

NOMBRE DEL TRABAJO

Degree Work - Dayaris Ropero and Luisa Sanchez (1).docx

AUTOR

Dayaris Ropero

RECUENTO DE PALABRAS

7365 Words

RECUENTO DE CARACTERES

40847 Characters

RECUENTO DE PÁGINAS

30 Pages

TAMAÑO DEL ARCHIVO

541.7KB

FECHA DE ENTREGA

Jun 15, 2023 11:26 AM GMT-5

FECHA DEL INFORME

Jun 15, 2023 11:27 AM GMT-5**● 16% de similitud general**

El total combinado de todas las coincidencias, incluidas las fuentes superpuestas, para cada base de datos

- 15% Base de datos de Internet
- Base de datos de Crossref
- 12% Base de datos de trabajos entregados
- 10% Base de datos de publicaciones
- Base de datos de contenido publicado de Crossref



Institución de Educación Superior
UCEVA®
Unidad Central del Valle del Cauca

Feedback in 21st Century Higher Education

Dayaris Jheliksa Roperero Casiano

Luisa María Sánchez Díaz

Directed by Mg. Fabio Nelson Giraldo Arcila

Education Sciences Faculty

Bachelor²⁷ of Foreign Languages with an Emphasis in English

2023

Tuluá, Valle del Cauca



Feedback in 21st Century Higher Education

The report submitted for the degree of:

36 Bachelor's Degree in Foreign Languages with Emphasis in English.

Research Processes in the Teaching of Foreign Languages

Dayaris Jheliksa Ropero Casiano

Luisa María Sánchez Díaz

Directed by Mag. Fabio Nelson Giraldo Arcila

Tuluá, Valle del Cauca

2023

Feedback in 21st Century Higher Education

Introduction

Throughout time, educational theorists have been concerned about providing students with different tools to improve their learning process, which is why what we call *feedback* arises from there, which was born given the need to allow students to identify their shortcomings in academic performance in order to solve them constantly through it, using it as an effective tool to improve the quality of learning, making the necessary adjustments and, in turn, motivate them to continue acquiring new knowledge. From this perspective, feedback is defined as the information provided by a teacher or instructor to a student about his or her work or performance, with the aim of improving his or her results and learning (Klimova & Pikhart, 2022).

This paper aims to present feedback practices used in European higher education to help students and teachers to implement this process and improve classroom teaching (Egelandsdai & Krumsvik, 2019). Undoubtedly, this tool is transcendental in the educational field since teachers are concerned that their students have an excellent academic performance and that, in turn, they have a meaningful learning in front of the subject studied. In addition, feedback helps to understand the effectiveness of implementing it in the classroom, identifying better educational practices, improving learning and maximizing the potential of students.

The European continent is taken as a reference since it has the evidence demonstrates a constant improvement in educational quality at all levels of education, in addition it has policies that focus on feedback as a means to support and improve the implementation of this educational tool. Likewise, it was determined that feedback seeks to change the meaning of a correction method to learning based on critical thinking. Universities in Europe not only have processes that generate results in students, but also allow teachers to innovate through technological tools and other strategies that enable clear, concise and effective learning.

Rationale

Universities around the world are trying to apply different strategic methods that allow the adoption of feedback in a clear, concise and effective way, proposing that this is not only to correct, but to allow the student to question the contents in order to obtain a meaningful learning that constantly guarantees the quality of teaching given in the classroom. However, there is still little information on feedback and much research is needed to determine its correct implementation, overcoming the challenges faced by teachers, such as the number of students per class, time constraints, and the need to balance formative and summative evaluation, etc.

In fact, these challenges are important so that teachers can establish closer relationships with their students and improve understanding in learning. Therefore, to achieve this, constant updating of teachers' knowledge is required, where the dual relationship they should have with each other is reiterated in order to determine the points to improve in learning.

It is also important to note that it is essential to question current strategies and methods for implementing feedback effectively in order to promote appropriate learning processes and enable students to excel in their academic performance, overcoming any obstacles they may face. Therefore, this report offers a review of the current state of feedback including its various practices, methods, strategies and types, as a challenge for both teachers and students in terms of its proper implementation in education. This is possible thanks to the collection of a relevant amount of information based on higher education in Europe, analyzing and characterizing its types and uses, having a complete process of tools to provide specific and timely information, as well as being constructive.

The challenge in this process is to eliminate the feedback gap, which means that it should not be limited only to correcting students, but also to offer a dialogue that encourages critical thinking. In this way, students can reflect on their academic achievements and look for alternatives to improve their skills and obtain meaningful learning. In this sense, authors such as Egeland & Krumsvik (2019) propose motivating students by proposing questions to be discussed in pairs and thus achieve better and greater participation, since they get support for their analysis when they are anonymous, and noticing coincidences with the answers of their peers or those of the other participants reassures them and induces them to take an active part in the discussion.

However, more extensive research is still needed to determine its correct implementation and to overcome the various challenges faced by teachers. To achieve this requires the constant updating of teachers' knowledge, where the dual relationship they should have with the student is reiterated, where the roles of the provider of information and analysis are interchangeable. That is, giving the student the opportunity to establish his or her points of view, even if they are in contradiction with those of the teacher (Costelloe & Egan, 2020).

Background

This project arose from the need to know the different strategies used by universities in Europe on feedback. In order to understand them, a series of researches are taken into account, which allow us to have a detailed look at each of the processes used. The first of these is research conducted by Laura Costelloe and Arlene Egan (2020) entitled "Because, as a teacher, giving feedback and assessment is actually really difficult": using self- and peer-assessment to develop Higher Education teachers' skills in assessment and feedback." Which addresses the challenges teachers face in providing effective feedback and assessment to students. The authors of the paper state that assessment and feedback are essential components of the teaching and learning process but that many teachers see it as challenging and complex tasks, so the need arises to explore how self- and peer-assessment can be used to improve teachers' skills in providing valuable and constructive feedback to students.

Therefore, the research proposes a model that favors the progressive development of competencies that reflect the ability to evaluate others, the ability to give and receive feedback and the ability to make judgments. This suggests that students feel comfortable in performing self-evaluation tasks, as this increases confidence and communication in the feedback to provide constructive comments at the end. The research concluded that this approach helps to have a dual identity that allows the teacher and student to have feedback on the given practice, essential tools when teaching.

On the other hand, the study conducted by Angelina Sánchez Martí, José Luis Muñoz Moreno and Georgetan Ion entitled "Design and Validation of a Questionnaire of Perception of Learning through Peer Feedback in Higher Education" deals with developing and validating a questionnaire that allows measuring the perception of learning through peer feedback in higher education, which is an educational strategy that students provide feedback to their peers, thus seeking to determine how students value this modality of feedback and how it impacts their learning process. That is why the act of providing feedback leads to the development of skills and competencies in students, such as greater autonomy in the learning process, the development of critical thinking, confidence in negotiating their own work, among others. Ultimately, it is concluded that the questionnaire designed and validated is a valid instrument to identify and understand the learning processes associated with the act of giving peer feedback. It is necessary to mention that this questionnaire is not limited to the identification of difficulties, but contributes to the understanding of learning processes.

