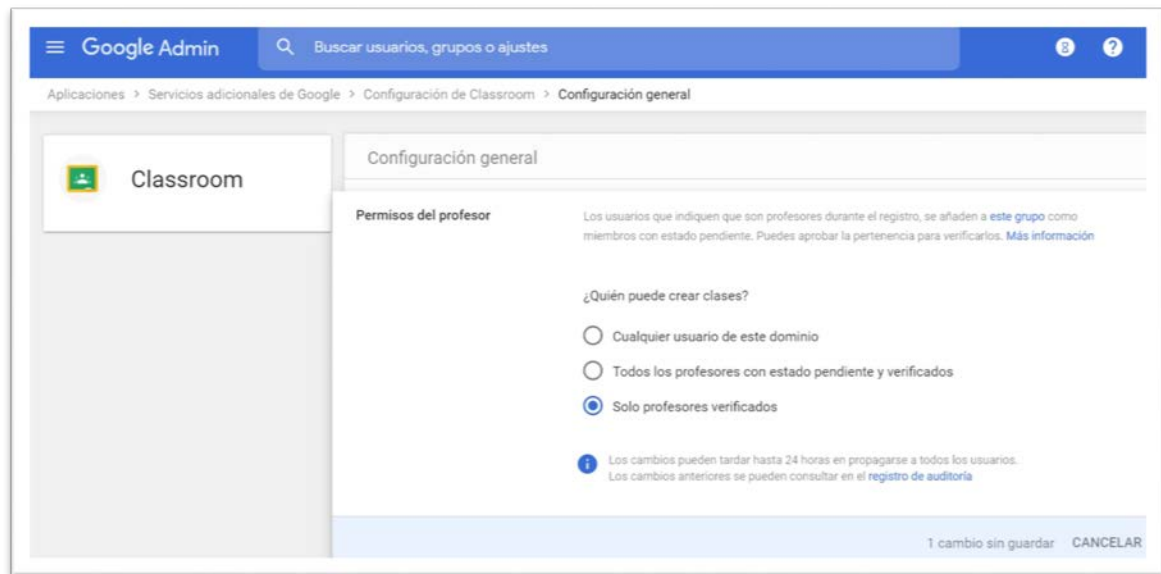


Illustration 7.- Permission options

### 4.3 Managing tutors

Tutors can track their students' progress through e-mail summaries. These summaries provide information about the student's work and classes.

The G-Suite administrator must decide whether to allow e-mail summaries for tutors and if teachers have permission to invite or remove tutors.

Once e-mail summaries are allowed, teachers will be able to send e-mail invitations to the tutors.

