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How University Teaching Staff Learn from Negative Student Feedback

Käthe Schneider, Amine Merve Ercan, Ekin Bayar, Uliana Proskunina

Institute of Education and Culture, Friedrich Schiller University Jena, Jena, Germany
Email: k.schneider@uni-jena.de

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Abstract

Based on a grounded theory approach, the study investigated how university teaching staff are learning from negative feedback in student evaluations of teachers (SETs). To collect qualitative data semi-structured interviews were conducted with 16 university teaching staff from a German university. Voluntary sampling method was used to select participants with an intention to learn from SETs. The interviews were audio-recorded, transcribed, and analyzed through open, axial and selective coding. The analysis resulted in a typology of four learning modes centered on a newly introduced category of dealing with negative feedback. This typology does not only expand the theoretical knowledge of learning from SETs but also provide valuable insights into differential learning potentials.

Keywords

Student Evaluation of Teachers, University Teaching Staff, Grounded Theory, Modes of Learning from Negative Feedback

1. Introduction

Parallel with the changes in society and economy, work and career are no longer considered static and preordained (Manuti et al., 2015). Employers and employees are expected to learn continuously and remain knowledgeable, skillful, and effective (Mulder & Ellinger, 2013), including university staff. Significant transformations have impacted higher education, requiring more adaptable approaches (Ramaley, 2013). University teaching staff must adapt their methods to engage diverse students and meet evolving educational goals. Formal learning, despite its benefits (Cerasoli et al., 2018), is insufficient alone due to its predetermined nature (Tannenbaum et al., 2010), and informal learning is needed.

Informal learning is non-curricular, non-structured, non-linear, self-directed, and field-based (Tannenbaum et al., 2010). As a result, the knowledge gained through it is more likely to be practical (Jeon & Kim, 2012). Hence, as the workhorse of the knowledge economy (Cross, 2007), it is the supplement needed for the rapid changes in higher education. It is crucial for the professional development of university teaching staff, enabling them to stay updated with the latest advancements in their fields and to continuously improve their teaching methodologies (Encinar-Prat & Sallán, 2019). In the workplace, conversing with others, searching online, getting feedback, and reading are the most influential aspects of informal learning (Schürmann & Beausaert, 2016). Feedback is not only integral to the overall learning and performance improvement process (McCarthy & Garavan, 2006) but also to informal learning (Noe et al., 2013). It is a key component of the informal learning process described in the Dynamic Model (Tannenbaum et al., 2010). Although this model has no definite beginning or end and not all elements need to be visited, feedback is essential for effective informal learning (Tannenbaum et al., 2010).

Many academic discussions leave the definition of feedback implicit (Scott, 2014). While it is commonly understood as information provided by university teaching staff to help students improve their performance (Scott, 2014), feedback can also target teaching staff. Student feedback encompasses their opinions regarding their experiences in higher education, including learning, support facilities, and external factors (Harvey, 2003). High-quality teaching is positioned at the heart of higher education (Harrison et al., 2020), and high-quality university teaching staff attach great importance to student feedback (Lumpkin & Multon, 2013) as they are essential to improving teaching quality (Hénard & Roseveare, 2012). However, studies on the impact of student feedback on the learning process of university staff are scarce (Mulder & Ellinger, 2013), highlighting a gap in understanding how staff informally learn from student feedback. This gap is critical, as feedback is pivotal in assessing performance, shaping teaching practices, and fostering continuous learning among university teaching staff.

Student evaluations of teachers (SETs) are commonly used to assess the performance of university teaching staff in higher education (Oude Groote Beverborg & Müller, 2023) and gather direct feedback from students (Mandouit, 2018). They have become routine (Zakka, 2009), globally, putting pressure on teaching staff and potentially influencing teaching methods to align with students' preferences (Flodén, 2017). SETs highlight instructional strengths and weaknesses, offering staff opportunities to learn. Most research focuses on the features and validity (e.g., Bush et al., 2018), their impact on promotion and tenure decisions (e.g. Lutovac et al., 2017) and teaching performance (e.g., Bush et al., 2018). However, there is a significant gap in research on how SETs impact the informal learning of university teaching staff.