The article by Lientje Maas, Matthieu J. S. Brinkhuis, Liesbeth Kester and Leoniek Wijngaards-de Meij entitled, on the other hand, focuses on cognitive diagnostic assessment in university education. It discusses how diagnostic assessments can provide valuable information about students' conceptual knowledge and how this information can be used to provide effective feedback through learning panels. In addition, the challenges and opportunities associated with implementing cognitive diagnostic assessments and learning panels in university settings are explored.

It also states that the value of feedback depends on how it is interpreted by the recipient and, in turn, influences learning choices. It is mentioned that it is important to explore how diagnostic feedback impacts students' learning processes and whether there are individual differences in the effects of diagnostic feedback on learning choices. However, it is noted that only a few studies have examined the actual uses of diagnostic reports.

The research by Wolf Langewitz, Ulrich Pleines Dantas Seixas, Sabina Hunziker, Christoph Becker, Martin R. Fischer, Alexander Benz and Bärbel Otto called "Doctor-patient communication during the Corona crisis - web-based interactions and structured feedback from standardized patients at the University of Basel and the LMU Munich" is an important background as it mentions feedback through technology. The paper describes the experience of the medical schools of the University of Basel and the LMU Munich in using standardized patients (SP) to

teach patient-physician communication during the pandemic. Due to pandemic-related restrictions, it was necessary to switch to a web-based digital format. The Web Encounter program allowed for one-on-one encounters between SPs and students, which allowed for structured evaluation and immediate feedback. The authors conclude that the program was successful in providing an effective alternative to face-to-face learning and may be useful even after the pandemic.

Feedback is also used in the research ²⁸ "Enhancing self-regulated learning through using written feedback", conducted by Georgeta Iona, Elena Cano-García, Maite Fernández-Ferrer. ⁴⁴ This paper focuses on the use of written feedback to enhance ⁵⁰ self-regulated learning in higher education. It discusses different proposals on how written feedback should be, including its focus on writing quality, content, style and clarity. The paper also discusses how students and teachers perceive and use written feedback to enhance self-regulated learning. Overall, it concludes that written feedback is a valuable tool for fostering self-regulated learning and improving students' competencies.

There is also the case of the ²² article "Feedback seeking behavior in higher education: the association with students' goal orientation and deep learning approach" authored by Martijn Leenknecht, Priscilla Hompus & Marieke van der Schaaf. This study examines the relationship between ⁴⁹ students' feedback seeking in higher education ¹⁹ and their goal orientation and deep learning approach. ³⁰ The aim of the study is to understand how students actively seek feedback and how this relates to their academic goals and approach to learning. Goal orientation refers to how students approach their academic goals, either focusing on acquiring skills and knowledge (deep learning approach) or on getting good grades and avoiding mistakes (surface learning approach).

Research finds ¹ that students with a goal orientation more toward deep learning tend to more actively seek feedback in order to improve their understanding and mastery of the material. On the other hand, students with a goal orientation that goes toward shallow learning may be less likely to seek feedback, as their focus is more on getting good grades rather than deepening their understanding. Overall, this study highlights the importance of feedback seeking as a self-regulatory learning strategy in higher education and how it is influenced by students' academic goals and learning focus.

The article on education issues during the pandemic entitled ³² "Lifestyle changes during Covid-19 period in Hungary - feedback of university students" by Miklós Bánhidí analyzes the lifestyle changes of university students in Hungary during ²³ the period of the Covid-19 pandemic and the feedback they provided on these changes. The aim of the research was to understand how the pandemic and related restriction measures ³ affected the daily life and habits of university students in Hungary. The study collected data through surveys and interviews to obtain feedback

from the students themselves on changes in their lifestyle, including aspects such as physical activity, sleep, diet, use of leisure time, and social interactions.

The research found that the pandemic and the confinement measures had a significant impact on the lifestyle of university students in Hungary. Many students reported changes in their daily routines, such as decreased physical activity due to the closure of gyms and the transition to online learning. Changes in sleeping and eating patterns were also observed, as well as a reduction in social interactions and use of free time. The feedback then served to avoid being profoundly harmed by the negative changes that the pandemic may have brought to these individuals' education.

Overall, this background shows different perspectives of feedback practice in different European universities.

Problem statement

The main objective of feedback in education is to provide students with information about their academic performance in order to improve their learning process. Effective feedback also helps students understand what they are doing well or where they need to improve by offering constructive and specific comments. However, although teachers offer feedback in their classes, this is not reflected in student performance due to lack of understanding, time, motivation, communication, etc., that is why several types and strategies have emerged which provide more information so that feedback is not only effective, but also provides the student with meaningful learning.

To solve this problem, it is necessary to carry out the general and specific objective that will be mentioned below, since the problem starts from the need to provide effective feedback to students, thus, knowing the different practices in which this academic strategy is carried out. Therefore, it is of vital importance to make a documentary review of how feedback is carried out in higher education in Europe, making an exhaustive review to determine the practices used in the European continent to help students and educators to effectively implement this process and also improve the quality of teaching-learning in the educational context.

Research question

How is feedback in higher education carried out in Europe?

Is feedback an effective strategy in higher education in Europe?

Overall objective

To analyze the relevance of feedback in higher education, focusing on the perspectives and practices of feedback in some universities in Europe.

Specific objectives:

- Conceptualize what is feedback in higher education.
- To examine the different types of feedback used in European universities, knowing their implementation and impact.
- Evidencing the effectiveness of feedback as part of the teaching-learning process in European higher education.

Methodology

A rigorous and detailed methodological approach, designed to meet high academic standards, was applied in this documentary article. The methodology was divided into several clearly defined stages to ensure the coherence and validity of the work itself. The exercise focused on determining what some European theorists think and how they think about feedback in higher education and what methods they employ to improve student learning at this level, taking into account the proposals in each document analyzed.

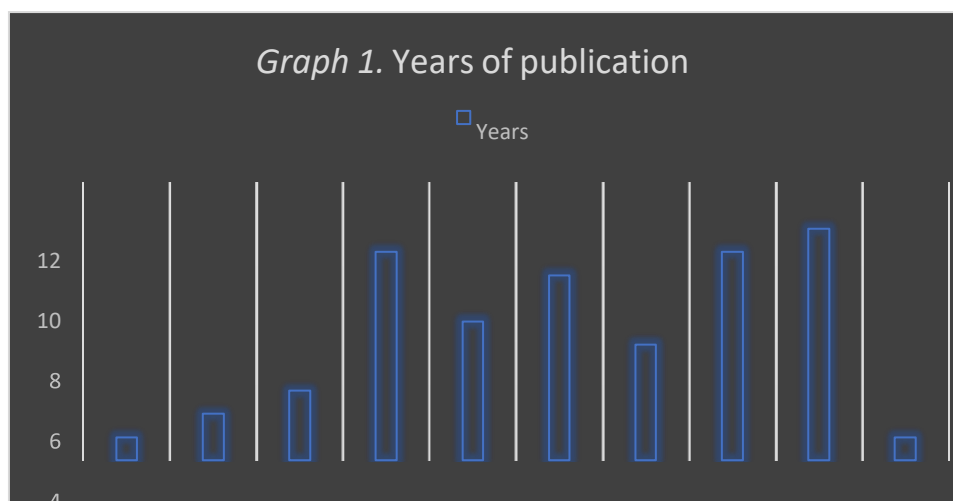
First, a careful planning of the bibliographic search was carried out. During the month of September 2022, a Boolean phrase was devised with precise instructions to perform a very specific query in the Scopus search engine. This phrase included criteria such as: "feedback", "higher education" or "university", as well as a chronological limit between the years 2015 and 2023, in which the foci of study were universities in European countries. Studies that focused on educational levels outside higher education or that did not provide relevant information on feedback were excluded. Once the writing of this sentence was completed, we proceeded with the search for the documents necessary for the elaboration of the documentary article that would specialize in how some European universities perceive feedback at that educational level. A total of 50 results were found in the search performed, but only 22 of them met the established criteria. The other documents were rejected because they did not fully comply with the requirement of being of European origin.

