# A didactic sequence in Moodle supported by peer assessment

# Diseño de una secuencia didáctica autorreguladora en Moodle basada en la evaluación entre iguales

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# Self-regulated learning

Self-generated thoughts, feelings and behaviors oriented towards the achievement of objectives, and it is understood as a cyclical process, made up of three phases:

planning, execution and self-reflection

(Zimmerman, 2001)

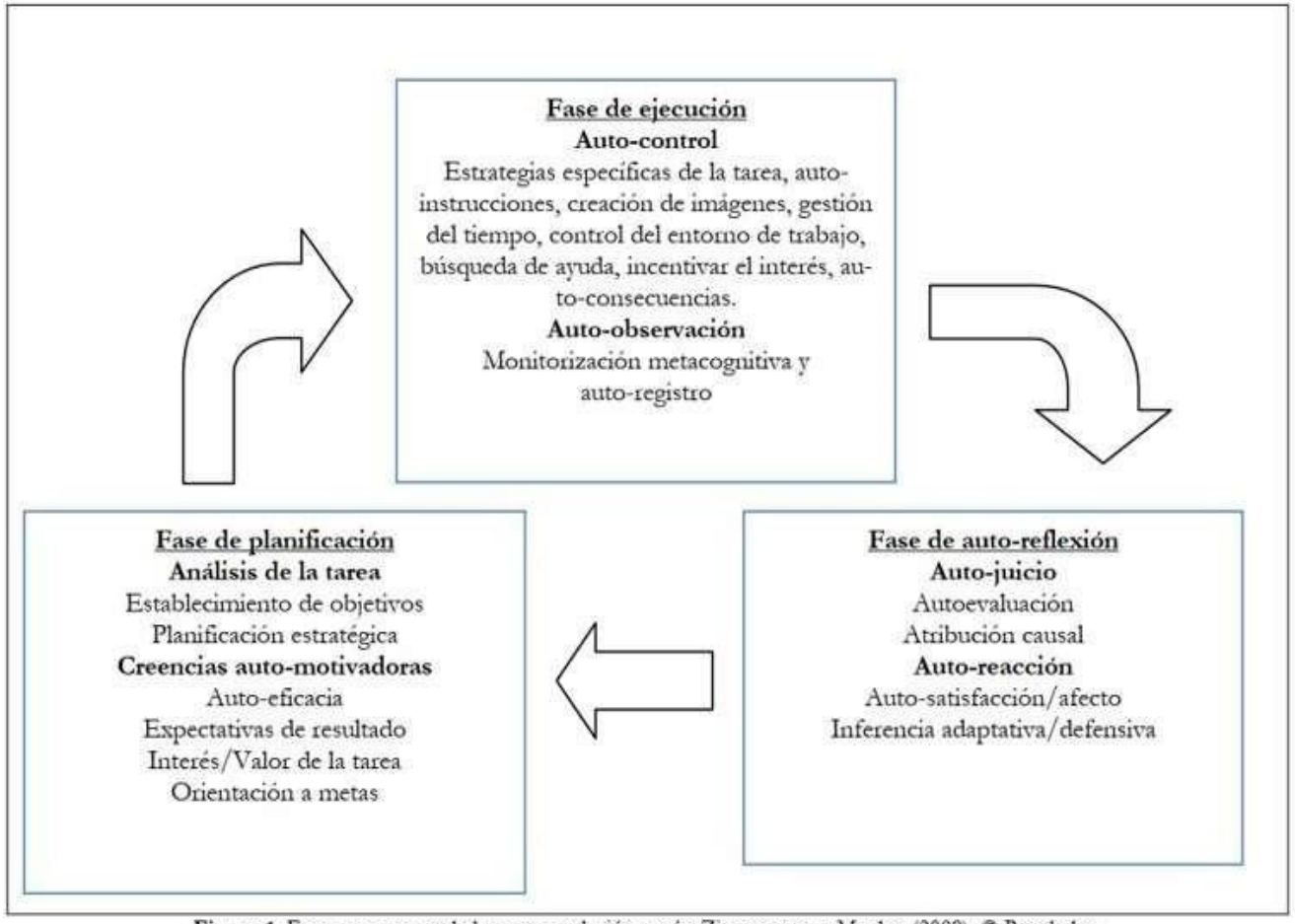
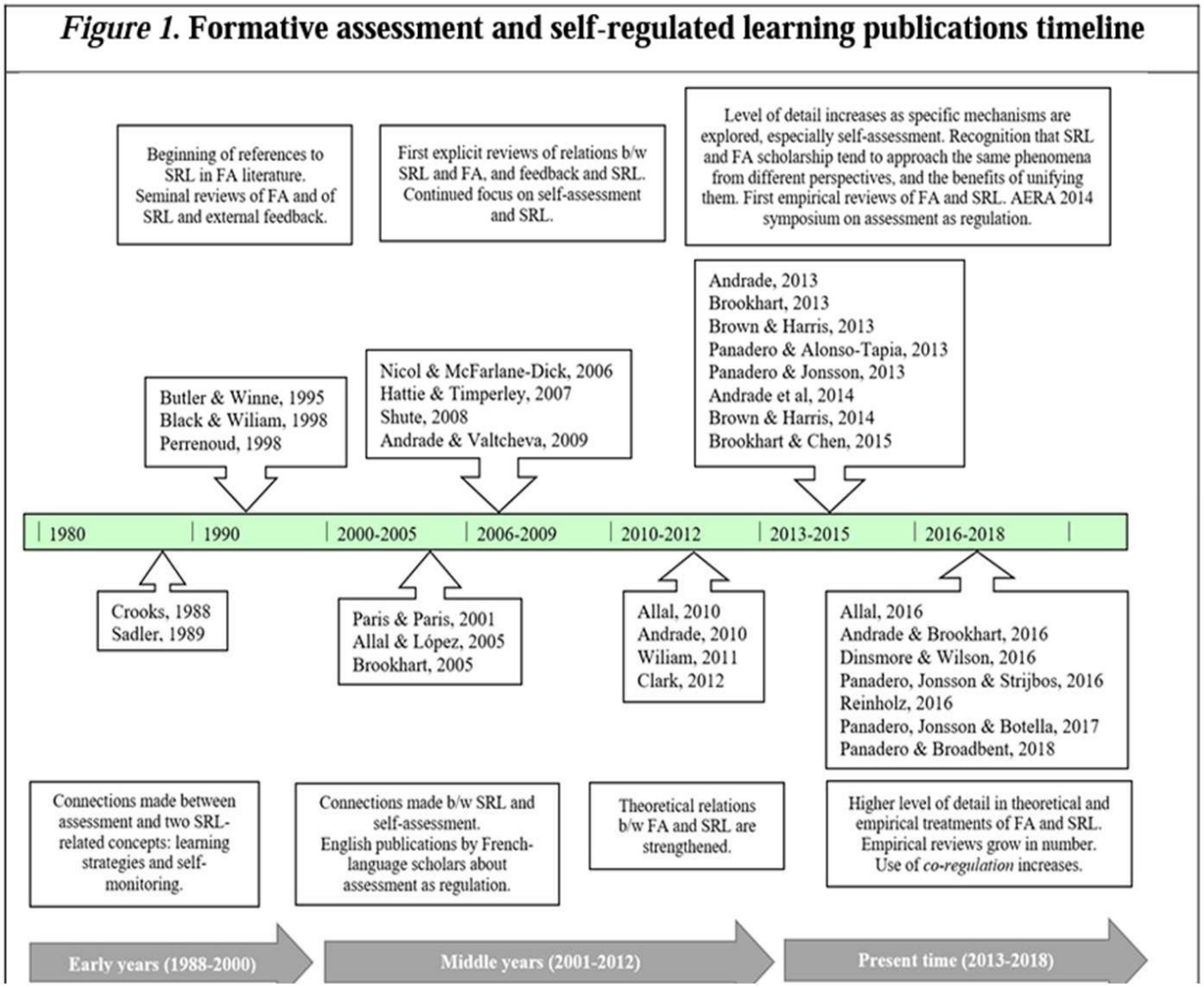


