

CONTIGO +

A importância do feedback no processo de ensino-aprendizagem

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Alexandra Antunes, DEQ



Ana Lanham, DBE

As oradoras

Debate com a participação de Ana Lanham,
Alexandra Antunes, Beatriz Silva e
moderação do NDA

Objetivos

Depois deste workshop teremos...

Demonstrado a importância e utilidade no processo de aprendizagem

Identificado várias oportunidades, vertentes e ferramentas para dar e obter feedback

Partilhado e reflectido sobre variadas experiências de feedback

Inspirado os participantes a reflectir sobre como introduzir, melhorar ou diversificar práticas de feedback na sua actividade docente

SMART – Objetivos de aprendizagem



Some notes:

“We are more likely to increase effort when the intended goal is clear, when high commitment is secured for it, and when belief in eventual success is high” (Kluger & DeNisi, 1996)

“Specific goals are more effective than general or nonspecific ones, primarily because they focus students’ attention and feedback can be more directed” (Locke & Latham, 1984)

“Goals are more effective when students share a commitment to attaining them, because they are more likely to seek and receive feedback” (Locke & Latham, 1984)

“The relationship between feedback and goal-related challenge is complex.” (Hattie & Timperley, 2007)

“Goals can be many and sometimes competing, and much of the learning that accrues can lead to creating options to achieve the goals, weighing the pros and cons of options, considering the likelihood that a given course of action will lead to the goals, and learning about and evaluating the consequences of achieving the goals.” (Hattie & Timperley, 2007)

“Students need to know their learning target – the specific skill they are supposed to learn – or else ‘feedback’ is just someone telling them what to do.” Susan Brookhart



Programa

5

- Utilidade e eficácia do Feedback
- Adequar o feedback ao tipo de avaliação da UC e ferramentas
- Critérios, gestão de expectativas e objetivos de aprendizagem

<https://conselhopedagogico.tecnico.ulisboa.pt/atividades-cp/programa-contigo/>

Objetivo do feedback no contexto do processo de ensino-aprendizagem: reduzir a discrepância entre o desempenho atual e um determinado objetivo de aprendizagem

A redução da discrepância pode ser alcançada quer pelo **estudante** (maior esforço ou abandono do objetivo), quer pelo **docente** (objetivos de aprendizagem desafiantes e específicos + feedback e ensino)

Para onde estou a ir (objetivos)?
Como estou a progredir?
Para onde vou a seguir (o que devo fazer para progredir)?

Autorregulação

Self (- útil)

Como são percebidas as tarefas

Processos principais necessários à realização da tarefa

Hattie & Timperley, 2007

O que é o feedback?

- **Informação** fornecida por um agente (p.e. professor, par, livro ou sebenta, o próprio, etc.) relativa à compreensão e/ou desempenho do/a estudante
- O feedback é uma “**consequência**” do desempenho

“Feedback is information with which a learner can confirm, add to, overwrite, tune, or restructure information in memory, whether that information is domain knowledge, meta-cognitive knowledge, beliefs about self and tasks, or cognitive tactics and strategies” (Winne & Butler, 1994)

“If feedback does not lead to reducing the discrepancy between current understandings and goals, students are likely to close the gap by overstating their current status or claiming various attributions that reduce effort and engagement. Feedback cannot lead to a reduction in this discrepancy if the goal is poorly defined, because the gap between current learning and intended learning is unlikely to be sufficiently clear for students to see a need to reduce it” (Earley et al., 1990; Erez, 1977; Frost & Mahoney, 1976)

“Too often, the feedback given is unrelated to achieving success on critical dimensions of the goal” (Hattie & Timperley, 2007)

“Feedback has no effect in a vacuum; to be powerful in this effect, there must be a learning context to which feedback is addressed.” “If feedback does not lead to reducing the discrepancy between current understandings and goals, students are likely to close the gap by overstating their current status or claiming various attributions that reduce effort and engagement. Feedback cannot lead to a reduction in this discrepancy if the goal is poorly defined, because the gap between current learning and intended learning is unlikely to be sufficiently clear for students to see a need to reduce it” (Earley et al., 1990; Erez, 1977; Frost &

Mahoney, 1976)