All these contents were recorded in an Excel table organized in columns. Once this exercise was completed, the information collected was analyzed according to ²³ the criteria of the PRISMA method (Preferred Reporting Items for Systematic Reviews and Meta-Analyses), following the steps proposed to carry out a selection process of those documents that contributed to the objective of this documentary article.

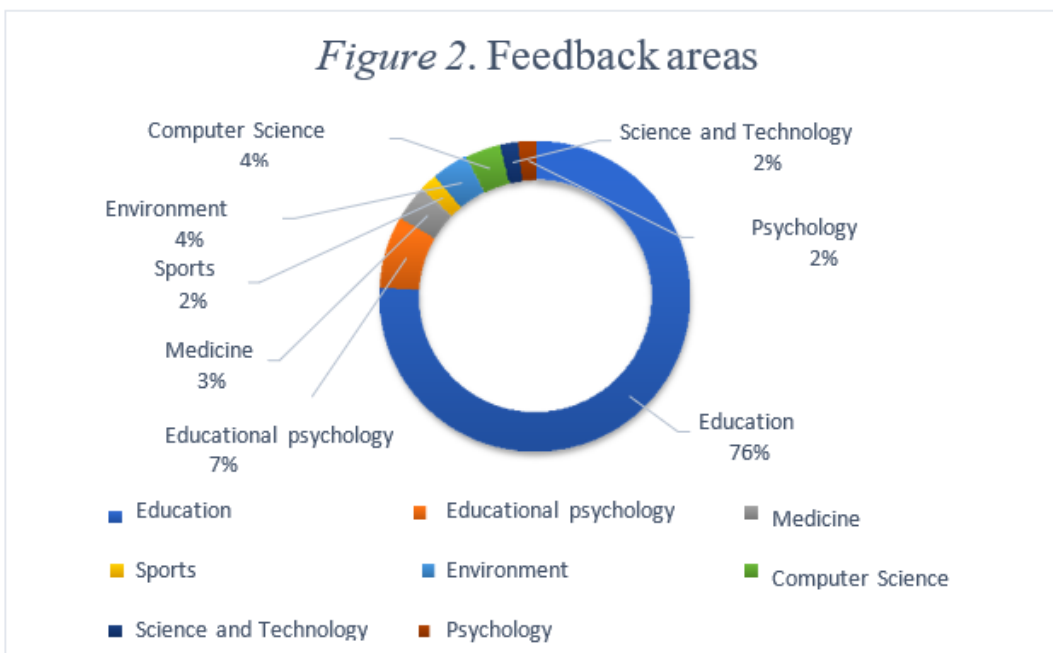
Subsequently, the selected documents were subjected to a critical and analytical reading, in which the key concepts were identified, complying with the required particularities: type of article, country, authors, title, object, key words, subject matter, observations, data, author's questions, conceptual field, paradigm addressed in the article, conclusions and results, aspects of great relevance for this purpose. The synthesis of the conclusions and results was done in narrative form, grouping the findings in seven thematic categories where the information of the documents is reported by paragraphs.

The selection of the documents for this research was based on the fact that they were focused on feedback in higher education, regardless of the career. Higher education was chosen because feedback at this level of education could be considered more effective and meaningful than at other levels. Higher education settings are more suitable than other levels for this process, due to the interaction systems that exist (personal or digital communication channels), which give greater viability to the use of this tool.

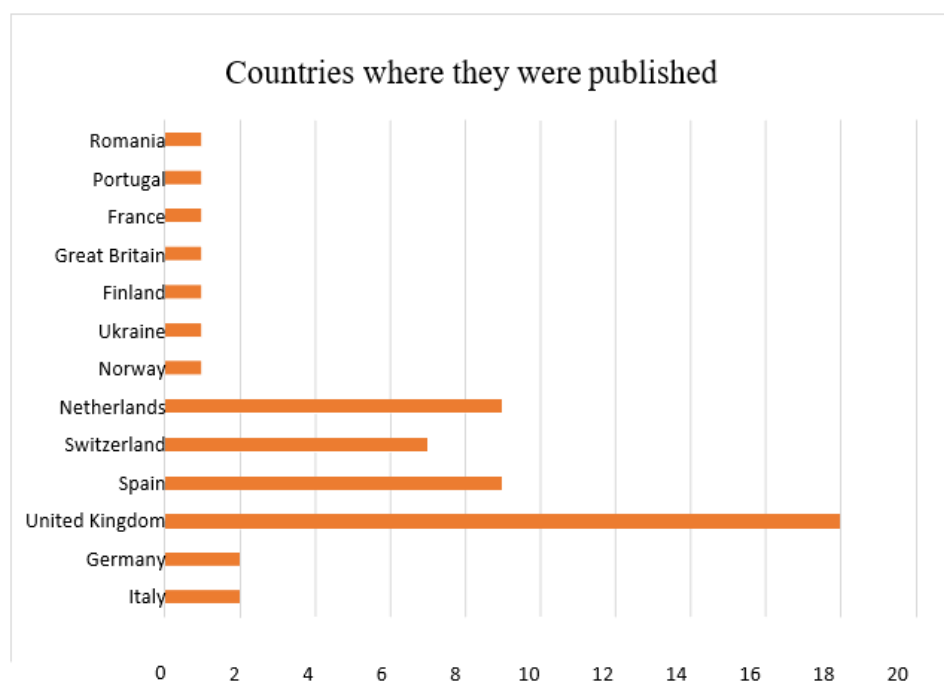
With this in mind, publications varied between 2014 and 2023, with the majority being 2017 (9), 2021 (9) and 2022 (10), as can be seen in the following graph:



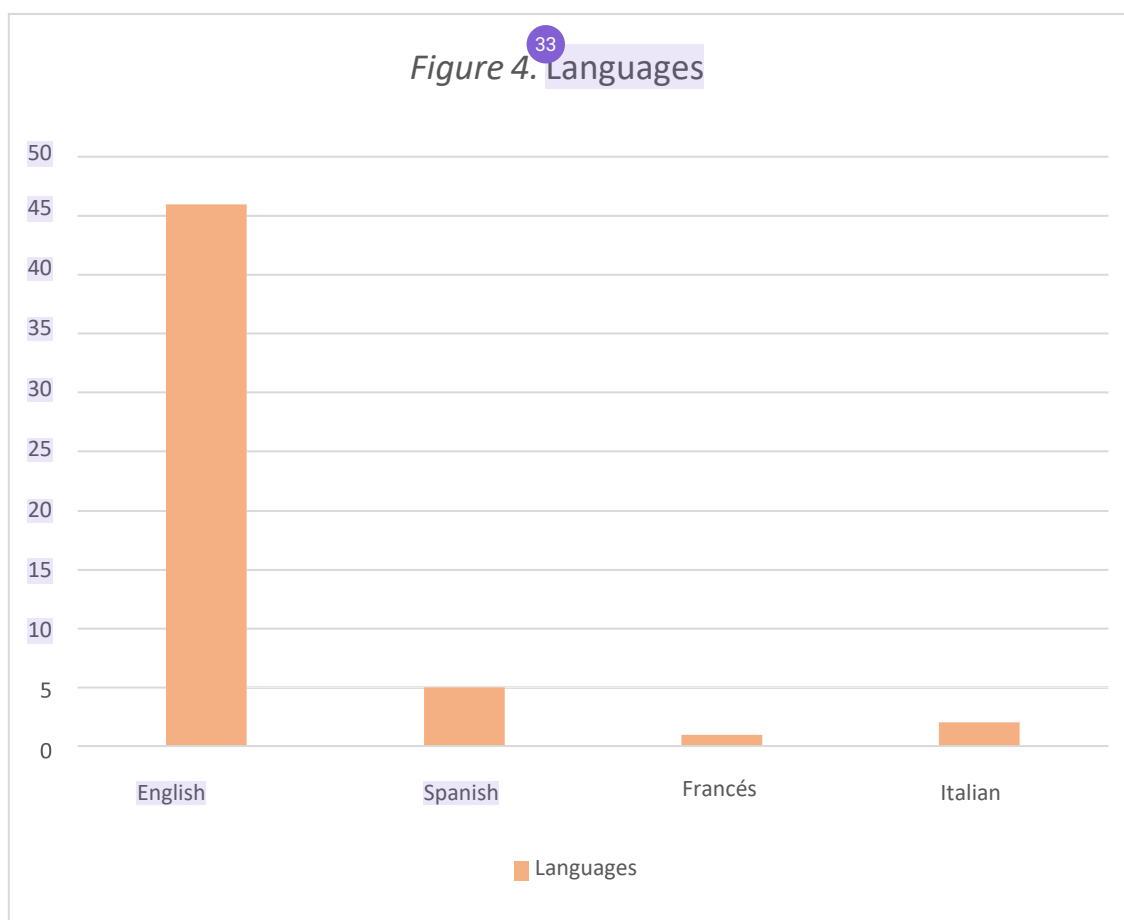
Documents on feedback were also found in various areas of expertise, with education accounting for 76% of the total number of publications selected.



As Europe is the central focus of this article, the journals or publishers that published were all from this continent. The largest number of publications were found in the United Kingdom (18), Spain (9) and the Netherlands (9).



The languages of these documents varied between English, Spanish, French and Italian, the first mentioned being the one with the most publications.



34

To ensure the quality and accuracy of the article, a rigorous validation and review process was carried out using the quality scale of the Centre for Evidence-Based Medicine of the University of Oxford. The article was shared with experts in the field of study, who provided valuable comments and suggestions for improvement. In addition, an exhaustive review of the content, argumentative coherence, grammatical correctness and accuracy of the bibliographic references was carried out. These aspects guarantee the soundness and reliability of the methodology and the exercise carried out.

**Theoretical
Framework
Approaches to
feedback.**

There are many coincidences reflected by the different authors with respect to the definition and impact of feedback. In principle, its definition as a mechanism whose objective is to improve future actions in relation to a learning event. However, the way it is applied in different areas reflects great diversity in its approach. Zhao and Ellis (2020), consider feedback as a corrective mechanism that can be explicit or implicit. In the explicit case, a direct correction must be made where the error is simply corrected immediately by giving the correct answer. In the implicit case, the student is given the opportunity to reason about the error, giving him/her options to choose the correct answer.

Other authors focus on complex activities such as writing. In order to achieve a successful performance in this skill, collaborative writing is proposed. This technique seeks to provide the student with different tools that facilitate continuous correction through different media. In this sense, the teacher has as an ally the contemporary technological means such as, for example, video-slides, as well as the support of another classmate through social networks. (Mauri, Ginesta and Rochera 2014).. Rochera, Enge, and Coll (2021), add to these considerations that despite the importance of the effects of feedback in technological media, this has not been efficiently assessed. They also consider that the cybernetic medium is a very conducive environment for collaborative action and that it can encourage communication among peers more effectively, since young people are naturally disposed to its use. The primary objective to be achieved through these media is to get students to share information and build knowledge through the discussion of issues related to their school activities that may have caused them doubts.

Types of Feedback

Essential elements such as attitudes, emotions, and the context when and where the feedback phenomenon occurs must be taken into account, since the educator should not expect that by providing information, the student will always act as expected. The teacher must design the mechanism very carefully in order to obtain a positive impact on learning. It should be emphasized that feedback should be in proportion to the difficulty of the task. It has been proven that attention given to this mechanism results in a clear improvement in performance.

In the face of the above, the student is not expected to correct for the sake of it, but because he or she actually questions and concludes that that is the best way to do so (Forster, Weiser and Maur 2018). Therefore, several authors state that feedback has different purposes and effects, which depend on the

learning needs and that is why it is necessary to achieve the implementation of strategies that promote orally or through writing an effect, i.e., feedback that drives through conversational teaching (González Rodríguez and Álvarez Mosquero 2020). Authors such as Lipsch and Kim (2022), have identified four types of feedback focusing on the task, the process, self-regulation, and the individual. Other authors such as Huisman, Saab, Van den Broek and Driel (2019), consider, on the other hand, other types such as peer, personal, negative, positive, constructive, outcome-based performance, non-corrective, corrective, effective and useless feedback.