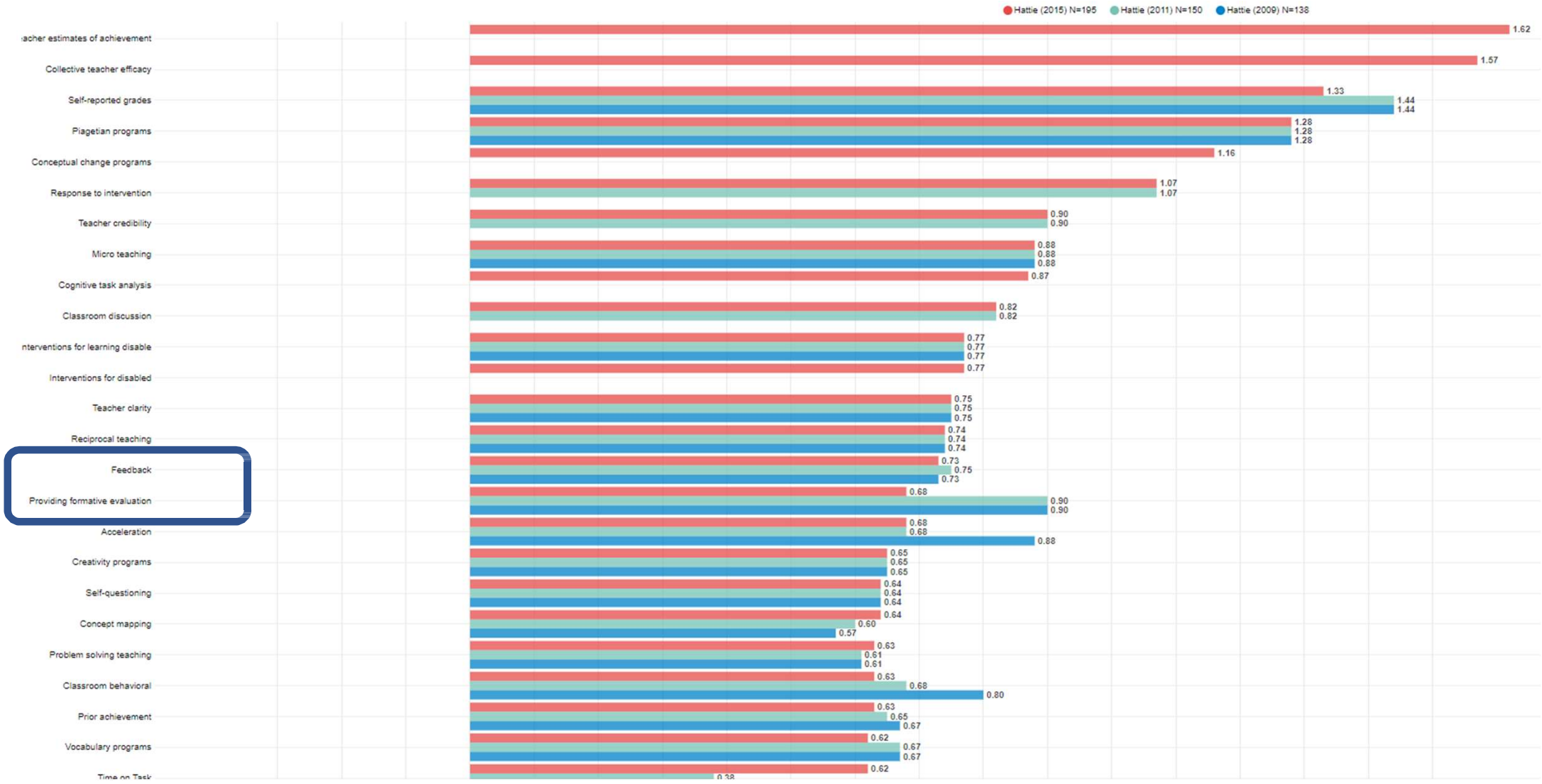

**Figura 1.** Fases y procesos de la autorregulación según Zimmerman y Moylan (2009). © Routledge.

Fuente: Panadero y Alonso-Tapia (2014), p. 452.