"If the material studied is unfamiliar or abstruse, providing feedback should have little effect on criterium performance, since there is no way to relate the new information to what is already known" (Kulhavy, 1977)

"Rather than the above three questions working in isolation at each of the four levels, they typically work together. Feedback related to 'how am I going?' has the power to lead to undertaking further tasks or 'where to next?' relative to a goal 'where am I going?'. As Sadler (1989) convincingly argued, it is closing the gap between where students are and where they are aiming to be that leads to the power of feedback" (Hattie & Timperley, 2007)

Feedback about the self is the least effective, feedback about the process and the task is powerful in terms of deep processing and mastery and

"Too much feedback only at the task level may encourage students to focus on the immediate goal and not the strategies to attain the goal. It can lead to more trial-and-error strategies and less cognitive effort to develop informal hypothesis about the relationship between the instructions, the feedback, and the intended learning." (Hattie & Timperley, 2007)

"Feedback at the process level appears to be more effective than at the task level for enhancing deeper learning." (Balzer et al., 1989)

"Self-regulation involves an interplay between commitment, control and confidence. It addresses the way students monitor, direct and regulate actions toward the learning goal. It implies autonomy, self-control, self-direction and self-discipline. Such regulation involves self-generated thoughts, feelings and actions that are planned and cyclically adapted to the attainment of personal goals."

(Zimmerman, 2000) Less effective learners have minimal self-regulation strategies, and they depend much more on external factors for feedback".

"Seeking help is a learner proficiency, and many types of help-seeking behavior can be considered aspects of self-regulation." "Praise addressed to students (feedback about self) is unlikely to be effective, because it carries little information that provides answers (Hattie & Timperley, 2007)

Feedback is what happens AFTER effective instruction, "to make the feedback effective, teachers need to make appropriate judgements about when, how and at what level to provide appropriate feedback and to which of the three questions it should be addressed." (Hattie & Timperley, 2007)

"Not all feedback is the same and one (average) effect size does not fit all. (...) Feedback must be recognized as a complex and differentiated construct that includes many different forms with, at times, quite different effects on Student learning" (Wiesniewski, Zierer & Hattie, 2020)

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Utilidade (estudantes) e
eficácia do feedback
(docentes),
considerando UC's de
'grandes' e 'pequenos'
números



"The most effective forms of feedback provide cues or reinforcement to learners, are in the form of video, audio or computer-assisted instructional feedback, and/or relate to goals" (Hattie, 1999)"

"Extrinsic rewards are typically negative because they 'undermine' people's taking responsibility for motivating or regulating themselves (...). They are a controlling strategy that often leads to greater surveillance, evaluation and competition, all of which have been found to undermine enhanced engagement and regulation." (Deci & Ryan, 1985)

"Feedback is more effective when it provides information on correct rather than incorrect responses and when it builds on changes from previous trails." (Hattie and Timperley, 2007)

"The ways in which students look at feedback and the learning environment in which feedback occurs influence the impact of assessment on learning" (William, 2011)

Utilidade

Desenvolvimento

Eficácia

Autorregulação

Oportunidade

Segurança

Motivação &
engagement

“Feedback is among the most critical influences on Student Learning” (Hattie and Timperley, 2007)

“Teachers need to seek and learn from feedback (such as from students’ responses to tests) as much as do students, and only when assessment provides such learning is of value either.” (Hattie & Timperley, 2007)

“A feedback intervention provided for a familiar task, containing cues that support learning, attracting attention to feedback-standard discrepancies at the task level, and void of cues that direct attention to the self is likely to yield impressive gains in students’ performance.” (Hattie & Timperley, 2007)

“Teachers can create a learning environment in which students develop self-regulation and error detecting skills” (Hattie, Biggs & Purdie, 1996)

“Students need confidence and competence in making informed judgements about what they produce. They need to develop the ability to evaluate the quality, completeness and/or accuracy of work with respect to appropriate standards, and have the confidence to express their judgements with conviction. This requires deliberately managed assessment processes and practice that relates to judgements required in professional practice and mature community engagement.” Assessment 2020 – Seven Propositions for Assessment Reform in Higher Education, University of Technology Sydney