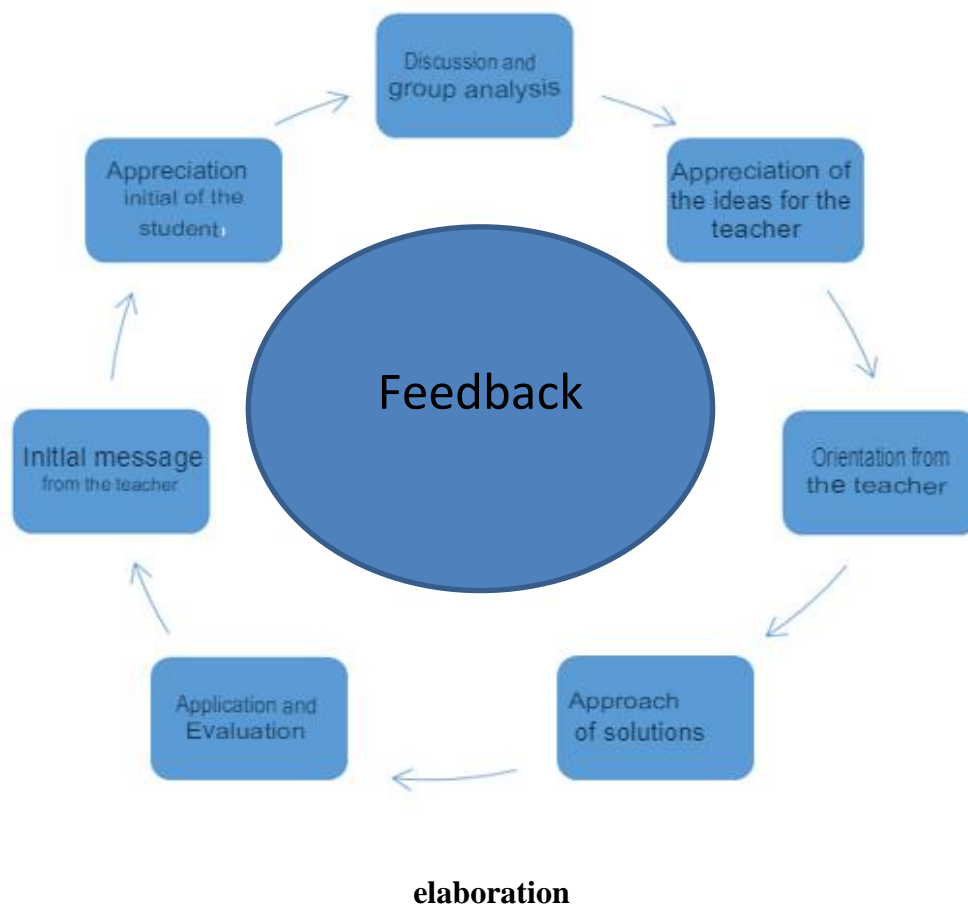
The aforementioned types take into account motivation and learning, which are taken as extrinsic and intrinsic incentives, high value feedback, low value feedback, traditional feedback, sustainable feedback, peer feedback and feedforward. There is no doubt that feedback is a process that encompasses different moments in teaching, which starts from an open and constructive dialogue between the teacher and the student, in which it seeks to understand where and why it failed, thereby providing meaningful learning (Huisman, et al. 2019).

Other authors speak of the SBI type (situation, behavior and impact). This mechanism occurs

when the individual recognizes, according to the situation in which he finds himself, the impact that his behavior has on his learning. There is also the Star model, whose components are the situation, the action and the result. Similarly, it assumes first the situation in which the subject acts and then evaluates the result. Among these, Flodén (2017), reviews the feedback from the student to the teacher, considering it as an increasingly common practice. The teacher's work is seen by the student from a different perspective, where he is a customer to whom a service is being provided and which must be offered with a guarantee of a quality result.

The three most widely recognized fundamental feedback models are Nicol and Macfarlane-Dick, Hattie and Timperley, and Boud and Molly. (Lipsch and Kim 2022). The first refers to the fact that for this mechanism to be correct, it must strengthen the student's capacity to self-regulate his or her own academic performance. The second states that this is a process whose main objective is to reduce the gap between current learning and expected learning or performance, i.e., their goals. And, the third explains that feedback is the information of the gap between the actual level and the reference level of a system parameter that is used to alter that gap in some way. That is why, in this work, it is prioritized that feedback allows the learning objectives to be met, hence the importance of a communicative process between teacher and student. This process can be seen in the following graph:

Figure 5. Feedback
Process.Source: Own



41

Feedback in Higher Education

During the development of this article, it has been reiterated that feedback pursues a continuous search for the improvement of actions through an initial approach and an analysis on the part of the actors involved. In the educational case, the teacher initiates his presentation to be submitted to the students for their consideration. The concerns resulting from the teacher's proposals can be reflected upon individually or by the group until the best option is reached through a virtuous circle of feedback. The opinions or perceptions resulting from the exchange of ideas constitute the necessary reinforcement for the learning process to be successful. This learning will not only be for the student, but for the teacher himself.

In higher education this mechanism has no major variants apart from the complexity of the issues dealt with at that level. By virtue of the exponential growth of the university student population in the last decade of the 21st century worldwide, which has risen by 10%, the concern also lies in the high number of students who do not finish their studies, which reaches an alarming 70% (van Klaveren, Kooiman, Cornelisz, & Meeter, 2018). In addition to the usual causes for student dropout (socioeconomic status, lack of adequate public transportation, inadequate institutions, etc.) is the lack of timely motivation during class sessions. This may be due to lack of preparation, commitment or lack of professionalism of the teacher, with much difficulty the contemporary teacher will be able to face the educational fact without updating his teaching methods.

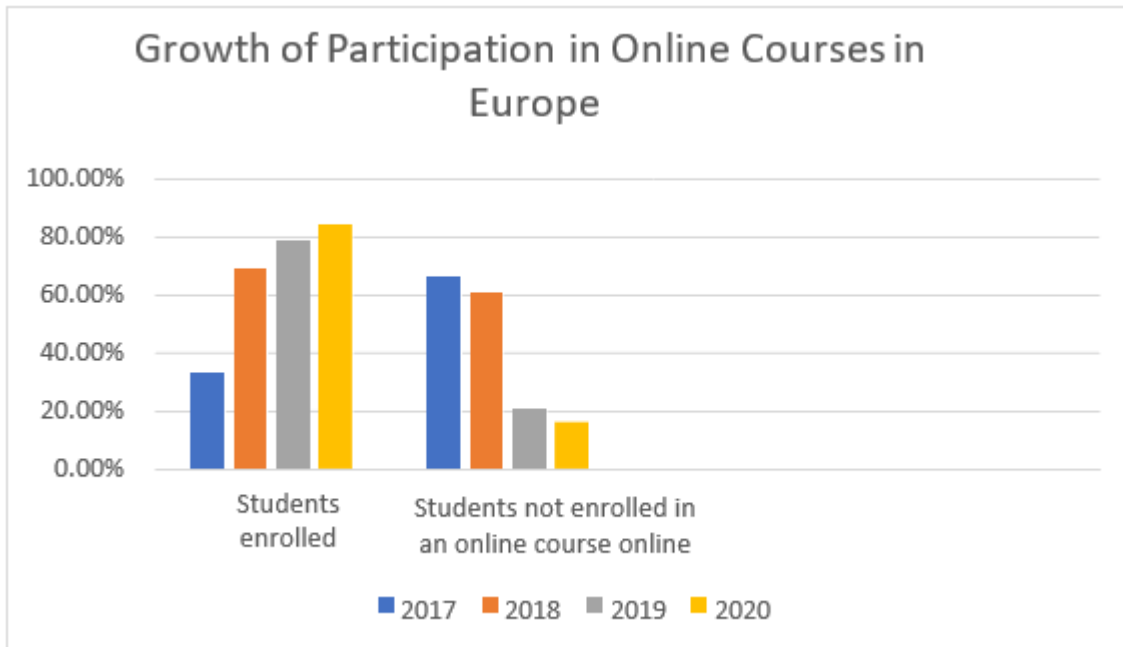
In some cases, in Europe, such as in the Netherlands, where the cost of higher education is quite low, the problem of attrition is that students do not successfully select a career path and change frequently. To minimize this, universities organize activities to guide students in making the right choice. It is at this point that feedback takes center stage. Students are recommended to attend different conferences and meetings with other students where they share experiences and ideas and, finally, they take a proficiency test related to the content of the chosen career (van Klaveren, Kooiman, Cornelisz, & Meeter, 2018).