# SRL relationship - Formative assessment

Panadero et al., (2018)






https://visible-learning.org/nvd3/visualize/hattie-ranking-interactive-2009-2011-2015.html

# Graham et al. (2015, p. 635)

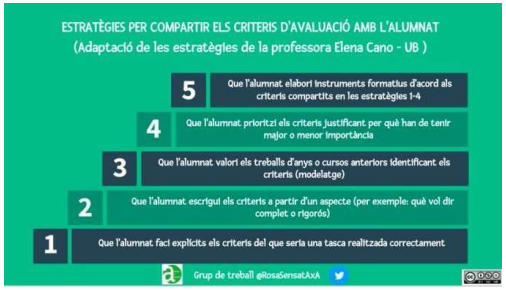
Table 2. Average Weighted Effect Sizes and Confidence Intervals for Writing Assessment Treatments

| Writing Intervention | Studies | Effect Size | Confidence Interval | Test of Null Hypothesis | | Heterogeneity | |
|---|---|---|---|---|---|---|---|
| | | | | Variance | *p*-Value | *Q*-Value | $I^2$ |
| All studies involving feedback | 27 | .61 | (.42, .79) | .01 | <.001 | 106.39** | 77.56 |
| Adult feedback | 7 | .87 | (.62, 1.11) | .02 | <.001 | 3.39 | .00 |
| Peer feedback | 8 | .58 | (.35, .82) | .01 | <.001 | 13.49 | 48.10 |
| Self-assessment | 10 | .62 | (.34, .90) | .02 | <.001 | 36.49** | 75.34 |
| Computer feedback | 4 | .38 | (.17, .59) | .01 | .001 | .22 | .00 |
| Progress monitoring | 5 | .18 | (-.01, .36) | .01 | .06 | .56 | .00 |
| 6 + 1 Trait Writing model | 4 | .05 | (-.01, .11) | .001 | .08 | .72 | .00 |

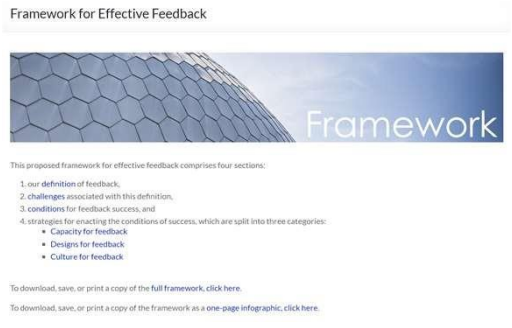
**$p < .001$.

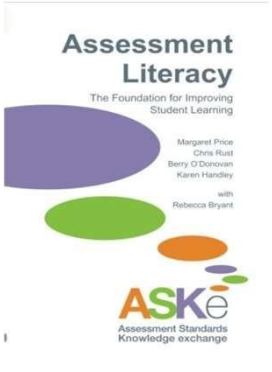
# Assessment **for** learning

- Aligned
- Authentic
- Motivating
- **Participative**

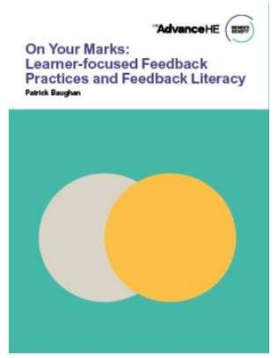



Cano et al. (2022)

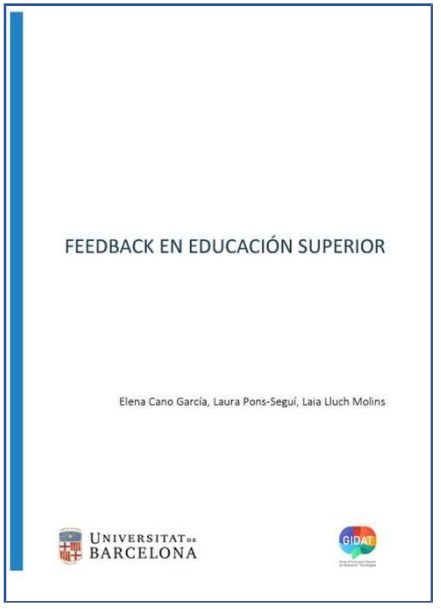








# Complex task (Ibarra et al., 2020)

- Challenger
- Deep
- Competence
- Transferable

| Constructo | Definición | Referencias |
|---|---|---|
| Reto | Abordar problemas abiertos y complejos que requieren pensamiento divergente, creatividad y establecer relaciones y conexiones significativas | Ashford-Rowe et. al., 2014; Dochy & Gijbels, 2006; Gore et al., 2009; Sambell et al., 2013 |
| Profundidad | Demostrar una comprensión profunda mediante la utilización de métodos de indagación y pensamiento reflexivo y crítico | Dochy, 2009; Entwistle & Karagiannopoulou, 2014; Herrington & Herrington, 2006; O'Donovan, 2016 |
| Comunicación | Utilizar estrategias de comunicación, oral, escrita o simbólica, mediante presentaciones, realizaciones o productos basados en la argumentación fundamentada | Gore et al., 2009; Gulikers et. al, 2004; Smith & Smith, 2014 |
| Transferencia | Relacionar el conocimiento y la experiencia con otras asignaturas y con la realidad social y profesional | Ashwin et al. 2015; Glofcheski, 2017; Gulikers et al., 2004, 2006; Ibarra-Sáiz et al., 2020; Strijbos et al. 2015 |

# Formative Peer Assessment Strategies

(To & Panadero, 2019, p. 924)