“The provision of challenging assignments and extensive feedback lead to greater student engagement and higher achievement” (Black and William, 1998)

“If students know the classroom is a safe place to make mistakes, they are more likely to use feedback for learning” Dylan William

Good Feedback Practice: “facilitates the development of self-assessment (reflection) in learning, encourages teacher and peer dialogue around learning, helps clarify what good performance is (goals, criteria, standards expected), provides opportunities to close the gap between current and desired performance, delivers high quality information to students about their learning, encourages positive motivational beliefs and self-esteem & provides information to teachers that can be used to help shape the teaching” (Nicol & MacFarlane-Dick, 2009; Juwah et al., 2004)

“The new trends on assessment emphasize the use of practices centered on the learner, based on diverse forms of assessment and continuous feedback, enabling the self-regulation of learning. The self-regulation of learning promotes an effective learning and motivates students to use feedback in order to regulate and improve their learning” (cit. Pereira et al., 2016) These ‘alternative’ methods of assessment have emerged in higher education context based on conceptions of ‘learner-centered assessment’ and includes assessment modalities such as projects, work in groups or oral presentations – these modalities foster collaboration and feedback. “Existing literature shows that self and peer assessment stimulate critical thinking and deep approaches to learning and that portfolio enables greater involvement of the student and more consistent acquisition of knowledge. Learner-centered methods are also considered to be fairer regarding learning and assessment as they assess skills that are also valued in other contexts” (cit. Pereira et al., 2016).

“When feedback is linked to the productions of students in order to improve their learning, it is seen as a key strategy for students to do better.” (cit. Pereira et al., 2016)

“From a motivational perspective, feedback is mainly considered to influence dependent variables like intrinsic motivation, locus of control, self-efficacy or persistence” (Wiesniewski, Zierer & Hattie, 2020)

(

Eficácia

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Seja oportuno/a

Seja claro e específico,
evite a ambiguidade

Foque-se no que pode ser
melhorado no futuro (*feed
forward*)

Seja equilibrado, lembre
os critérios de avaliação

Foque-se no conteúdo,
não na pessoa do/a
estudante

Evite juízos de valor, faça
perguntas

“To be effective, feedback needs to be clear, purposeful, meaningful, and compatible with students’ prior knowledge and to provide logical connections. It also needs to prompt active information processing on the part of learners, have low task complexity, relate to specific and clear goals, and provide little threat to the person at the self level.” (Hattie & Timperley, 2007)

“Be timely, be clear (unambiguous), be educative (and not just evaluative), be proportionate to criteria/goals, locate student performance regarding intended learning goals, place more emphasis on feedforward, emphasize task performance, be phrased as an ongoing dialogue rather than an endpoint, be sensitive to the individual (context and history, emotional investment and needs, power, identity, access to discourse)” (Henderson & Phillips, 2014)

“Feedback should be regular, detailed, on time, relevant, and focused on the learning process and on the students’ performance”; “For feedback to be effective it has to have a clear purpose, clear standards and to be helpful for students’ professional future” (Price et al., 2008)

“If feedback is to be effective it must be timely, relevant (Ramsden, 2003) and suitable to the context (Knight & Yorke, 2003)

“Teachers’ and students’ conceptions of assessment need to be shared, otherwise feedback may not be suitable” (Nicol & MacFarlane-Dick, 2006)

“Feedback practices should reflect the evidence-based methods designed to achieve primary learning goals, which indicate a cyclical approach to apply feedback” (Haughney,