In very specific subjects such as mathematics teaching, the usefulness of feedback is a great ally. A university in Ireland has implemented this mechanism using online learning modules. This turns the technological means into a great support for students, who can use this material even if they have not attended the formal class. Students access the modules through anonymous registration. They are placed in shifts to be attended by a tutor. Additionally, they can act collaboratively by establishing communication with other knowledgeable students (Cronin & Meehan, 2021).

Unpredictable changes in today's world make it necessary to take actions that support students in achieving their cognitive goals. Social problems, the economic situation and natural events of low or high magnitude affect student performance. In higher education, these situations often have an extremely negative influence, leading in many cases to resignation in their desire to obtain a college degree.

Once again, technology was the lifeline for the wounded school. Thus, the pre-established concepts of homework and distance education via the Internet took off and proved their importance. In Romania and Hungary, for example, these concepts were immediately taken up and implemented with great success. In fact, the numbers as of 2020 have increased significantly and

show that at least 20% of the population has taken an online course, which comes to demonstrate the presence of an element that supports education through feedback (Harabgi, Stefanescu, Zsido, & Fenyves, 2022). The following chart shows how the participation of the student population in online courses in Europe has developed in an increasing way, according to data from the National Statistical Center for Education:

Graph 6: National Center for Education**Statistics**

The importance of using the feedback mechanism is evident in any field of education and can be applied using different tools. Rasi and Vuojari (2018), consider this method as one of the most powerful means to empower students and make them take responsibility for their performance. These authors make use of this technique through audios for learning, further arguing that students every day demand more and more forms of individual support.

They insist that students' emotions are crucial when facing academic challenges. Individual action allows the student to maintain some peace of mind by being away from the pressure of the teacher's presence and that of their peers. This type of strategy has shown an

increase in the quality of the academic load developed by the students. All this is supported by the tutors, who offer perceptions that highlight emotions such as joy, pride and enjoyment of a novel activity. However, this modality is not really new, this has been recommended since 1998, but thanks to new technologies and the pressure caused by the pandemic of 2019, its use has become widespread. This technique can be used for any subject. In the teaching of languages as a second language it is very common, since the audios allow the student to listen and repeat at his discretion and at his own pace.

A major challenge is the application of feedback with subjects with special needs. Authors such as Arriagada, Venegas and Calzadilla (2021), point out that co-teaching tools are a very useful method to meet the educational needs of people with special conditions. According to their arguments, interaction between collaborators in the educational process can be achieved. This modality is a variation of feedback, as it contributes to the exchange of experiences between students and teachers, in order to achieve a significant cognitive development.

In many cases, teachers do not know how to deal appropriately with the issue of feedback. Their concern comes down to how to interpret students' emotions and take advantage of them to reinforce learning or rethink different strategies that lead to meaningful learning. Negative and adverse behavior in certain subjects are emotions that the teacher must detect and analyze in order to find a way to change this attitude. The teacher must be very careful in this regard, since misinterpreting the student's perception can lead him/her to the wrong path. Gathering information about the different reasons that may show negative attitudes towards a subject is the first step to success in how to use the feedback mechanism. In view of the fact that emotions are unique to each person, the teacher must consider that actions taken with other subjects will not always work in the same way and, therefore, the importance of taking into account individual differences and the context where the educational activity takes place (Lutovac, Kaasil, Komulainen, & Maikkola, 2017).

In the world of computer science, feedback plays a role of great significance. Thus, authors such as Thangaraj, Ward and O'Riordan (2022), point out that the lack of tutors for new students is a great challenge, especially when they are looking for answers to their doubts. It is very difficult to motivate them, especially in very long class sessions. It is at this point that technology emerges as an ally to solve the shortage of staff that can attend to students. Thus, the creation of a system of automated advisories and feedback to support teaching programs. Different platforms such as Leed are present for students to receive instant and automated feedback. Its great strength lies in the fact that the learner is held accountable for his or her performance, but the program lacks the ability to show exactly where the errors lie.

The Code Runner platform developed at the University of Canterbury is another feedback system specifically focused on supporting systems management students. This platform offers millions of short quizzes that allow the teacher to organize student responses for grading using a preset schedule. It is mainly used in programming courses. In these modules, students are asked to develop programming problems where they must. The students' proposals are analyzed by means of a series of tests. The platform then makes available a series of possible correct answers that the student processes to select the most suitable for his purposes.

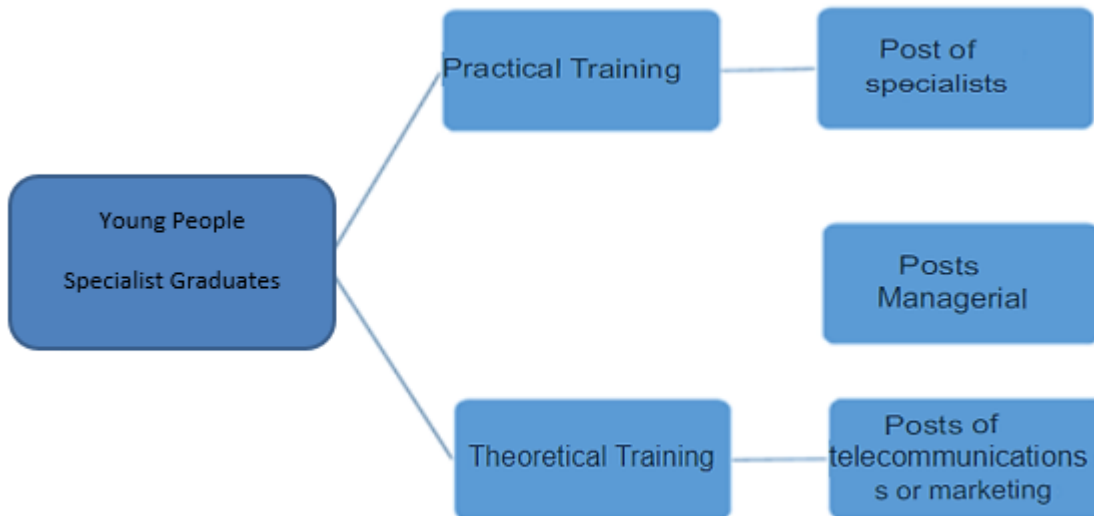
Another option is the Virtual Programming Lab. This platform allows students to edit, run and test different programs directly from the servers, which are automatically evaluated and subjected to anti-plagiarism programs. In this way, student participation is easier, as all modules are permanently available. Its great strength lies in the fact that students receive immediate feedback. Other less popular programs such as MULE or Einstein are available and most have very similar features, especially in the automatic way of providing feedback (Thangaraj, Ward, & O'Riordan, 2022).

It should be noted, on the other hand, that feedback is not exclusive to the teacher. One way to positively develop the teacher's performance is precisely to receive feedback from the students. This has an immediate effect on the teacher's attitude change. They encourage them to

update themselves and to take new routes that lead them to improve their performance in the classroom. For example, seeking the opinions of recent graduates and those recently immersed in the labor market in their respective specialties is a very valuable source of information for teachers.