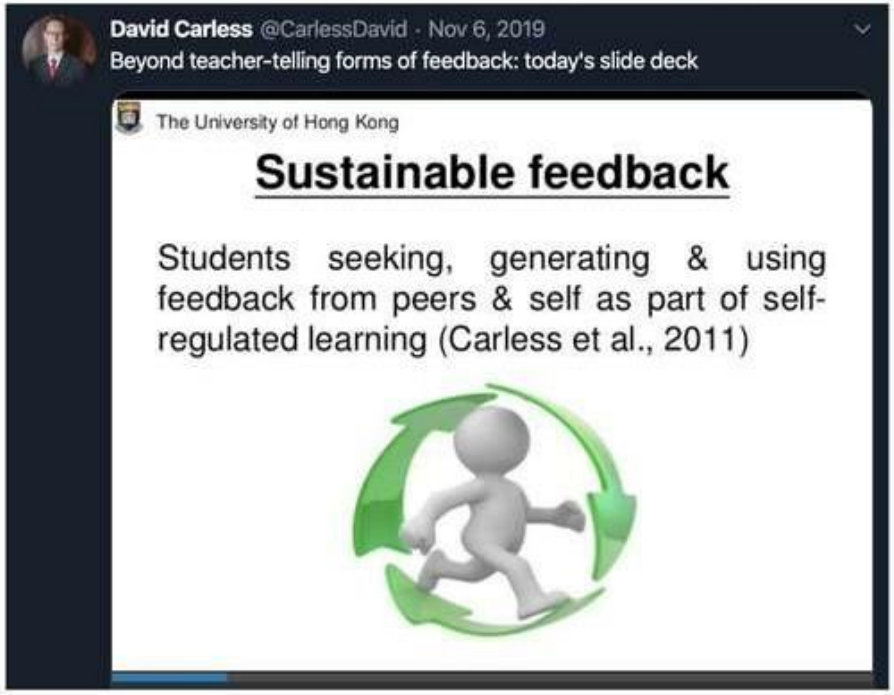
Table 1. Formative peer assessment activities.

| Type | Activity | Description |
|---|---|---|
| Teacher-led | Exemplar discussion | In groups of four, students exchanged views on the quality of two different exemplars and explained their judgement. |
| | Peer review on first draft | In pairs, students read each other's draft, wrote comments on a peer feedback form and discussed peer comments. |
| | Individual response to online peer feedback | Each student read two peers' essays and gave feedback on an E-Learning platform. Then, as a part of assignment requirements, he/she wrote a 200-word response explaining the insights from peer feedback. |
| Student-led | Peer review on final draft | A few days before assignment submission, students showed their final draft to one or two peers to seek suggestions. |
| | Peer editing of group projects | The work of individual members was uploaded to Google Docs (an online editing app) so that other members could comment on each other's work. All members attended a review meeting to discuss improvement plans afterwards. |

Currently the feedback is conceived as the action to through which they students make sense of feedback on their learning process and use them to improve (Carless and Boud, 2018, p. 1)

Internal feedback is the new knowledge that students generate when they compare their knowledge and current skills with some reference information (Nicol, 2020, p. 2).

## What's possible? What will it take?




Fuente: Carless (2019)

# How to make feedback have a greater impact on the quality of tasks

(Zong et al., 2021)

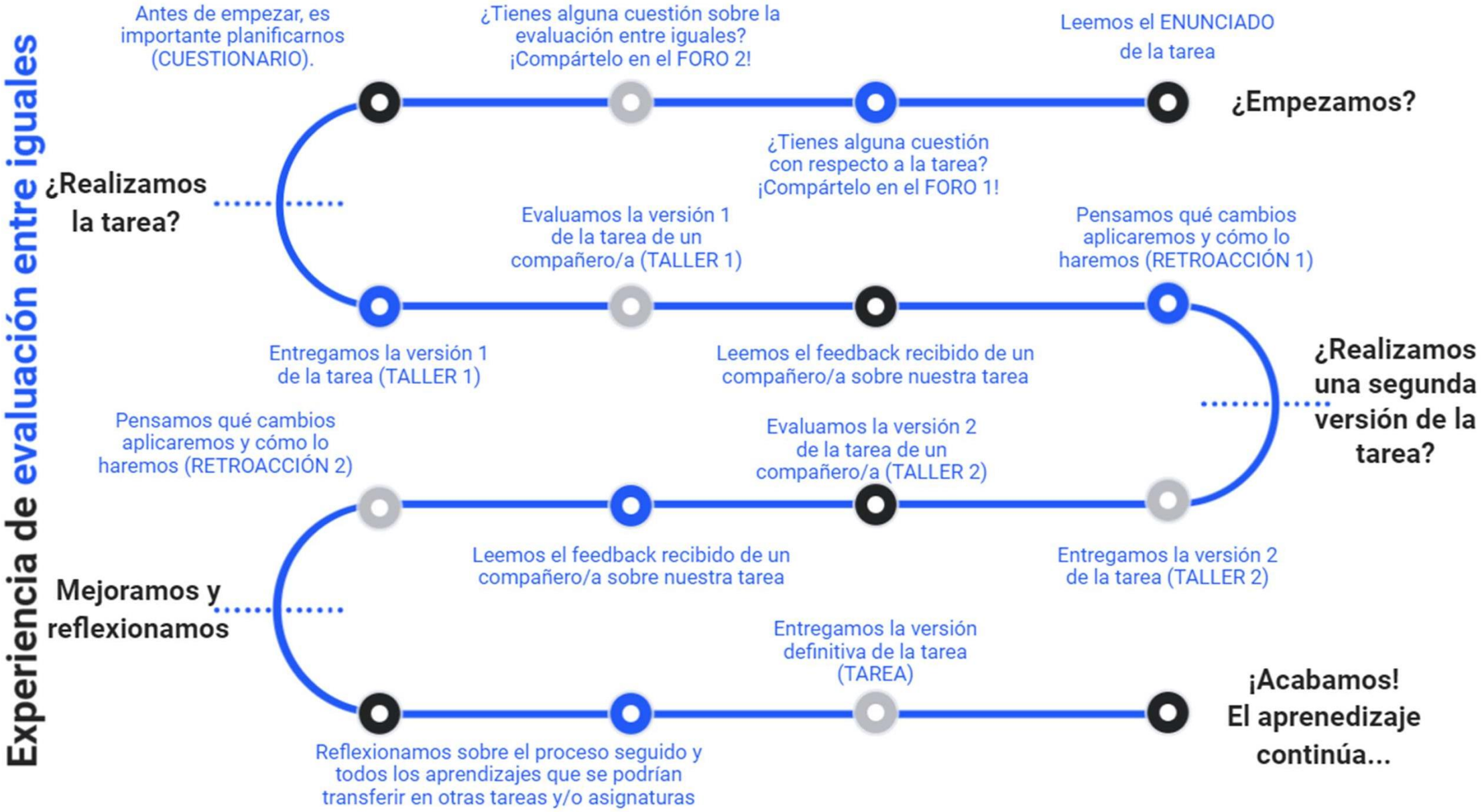
1) provided rather than received comments