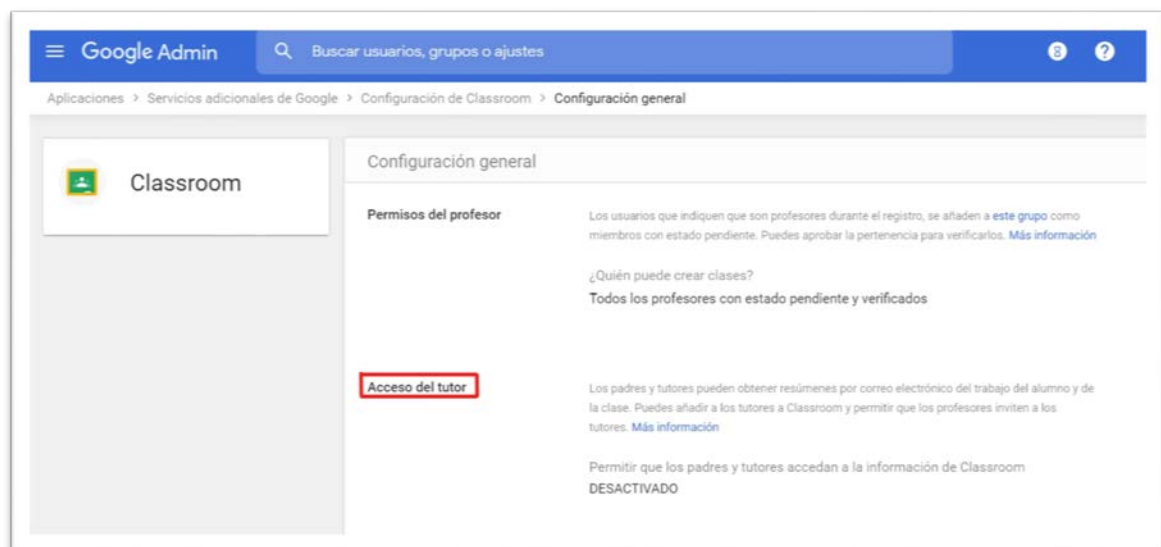


Illustration 8.- Tutor access



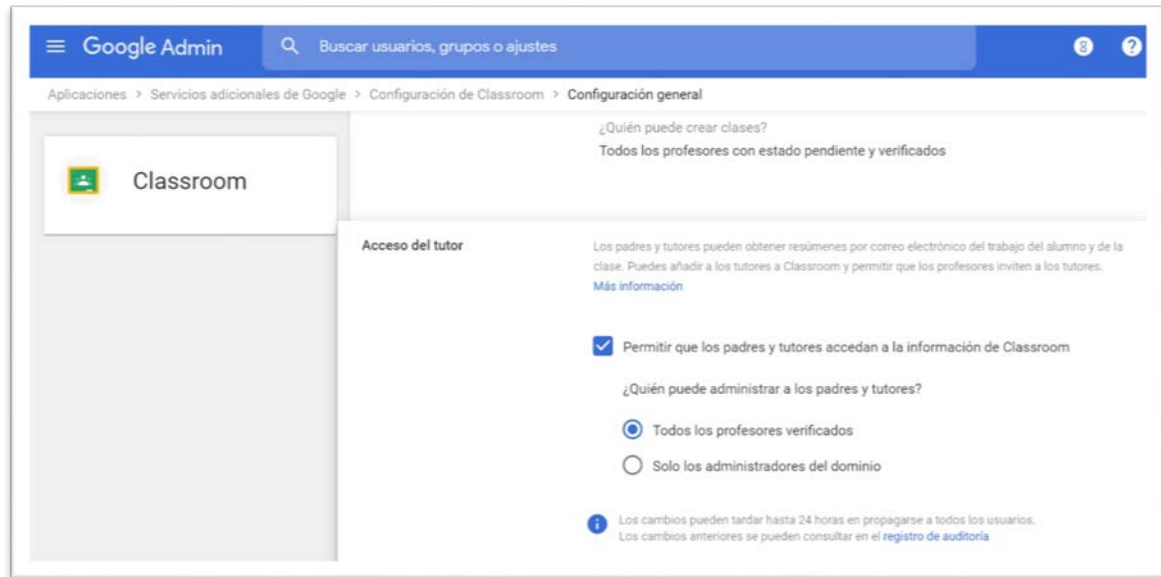


Illustration 9.- Permission options

#### 4.4 Establishing who can register for a class

Classroom is configured by default so that users can only participate in classes in their domain.

To enable users from different domains to participate in classes, you need to specify the class enrollment settings in the Google administration console.