Belash, Muravyev, Ryzhov and Chirkova (2018), in their study on the feedback provided by young specialists recently graduated in engineering, yielded very useful opinions on improving the performance of the faculty and of the approach to their content and objectives. In their research they asked questions about the reasons why they do not work in the environment, for which they were prepared, and gave interesting answers such as the low salaries they would receive if they worked in positions in their specialty. In another case, they referred to the shortage of positions in their profession. In other cases they referred to the unbalanced technical training, which is always below the merely theoretical sessions. According to the considerations collected on this fact, the young recent graduates agreed that a greater practical preparation would encourage them to adapt more quickly and easily to the work environment in their specialties. The following graph illustrates the ideal jobs according to their university education:

Graph 7. Job projection according to the focus of academic training.



In view of the experiences described above, one way to foresee future failures in the way training is received during the university career could be the reflective diary. This is considered to be one of the most efficient means of gathering information about a student's performance. In them, the daily experiences during the educational process or just after a session are collected.

(Barth, (2002)). Argues that learning becomes effective when it is based on critical reflection. Through which students have the opportunity to reflect on their learning and receive feedback, providing continuous and formative guidance, allowing them to set clear objectives and develop metacognitive skills.

Receiving constant support from tutors leads students to significantly improve their performance. However, in many cases, these diaries become simple checklists that are manipulated mechanically without taking into account their own emotions and are simply carried as a

requirement. Once again, it is important to reiterate the teacher's commitment to constantly update their training and never leave aside the need to give space to the student so that the motivation they try to provide does not result in an obnoxious and impertinent pressure. In this sense, the teacher must be very careful, since it is a fact the fragility of the personality of young people and the ease with which they feel invaded in their comfort zone. This would be the only way to be able to handle this type of tools. Barth argues that reflection⁴³ is essential for the development of socioemotional skills and to help students become responsible and engaged citizens. Furthermore, he stresses the importance of the teacher's role in promoting reflection, not only as a method to enhance learning, but also to foster students' personal development, perceptions and well-being.

Another very useful tool for the implementation of the feedback mechanism according to Portillo and Cano, is the writing of blogs (Portillo Vidiella & Cano García, 2015). These authors proposed a project where students reflect their self-regulation and counseling. The difference with reflection journals is that these blogs are done through a platform created specifically for this purpose. In it, teachers can record their comments and advice and students can access them at any time. These notes provide formative feedback, related to the students' activities.

Discussion

First of all, research through papers related to the topic highlight⁴⁷ the importance of

feedback received in higher education in the 21st century. The large number of authors analyzing the topic is evidence of this. Authors such as (Lyon, Cano-García, & Fernández-Ferrer, 2017) , highlight the importance of feedback as a tool for a continuous process of counseling and insist on the development of students' ability to achieve adequate self-regulation of their actions, to become autocratic beings and that they can achieve by themselves the detection of their weaknesses and strengths in the critical areas of their cognitive development and take advantage of them to take appropriate actions. The idea is that the student can assume a responsible attitude towards their problems.

These authors propose four determining aspects for the student to become a participant in sustainable feedback. First, involve them in issues that produce qualitative results. This will provide them with a vision with a perspective that can be analyzed from different points of view, including that of their teachers, their peers and their own perception. Second, the student should be encouraged to develop self-counseling skills, leading them to make responsible decisions according to their own reasonable judgment. Thirdly, it is necessary to enable him to set achievable goals and plans in his learning process. This license will make him aware of what his possible achievements are according to his own criteria and thus he would set real goals according to his own intellectual resources and possibilities. And finally, motivate him to perform tasks that increase his commitment and dedication.

Considerations such as these are the ineffable proof that feedback, in spite of being a mechanism of very remote use, today has taken a boom thanks to the current technological means that are complemented with the tutor's face-to-face counseling. And perhaps the most important thing discovered in this research is the effect that feedback has on the reflective aspect of the student, since it leads him to make his own decisions from his own perceptions, becoming a critic of his actions, limitations and strengths.

Conclusions

Feedback has successfully contributed to research on how to improve teacher-student critique, especially focused on higher education since it allows for both effective and meaningful observation and communication, i.e., feedback at this educational level, as compared to others. Higher education settings are more suitable than other levels for this process, due to the interaction systems which guarantee a greater possibility of execution when using this tool.

In the educational field, the concepts of homework via the web, online class or television were already well known, and as a consequence of the pandemic they became an important support. After the confinement was overcome, education was already turning to the use of the Internet as a medium for teaching. University students in particular saw the production of online material as a method to make up for the failures they may have had for a variety of reasons. Repeated absences from class due to economic, social or fortuitous causes could be solved by taking advantage of online tools.

This method was nurtured by the concept of feedback, which in its different modalities constitutes today's leader to support the counseling necessary to reinforce and guide meaningful learning. The large amount of information about feedback gathered and analyzed through the exhaustive research of related documents reflects the importance of this mechanism. The tutor's face-to-face counseling with the student is not always feasible for logistical or other reasons, in view of this, the different options that technology offers become a feasible, appropriate and easily manageable solution for young people who receive it in the same way as they handle technological resources. Now it is the teachers' turn to update their knowledge in order to apply the feedback in an adequate way.

References

- Arriagada, C., Venegas, N., & Calzadilla, ó. (2021). The evaluation of professional co-teaching practices. *Praxis y Saber*, 2-18.
- ¹⁹ Barth, R. S. ((2002).). *Learning by heart*. San francisco, California: John Wiley & Sons.
- Belash, Y., Muravyev, A., Ryzhov, G., & Chirkova, A. (2018). Receiving Feedback from Young Specialists -University Graduates. *LETI*, 102-104.
- ² Costelloe, L., & Egan, A. (2020). "Because, as a teacher, giving feedback and assessment is actually really difficult": using self- and peer-assessment to develop Higher Education teachers' skills in assessment and feedback. *6th International Conference on Higher Education Advances* (pp. 501-505). Valencia: Universitat Politècnica de València.
- ² Costelloe, L., & Egan, A. (2020). "Because, as a teacher, giving feedback and assessment is actually really difficult": using self- and peer-assessment to develop Higher Education teachers' skills in assessment and feedback. *6th International Conference on Higher Education Advances* (pp. 501-505). Valencia: Universitat Politècnica de València.
- ⁴ Cronin, A., & Meehan, M. (2021). The utility of mathematics support centre feedback to lecturers of large first-year university mathematics courses. *International Journal of Mathematical Education in Science and Technology*, 1471- 1490.
- Egelandsdai, ²⁶ K., & Krumsvik, R. J. (2019). Clicker Interventions at University Lectures and the Feedback Gap. *Nordic Journal of Digital Literacy*, 70-87.
- ⁶ Godén, J. (2017). The impact of student feedback on teaching in Higher education. *Assessment & Evaluation in Higher Education*, 1054-1068.
- ²¹ Forster, M., Weiser, C., & Maur, A. (2018). How feedback provided by voluntary electronic quizzes affects learning outcomes of university students in large classes. *Computers & Education*, 100-114.
- ⁸ González Rodríguez, L. M., & Álvarez Mosquero, P. (2020). The impact of feedback and explicit rhetorical instruction on EFL students' writing proficiency in higher education. *Atlantis, Journal of the Spanish Association of Anglo-American Studies* 42(1), 120-142.
- ¹⁴ Harangi-Rákos, M., Ștefănescu, D., Zsidó, K.-E., & Fenyves, V. (2022). Thrown into Deep Water: Feedback on Student Satisfaction- A Case Study in Hungarian and Romanian Universities. *Education Sciences* 12 (36), 1-11