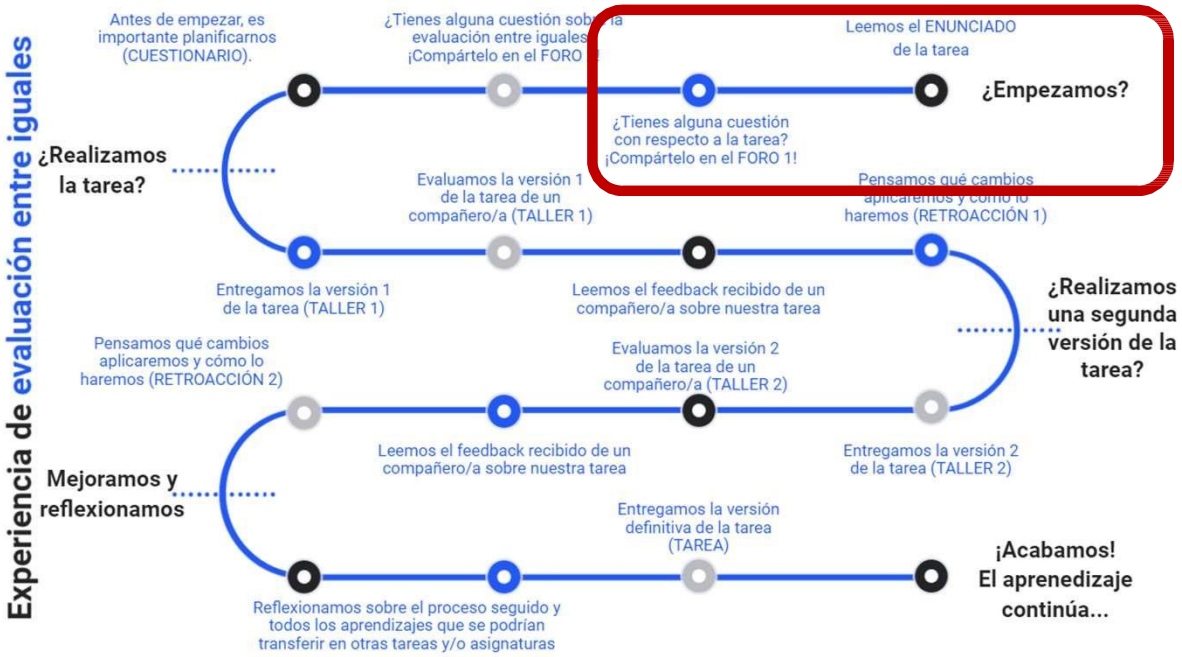
2) longer rather than more comments, and

3) comments perceived to be helpful for revision.

# Moodle

- Cobertura institucional (García-Peñavo et al., 2020).
- LMS más empleado (Altinpulluk & Kesim, 2021; Gamage et al., 2022).
- Secuencia exportable.
- Beneficios de la tecnología digital: flexibilidad de tiempo y lugar, facilidad para organizar y administrar las tareas de estudio, posibilidad de reproducir y volver a visitar los materiales, dar respuesta a estilos de aprendizaje más visuales, etc. (Henderson et al., 2017)