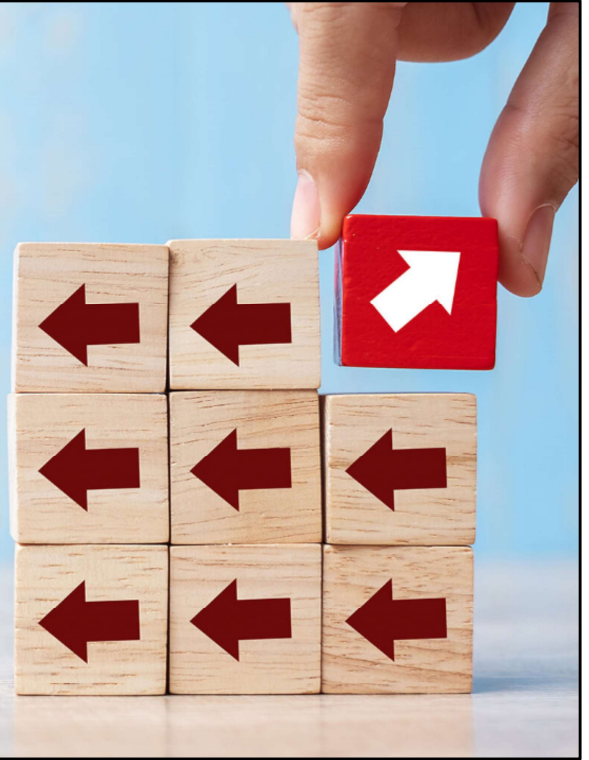
Wakeman & Hart, 2020)

“Feedback should be positive, specific, timely, and encourage active student engagement” (Haughney, Wakeman & Hart, 2020)

“It is only when students are grounded in and committed to the goals of learning and when the feedback is related to accomplishments of the learning that feedback is effective” (Crocker & Wolfe, 2001)

2

Adequar o feedback ao
tipo de avaliação da
UC, selecionar as
melhores ferramentas



Tipos de Feedback - Escolhas

Formal
vs
Informal

Pequenos
vs
Grandes Números

Sumativo
vs
Formativo

Individual
vs
Grupo

Processo
vs
Resultado

Na sala de aula
vs
Fora da sala de aula

“It should be clear that providing and receiving feedback requires much skill by students and teachers” (Hattie & Timperley, 2007)

Adequar o feedback ao tipo de avaliação

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Ligado a
descritores de
desempenho

Alinhado com os
objetivos de
aprendizagem

Reduzir o
diferencial entre um
dado desempenho
e o esperado/ideal

De
desenvolvimento
Coaching

Processo/método
de resolução da
tarefa

Estimular a
criatividade e o
pensamento crítico

Ferramentas & Métodos

Autoavaliação

Peer-to-peer

Quizzes

Relatórios

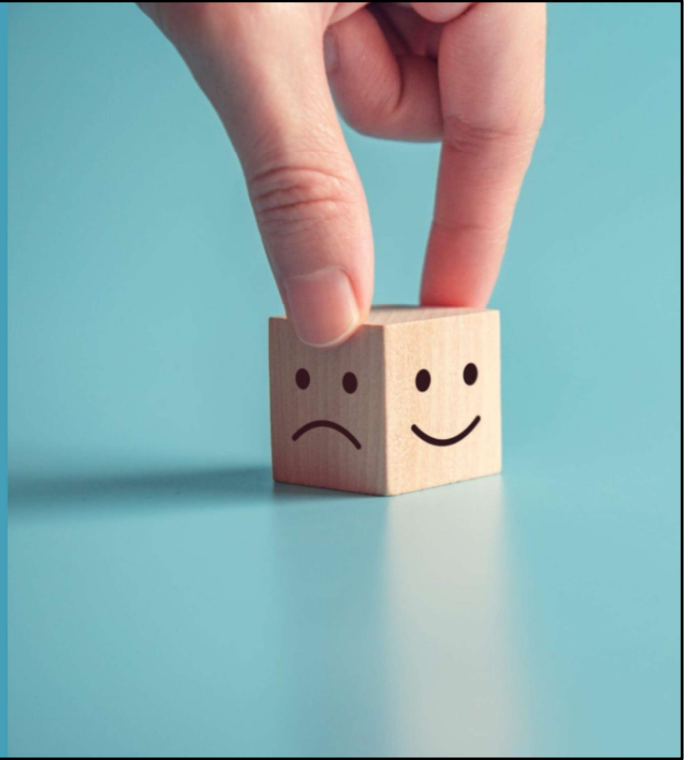
Testes e Exames

Avaliações Orais

Some ideas: use a pre-submission check-list (proforma) – students self-assess on some pre-defined criteria and hand it in with assignment; consider feedback in different media/formats – on-line, audio-feedback, kahoot or other type of quizzes; ask students to submit specific requests for areas for feedback at the beginning of the assignment and focus feedback primarily on these areas; evidence of action – students have to integrate (highlight) in next assignment, where actions from previous feedback are integrated into this assignment; focus teaching staff energies on mid-unit feedback, instead of end of semester feedback; engage students with the assessment criteria; in class, peer and self-assess feedback activities using previous anonymous assignments or current students first drafts to peer/self-assess using rubrics/assessment criteria; comment on actionable language – give feedback that includes actions for students to improve next performance (www.ucd.ie/teaching)