9. Huisman, B., Saab, N., Van den Broek, P., & Driel, J. v. (2019). The impact of formative peer feedback on higher education students' academic writing: a Meta- Analysis. *Assessment & Evaluation in Higher Education* 44 (6), 863-880.
10. Ion, G., Cano-García, E., & Fernández-Ferrer, M. (2017). Enhancing self-regulated learning through using written feedback in higher education. *International Journal of Educational Research*, 85, 1-10.
31. Klimova, B., & Pikhart, M. (2022). Application of corrective feedback using emerging technologies among L2 university students. *Cogent education*, 1-14.
1. Lipsch, I., & Kim, D. (May 31, 2022). A case study of the use of the Hattie and Timperley feedback model on written feedback in thesis examination in higher education. *Cogent Education* 9(1), 1-16. Retrieved from [A case study of the use of the Hattie and Timperley feedback model on written feedback in thesis examination in higher education.](#)
6. Lutovac, S., Kaasil, R., Komulainen, J., & Maikkola, M. (2017). University lecturers' emotional responses to and coping with student feedback: a Finnish case study. *European Journal of Psychology of Education*, 235-250.
4. Mauri, T., Ginesta, A., & Rochera, M.-J. (2014). The use of feedback systems to improve collaborative text writing: a proposal for the higher education context. *Innovations in Education and Teaching International* 53(4), 411-423.
16. Portillo Vidiella, M.-C., & Cano García, E. (2015). Regulating the writing process in the teacher training practicum guided by feedback at the University of Barcelona. *Cambridge Journal of Education*, 55-79.
18. Kasi, P., & Vuojari, H. (2018). Toward personal and emotional connectivity in mobile higher education through asynchronous formative audio feedback. *British Journal of Educational Technology* 49(2), 292-304.
25. Rochera, M., Enge, A., & Coll, C. (2021). The effects of teacher' feedback: a case study of an online discussion forum in Higher Education. *Journal of Distance Education* 21(67), 1- 24.
7. Sánchez-Martí, A., Moreno, J. L. M., & Ion, G. (2019). Design and Validation of a Learning Perception Questionnaire through Peer Feedback in Higher Education. *Revista Iberoamericana de Diagnóstico y Evaluación-e Avaliação Psicológica*, 4(53), 113-128.
15. Thangaraj, J., Ward, M., & O'Riordan, F. (2022). Use of Assessment and Feedback Systems for Introductory Computer Programming Modules of Higher Education: A Comparative Study. *8th International Conference on Higher Education Advances*.(pp. 127-134).

Valencia: Universitat Politècnica de València.

- 11 van Klaveren, C., Kooiman, K., Cornelisz, I., & Meeter, M. (2018). The Higher Education Enrollment Decision: Feedback on Expected Study Success and Updating Behavior. *Journal of Research on Educational Effectiveness* 12(1), 67-89.
- 13 Zhao, Y., & Ellis, R. (2020). The relative effects of implicit and explicit corrective feedback on the acquisition of 3rd person -s by Chinese university students: A classroom-based study. *LANGUAGE TEACHING RESEARCH*, 361-363.

● 16% de similitud general

Principales fuentes encontradas en las siguientes bases de datos:

- 15% Base de datos de Internet
- Base de datos de Crossref
- 12% Base de datos de trabajos entregados
- 10% Base de datos de publicaciones
- Base de datos de contenido publicado de Crossref

FUENTES PRINCIPALES

Las fuentes con el mayor número de coincidencias dentro de la entrega. Las fuentes superpuestas no se mostrarán.

1	researchgate.net Internet	1%
2	riunet.upv.es Internet	1%
3	mdpi.com Internet	<1%
4	link.springer.com Internet	<1%
5	pubmed.ncbi.nlm.nih.gov Internet	<1%
6	files.osf.io Internet	<1%
7	erudit.org Internet	<1%
8	ojs.uv.es Internet	<1%

9	files.eric.ed.gov Internet	<1%
10	europeanproceedings.com Internet	<1%
11	Postgraduate Institute of Management on 2023-01-31 Submitted works	<1%
12	hdl.handle.net Internet	<1%
13	espace.curtin.edu.au Internet	<1%
14	Intercollege on 2022-07-28 Submitted works	<1%
15	arxiv.org Internet	<1%
16	University of Melbourne on 2022-10-31 Submitted works	<1%
17	eprints.teachingandlearning.ie Internet	<1%
18	mail.ijlter.org Internet	<1%
19	tandfonline.com Internet	<1%
20	University of Leicester on 2008-10-01 Submitted works	<1%

21	curis.ku.dk Internet	<1%
22	srhe.tandfonline.com Internet	<1%
23	journaltoocs.ac.uk Internet	<1%
24	revistas.um.es Internet	<1%
25	Global Banking Training on 2021-11-23 Submitted works	<1%
26	repository.nie.edu.sg Internet	<1%
27	Submitted on 1686099244236 Submitted works	<1%
28	kar.kent.ac.uk Internet	<1%
29	University of Southampton on 2018-01-11 Submitted works	<1%
30	shura.shu.ac.uk Internet	<1%
31	Hawa Syamsina Md. Supie, Nur Syamimi Zahari, Zulaikha Khairuddin, Z... Crossref	<1%
32	daten-quadrat.de Internet	<1%

33	asha.org	Internet	<1%
34	bjgpopen.org	Internet	<1%
35	University of Waikato on 2017-10-13	Submitted works	<1%
36	view.genial.ly	Internet	<1%
37	Dylan Wiliam. "Putting learners at the heart of the feedback process: R...	Crossref	<1%
38	Kjetil Egelandstal, Rune Johan Krumsvik. "Clicker Interventions at Univ...	Crossref	<1%
39	Universidad de Salamanca on 2021-05-31	Submitted works	<1%
40	University of Greenwich on 2018-04-08	Submitted works	<1%
41	prism.ucalgary.ca	Internet	<1%
42	Andria Pavlou, Eleni A. Kyza. "Chapter 22 An Investigation of Two Meth...	Crossref	<1%
43	Global Banking Training on 2022-08-07	Submitted works	<1%
44	Laura M. Brown. "The Impact of Student-Centered Learning through Us...	Crossref	<1%

45	bora.uib.no Internet	<1%
46	repository.kulib.kyoto-u.ac.jp Internet	<1%
47	Bath Spa University College on 2023-05-20 Submitted works	<1%
48	Lientje Maas, Matthieu J. S. Brinkhuis, Liesbeth Kester, Leoniek Wijnga... Crossref	<1%
49	Martijn Leenknecht, Priscilla Hompus, Marieke van der Schaaf. "Feedb... Crossref	<1%
50	University of Wollongong on 2022-08-30 Submitted works	<1%