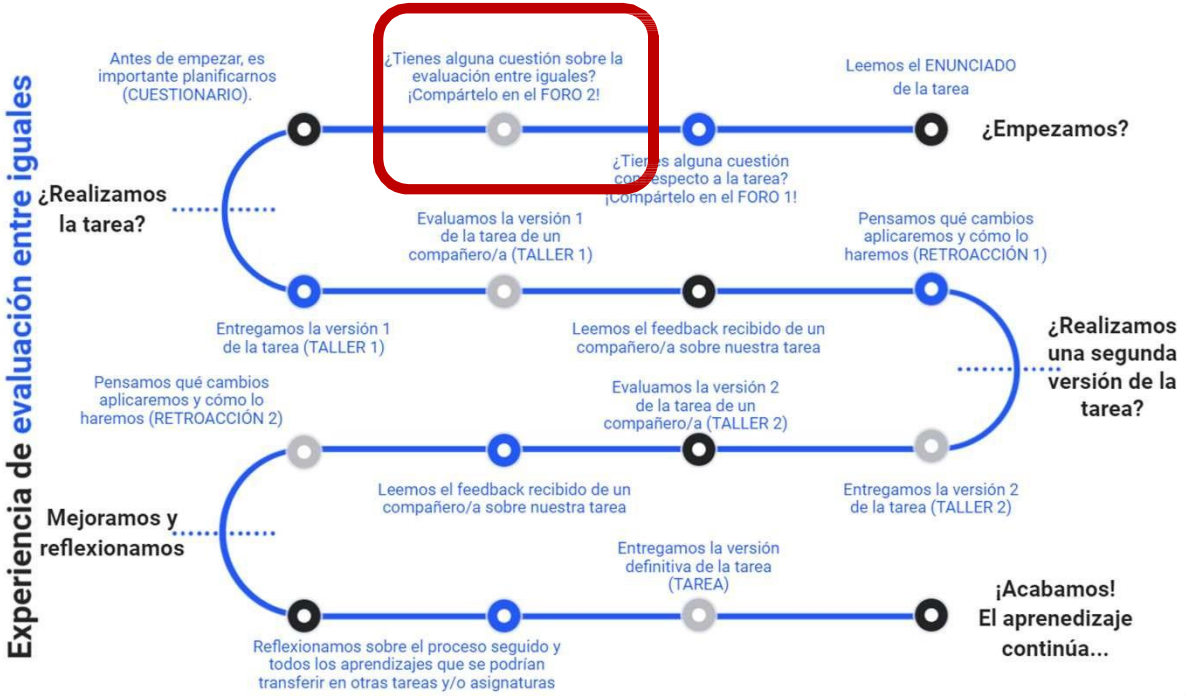

Experiencia de evaluación entre iguales
Antes de empezar, es importante planificarnos (CUESTIONARIO).
¿Tienes alguna cuestión sobre la evaluación entre iguales? ¡Compártelo en el FORO 2!
Leemos el ENUNCIADO de la tarea
¿Empezamos?
¿Tienes alguna cuestión con respecto a la tarea? ¡Compártelo en el FORO 1!
¿Realizamos la tarea?
Evaluamos la versión 1 de la tarea de un compañero/a (TALLER 1)
Pensamos qué cambios aplicaremos y cómo lo haremos (RETROACCIÓN 1)
Entregamos la versión 1 de la tarea (TALLER 1)
Leemos el feedback recibido de un compañero/a sobre nuestra tarea
¿Realizamos una segunda versión de la tarea?
Pensamos qué cambios aplicaremos y cómo lo haremos (RETROACCIÓN 2)
Evaluamos la versión 2 de la tarea de un compañero/a (TALLER 2)
Leemos el feedback recibido de un compañero/a sobre nuestra tarea
Entregamos la versión 2 de la tarea (TALLER 2)
Mejoramos y reflexionamos
Entregamos la versión definitiva de la tarea (TAREA)
¡Acabamos! El aprenedizaje continúa...
Reflexionamos sobre el proceso seguido y todos los aprendizajes que se podrían transferir en otras tareas y/o asignaturas




**Appropriation of the criteria**

Presentation complex and iterative task. The statement includes the criteria.

Forum 1: Discussion of the meaning of the criteria.