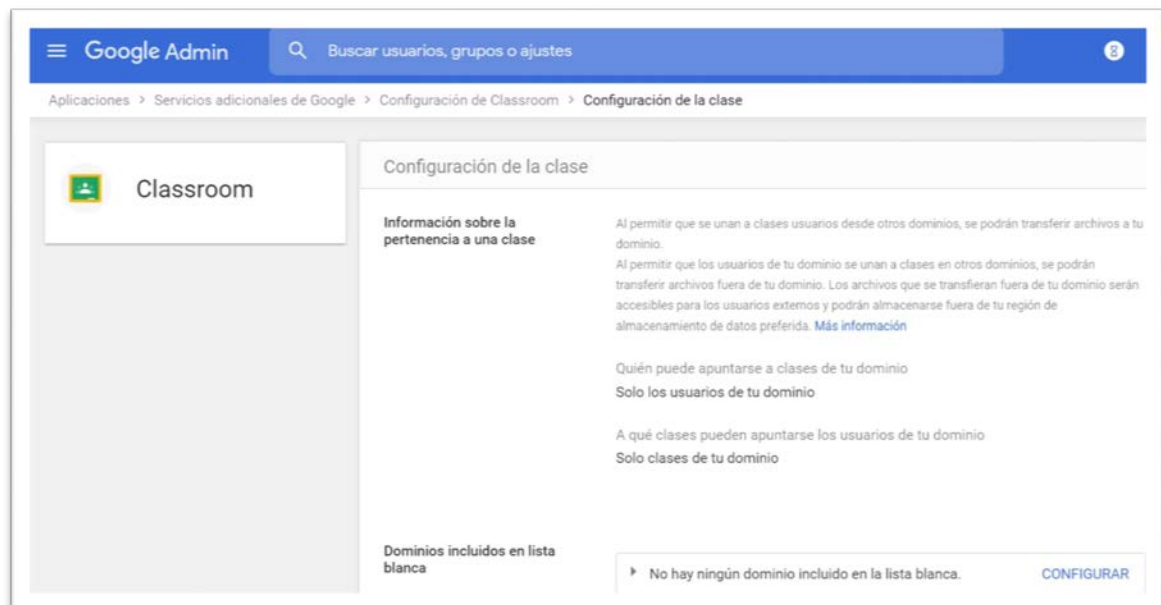


Illustration 10.- Class membership

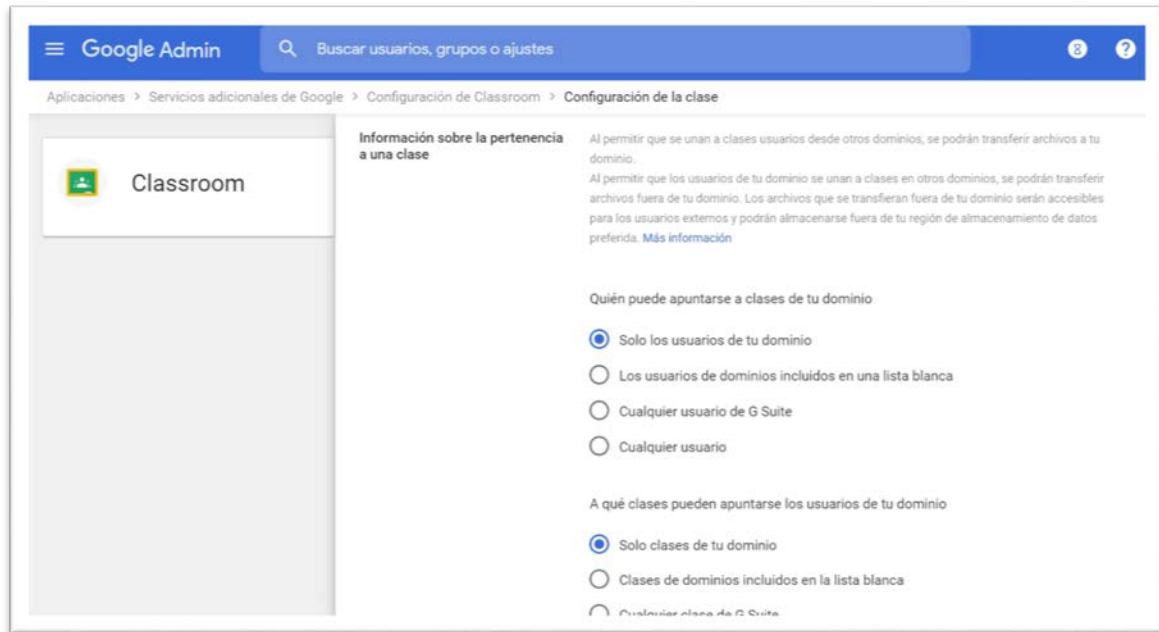


Illustration 11.- Class and domain options

## 4.5 Class adjustments

Among the configurations, that teachers can manage is the Class Code, a unique identifier for students to join the class created.



Illustration 11.- Class settings

Within the class there is the Publication Board, the teacher can select who can post and comment on content.

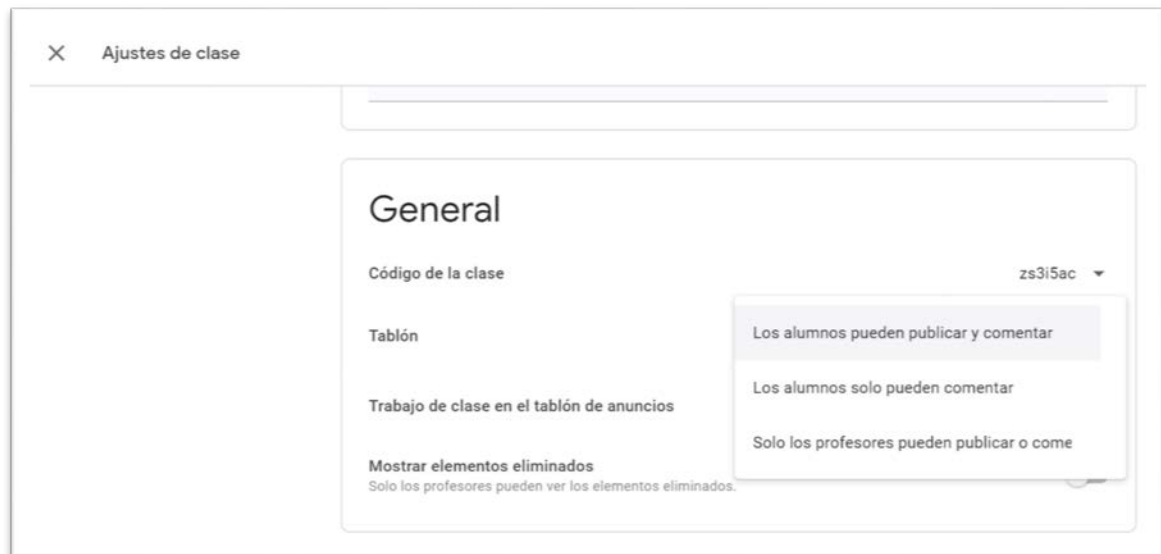


Illustration 12.- Board settings

## 5 CONCLUSIONS

Based on the above, we can draw the following conclusions.

- The Google Classroom solution complies with the requirements of the National Security Framework (RD 3/2010, of 8 January).
- In relation to the current Data Protection regulations by virtue of the first additional provision of the Organic Law 3/2018, of December 5, on Data Protection and Guarantee of Digital Rights, when the data controller is an entity included in article 77.1 of said legal body, the security measures can be considered satisfied, given the aforementioned certified conformity of Google Classroom with the ENS.
- The G-Suite solution that provides the functionality to the Google Classroom product and the relationship with other products that are deemed necessary to provide academic support to the students, presents two (2) different versions, with incremental security capacities. The G-Suite Enterprise for Education version is the one that offers the most adequate security features for an effective alignment with the National Security Framework.