3

Gestão de expectativas,
critérios em função dos
prazos e objetivos de
aprendizagem



Expectativas



Expectativas dos Estudantes

Atempado

Útil para eles próprios (percebi o que errei, sei como melhorar?)

Claro, Objetivo e Construtivo

Coerente e Justo

Detalhado



Expectativas dos Docentes

Tarefa exequível e "rápida"

Útil para os alunos (assimilaram os objetivos de aprendizagem)

Claro, Objetivo e Construtivo

Coerente e Justo

Detalhado



Gestão de Expectativas

3 Exemplos

Gestão do Tempo

Gestão dos Critérios

Gestão da forma de dar feedback

Docentes

Feedback **IDEAL** vs. **POSSÍVEL = ADEQUADO** (aos objetivos de aprendizagem)

- Pedir aos alunos para definirem a área para a qual pretendem feedback
- Alternativas ao feedback personalizado de um docente:
 - automático
 - global (pontos fortes e pontos fracos dos relatórios)
 - “pares” ou “auto” face a uma grelha de avaliação
 - soluções ou guias de solução
 - exemplos de boas práticas (relatórios etc.)
- Estabelecer critérios de avaliação específicos

Estudantes

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- Ser explícito **de antemão**: tipo, detalhe e prazos para feedback + **CUMPRIR**

Gestão de Critérios (grelhas de avaliação)

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APPENDIX 1 – MARKING BENCHMARKS

Class (Grade) Equivalent	Mark Range	Descriptive Equivalent
First Class (A)	90-100	Excellent. An outstanding piece of work throughout with excellent analysis, synthesis and evaluation of material and concise, logical thought. Where appropriate, work shows originality and critical ability. Demonstrates comprehensive understanding of topic with evidence of substantial additional study and with virtually no errors. Extremely well presented and structured work. Could not be bettered in the time available.
	80-89	Excellent. Outstanding in most elements but minor deficiencies in some, compensated by excellence in others. Extremely well presented and structured work.
	70-79	Excellent. Work overall excellent with respect to synthesis, originality, critical ability and logical argument. Thorough understanding of the topic and evidence of significant additional study, although may contain minor errors. Extremely well presented and structured work.
Upper Second Class (B)	65-69	Very good. Shows thorough understanding of topic. Substantial detail supported by reasoned argument, application and critical analysis, with evidence of further study. Very well presented and structured work.
	60-64	Very good. Work provides substantial information that addresses the aims and objectives of the coursework. May contain minor errors of understanding. Some evidence of additional study. Very well presented and structured work.
Lower Second Class (C)	55-59	Good. Work indicates understanding of the topic, largely factually correct, but lacking in critical analysis and in evidence of further study. May contain significant errors of understanding compensated by very good work in other areas. Well presented and structured.
	50-54	Good. Work that is relevant to the aims and objectives of the coursework topic but not a full treatment. Relies almost

Marking Guidance

The following is based on the University of Bath's marking benchmarks (available from the Chemical Engineering undergraduate programme handbook and included here on Page 4).