**Feedback Literacy**

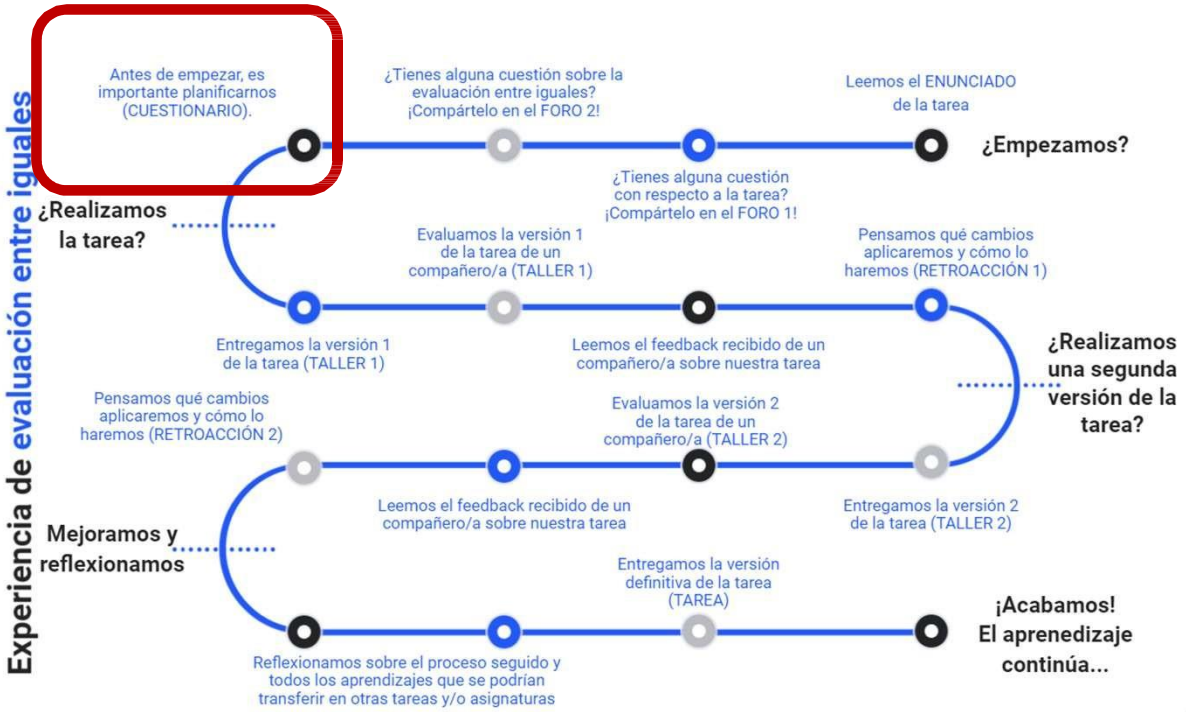
Forum 2: Criteria for good feedback

Infographic

Video

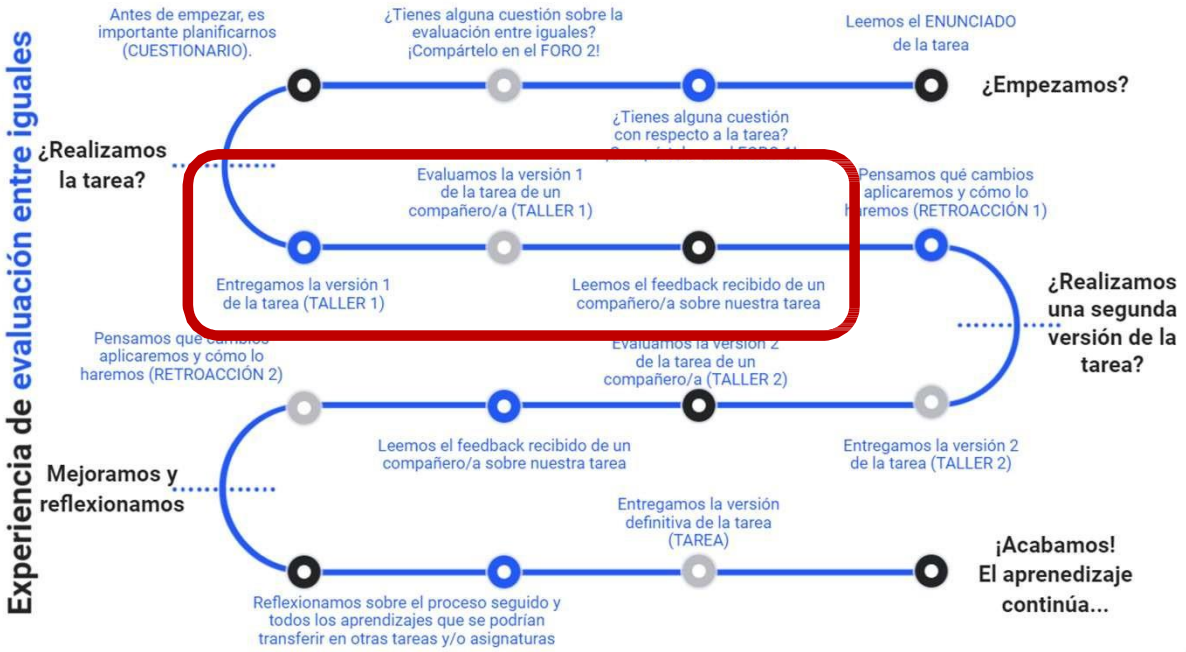
Examples

Greater dynamism by teachers




## 1 phase SRL: Planification

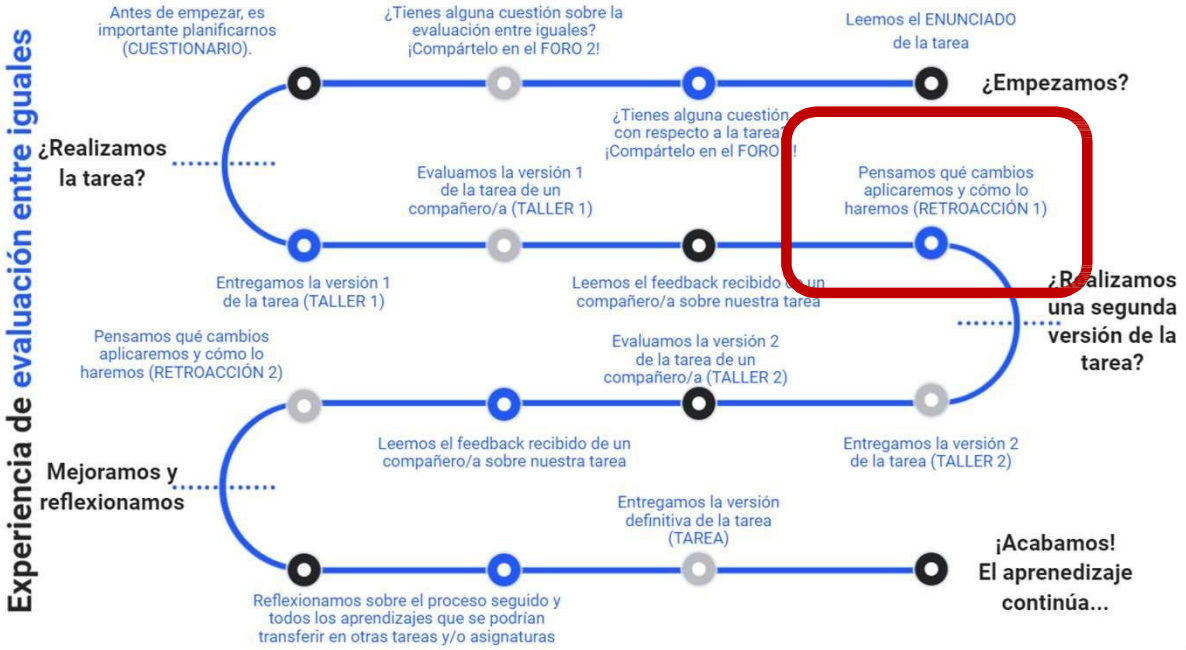
Specific instance for planning




## Peer assessment

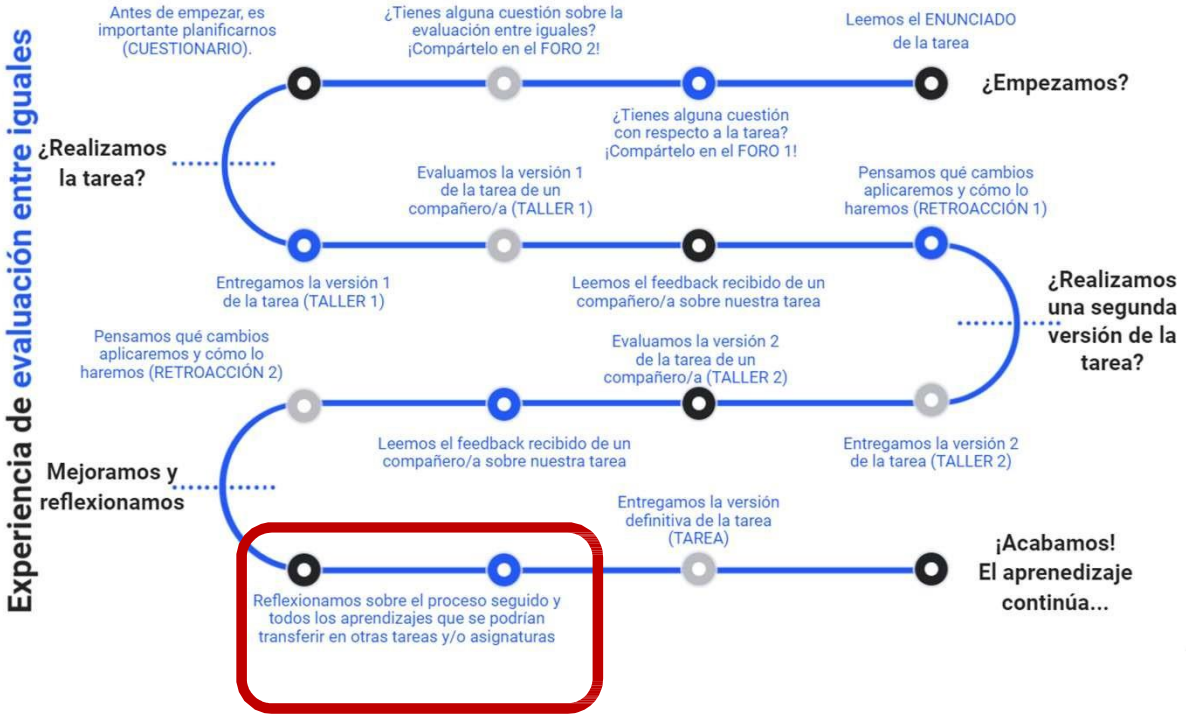
**Peer assessment** must be planned following some recommendations (**Panadero, Jonsson y Strijbos, 2016, p. 10**) :

1. Clarify and justify peer assessment, as well as expectations for students.
2. Involve all the students in the decision, development and clarification of the assessment criteria.
3. Pair the students participating in the peer-to-peer process, fostering a productive assessment.
4. Determine specifically the format of the peer review - for example, with a numerical rating or comments - as well as the mode of interaction between the assessor and the assessee (for example, in person or online).
5. Provide an assessment instrument (rubric type, checklists or other) for the assessment process.
6. Specify the activities of the continuous assessment and its schedule.
7. Carry out an exhaustive follow-up of the assessment peer process, accompanying the student body at all times.




**2 phase SRL: Monitoring (with/without support digital tools)**

To & Panadero (2019)
Carless (2019)




## 3ª phase SRL: Self-reflection

Transference

Monitoring with support of digital tools

- Chatbot
- Dashboard

hace un momento

Empezar

hace un momento

Hola! Soy EDUguia. Estoy aquí para acompañarte en el desarrollo de la tarea.

Este chatbot es una versión piloto, por lo que pueden ocurrir errores. Disculpas de antemano y gracias por tu paciencia.

El uso del chatbot forma parte de una investigación sobre los procesos de feedback mediante tecnología. Los datos que se recolectan son confidenciales y sólo se utilizarán con fines de investigación. Los datos recogidos no se compartirán con el profesorado ni tendrán ningún efecto en tu evaluación académica.

¿Empezamos?

¡Vamos! Ahora no

Para poder acompañarte necesito un poco de información. Para eso te haré algunas preguntas. ¡Recuerda! No hay respuestas incorrectas.

¿En qué momento de la tarea te encuentras?

Al inicio

En este momento es importante analizar la tarea, valorar si la puedes realizar con éxito, fijar metas y planificar.

¿Por dónde quieres empezar?

hace un momento

Gestionar recursos

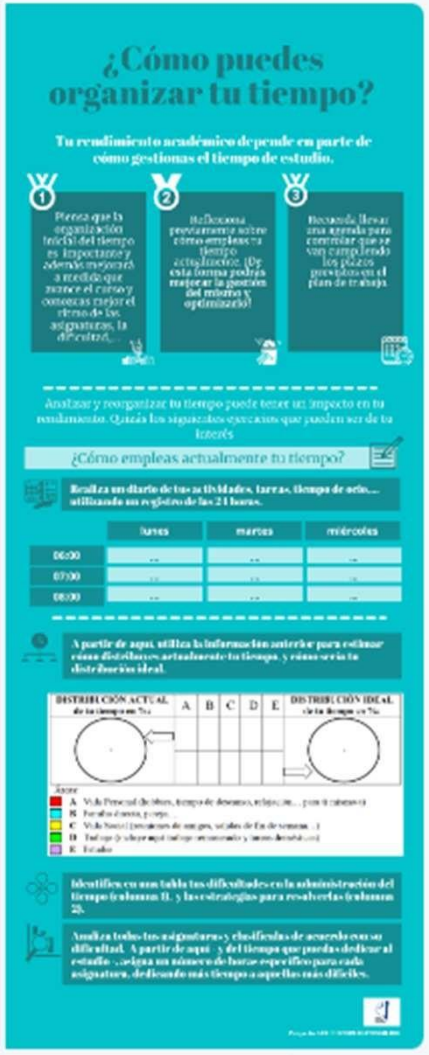
hace un momento

¿Qué quieres gestionar mejor?

Tiempo Información Concentración

hace un momento

¡Buena elección! Saber buscar y clasificar información de forma eficiente es fundamental. Aquí tienes algunos consejos para mejorar.




Tras la lectura de la infografía y según tu experiencia ¿Qué idea clave destacarías?

# Chatbot related decisions

- Co-creation with students.
- To support SRL.
- Linked to the phases of the Zimmerman cycle.
- Related to Transversal Competences.
- With interrogative messages.
- Technical decisions derived from budget limitations.


Foro: ¿Tienes alguna duda sobre la tarea o el proceso de evaluación entre iguales?
Cuestionario: Antes de comenzar, responde unas preguntas


Taller 1: Versión 1 de la tarea
Retroacción 1: Ahora que has recibido el feedback, prueba de integrarlo

# Dashboard related decisions

- Technical decisions derived from the budget limitation.
- Designed with a co-creation process between members of education, computing and
- Audiovisual Communication.
- Limitation: Logs available in Moodle without having the role of platform administrator.
- Only available to the student.
- With interrogative messages. Frames of reference:

# Experiència d'avaluació entre iguals

Abans de començar, és important planificar-nos (**QÜESTIONARI**)

Tens cap dubte sobre la tasca i el procés d'avaluació entre igual? Comparteix-lo al **FÒRUM**

Llegim l'**ENUNCIAT** de la tasca

**Comencem?**

QÜESTIONARI INICIAL

**Realitzem la tasca?**

Lliurem la versió 1 de la tasca (**TALLER 1**)

Avaluem la versió 1 de la tasca d'un company/a (**TALLER 1**)

Llegim el feedback rebut d'un company/a sobre la nostra tasca

Pensem quins canvis aplicarem i com ho farem (**RETROACCIÓ 1**)

**Realitzem una segona versió de la tasca?**

Lliurem la versió 2 de la tasca (**TALLER 2**)

Avaluem la versió 2 de la tasca d'un company/a (**TALLER 2**)

Llegim el feedback rebut d'un company/a sobre la nostra tasca

Pensem quins canvis aplicarem i com ho farem (**RETROACCIÓ 2**)

**Millorem i reflexionem**

Lliurem la versió definitiva de la tasca (**TASCA**)

QÜESTIONARI FINAL

Reflexionem sobre el procés seguit i tots els aprenentatges que es podrien transferir en altres tasques i/o assignatures.

**Acabem! L'aprenentatge continua...**

VALORA L'EXPERIÈNCIA

# First learnings

- Scaffolding to achieve autonomy.
- Consider formal and non-formal sources of feedback.
- Strengthen the training of the participants by working on both the appropriation of the criteria and the characteristics of good feedback.
- Better integrate technologies in the sequence.
- Improve the automation of logs-script-dashboard download processes.
- Design other sequences also using PLD or other Moodle functionalities.

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# Thank you

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