Component and Key Indicators	0-39 Fail	40-49 Basic	50-59 Good	60-69 Very Good	70-79 Excellent	80+ Outstanding
(S) Technique: • Time-keeping • Work rate/effort • Proactive and showed initiative • Planning/time management • Good lab practice • Quantity of data/results appropriate under the circumstances • Scientific/technical quality of results	Demonstrated none – or only a few – of the key indicators to an acceptable level.	Demonstrated some/most of the indicators to a limited or barely acceptable level.	Demonstrated all of the key indicators to a good level.	Demonstrated all of the indicators to a high standard, with room for minor improvement in one or more areas.	Excellent. Demonstrated all indicators to a very high standard with little room for improvement.	The student was exceptional, demonstrating all of the indicators to a level in line with PGR – beyond what could be reasonably expected of an undergraduate student.
(A) Literature review & design/structure of the project programme: • Thoroughness of literature review • Places present work in context • Literature review informs project planning/methodology • Clear and logical approach to project • Demonstrates awareness of safety/risk aspects of project (must include relevant H&S paperwork in an Appendix)	Little to no evidence of any research into literature. Few sources used, lack of appropriate literature citations. No real attempt at planning.	Several sources of information used. Basic but limited literature survey, research not systematic. Project plan and methodology generally appropriate but flawed. H&S information included.	All indicators demonstrated to a good level. Some link made between literature and present work. H&S information included.	Very good – addresses all of the indicators to a high standard, with room for minor improvement in one or more areas. H&S information included.	Excellent – demonstrates all indicators to a very high standard with little room for improvement. Demonstrates ability to critically evaluate scientific literature and synthesise new ideas. H&S information included.	Exceptional. Literature review is likely to be of publishable quality.
(B) Analysis and discussion: • Quantification of error and uncertainty • Evidence that the results are reliable and reproducible • Sound and well-reasoned analysis of results • Clear and justified conclusions	Demonstrated none – or only a few – of the indicators to an acceptable level.	Demonstrated some/most of the indicators to a limited or barely acceptable level.	Demonstrated all of the key indicators to a good level. Conclusions are justified.	Demonstrated all of the indicators to a high standard, with room for minor improvement in one or more areas.	Excellent. Demonstrated all indicators to a very high standard with little room for improvement.	Outstanding. Could not be bettered in the time available. Likely to be of publishable quality.

Universidade de Bath, UK

Gestão de critérios (instruções para avaliação por pares e auto avaliação)

Parts 2 and 3: Draft Executive Summary Report and Peer-Review

These are the submission points for your **Draft Summary Reports** that should accompany the Presentation. Non-submission or poor engagement with this activity will affect your professionalism mark of the presentation.

Objectives

The ability to condense difficult and intricate technical information into short technical summaries is an essential skill used across any type of engineering job. Hence, the purpose of drafting a Summary Report that accompanies your presentation is allowing you to develop or improve that skill.

The specific objective of this exercise is for you to be able to get some feedback on a few points of your Summary Reports **before** you submit a final version. This also allows you to look at other people's work and find inspiration to improve your own.

The 4 criteria you will be looking at are:

- The appropriate use of technical language and style
- The depth and breadth of the content for your presentation
- The conciseness, clarity and logic of the Summary
- The ability to follow the brief

Instructions

1. Prepare 1 Draft Summary Report per group. See guidelines [here](#). If you want the review to be anonymous, see [here](#).
2. **Each** group member uploads the draft document (pdf) onto one of the submission points below before the deadline.
3. You will **each** review the Draft Summary Report of **two** other students and provide some short formative feedback.
4. Based on the feedback, review your work and submit the Final Summary Report before your presentation.

Deadlines

Draft Summary Report Deadline

Guidelines para exercício de peer-review de um sumário executivo

1. Is the use of technical language and style appropriate?

You want to break down a lot of complex information into simple ideas and concepts that can be grasped QUICKLY!

What are we looking for?

Simple, lean, direct style.

Short, active sentences.

One main idea per paragraph.

Use of precise and unambiguous words. E.g., Don't say: This is "great" (because then you think in which sense is it great?). Instead say: This is timely, useful, productive, efficient etc.

Specific technical terms (jargon) are briefly described, and any acronyms are used sparingly and always defined.

What should be avoided (within reason):

Adjectives or describing details if they are not essential.

Embellishments or long complex sentences.

Gestão da forma de dar feedback

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Feedback sandwich



Reflexão final

e feedback!

Demonstrado a importância e utilidade no processo de aprendizagem

Identificado várias oportunidades, vertentes e ferramentas para dar e obter feedback

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Inspirado os participantes a reflectir sobre como introduzir, melhorar ou diversificar práticas de feedback na sua actividade docente

Contactos: isabel.goncalves@tecnico.ulisboa.pt



Obrigada!