In education, feedback is typically categorized as positive or negative based on

the emotions it evokes (Lipnevich & Panadero, 2021). Positive student feedback indicates satisfaction, approval, or appreciation, while negative feedback expresses dissatisfaction, criticism, or concerns. SETs collect both types of student feedback. In anticipation of the presentation of the results, the current study shows for the participating university teaching staff the importance of negative feedback in the SETs. Accordingly, this research focuses exclusively on negative feedback as the literature indicated that positive and negative feedback yield different results (e.g. Flodén, 2017; Lutovac et al., 2017; Roxå & Mårtensson, 2011). This distinction highlights the specific effects and implications of negative feedback on learning processes of university teaching staff.

Therefore, this study uniquely focuses on a crucial aspect of the university teaching staff's learning process: informal learning from negative student feedback collected via SETs. This understanding is pivotal and distinct, as it sheds light on a less explored area of educational practices and teacher development. The research question that guided this study was:

> How does university teaching staff informally learn from negative feedback provided in SETs?

This study employed the grounded theory methodology, allowing for a comprehensive exploration of the different learning modes from negative feedback. It aims to provide theoretical insights for enhancing teaching effectiveness and fostering professional growth among university teaching staff, and a responsive learning environment. Specifically, this study underlines the role of negative feedback as an evaluative tool and a catalyst for continuous learning and reflective practice in higher education, which resulted in the emergent construction of the concept according to the leads in the data.

2. Method

2.1. Standards of Grounded Theory

Although grounded theory follows general principles, it exhibits distinctive traits in three main areas: literature review, sampling, and process and precision.

The timing of the literature review is the first debated issue. Although Grounded theory was developed by Glaser and Strauss (1967), after a certain period, Glaser (1978) advised against early reviews to prevent data contamination, while Strauss and Corbin (1998) supported early integration. With a pragmatic approach, this study followed Glaser's approach, conducting the literature review after data collection, initially focusing on student feedback and then shifting to negative feedback.

Based on the data, the university teaching staff systematically focused on negative feedback from SETs for their learning, in some cases, stating that positive feedback didn't help them improve due to the absence of learning stimuli. It is predominantly understood as a self-confirmation, especially by the staff with profound university teaching experience. The anonymity of SET allows honest and

critical feedback, which remains a general expectation by teaching staff. As discussed by Charmaz (2006), the grounded theory method is open-ended and relies on emergent processes. Consequently, the study's aim was reshaped according to the emerging content and the leads in the data and updated to "investigation of how university teaching staff learn from the negative feedback of students," and the research question was revised accordingly. With this, the method's flexibility, interactivity, and fluidness are realized, when the emerging analysis leads to the specification of the way of pursuing the inquiry.

As the second controversial issue, sample size has no preset participant limits since data collection continues until saturation. Accordingly, a debate centers on sample size: Hutchinson (1993) advocates large samples, while Morse (1998) supports a focused sample. Glaser and Strauss (1967) argued that the researcher's purpose determines the selection: a narrow sample for a theory applicable to a single group, and a broader sample for a more general theory. This study aimed to build a theory, using a focused group experienced in evaluations.

Lastly, theoretical sensitivity is crucial in grounded theory, representing the researcher's ability to identify and interpret data categories and their relationships. Glaser (1978) states that without it, effective theory development is challenging since the researcher's temperament, background, and methodological expertise enhance the creation of meaningful theories from data. In this study, a diverse group of researchers conducted the whole coding process all together iteratively to facilitate theoretical sensitivity through the diversity in their expertise and backgrounds.

2.2. Sample

This study focuses on German university teaching staff aiming to learn from SETs. Invitations were sent to all university staff from 2022-2023, including research assistants, professors, and freelancers. The sample comprises volunteers with a learning intention, and each participant recommended a colleague, with no additional criteria.

The data were collected from 16 volunteer teaching staff from several departments. Of the participants, 9 (56.3%) were male, and 7 (43.8) were female. The participants' university teaching experience ranged between 0.5 and 38 years ($M = 12.47$, $SD = 10.39$). Moreover, the number of further training courses they have taken part in ranged from 0 to 20 ($M = 5.19$, $SD = 5.67$).

The usage of SETs at the analyzed university for university teaching staff is optional. They are developed by the Central Office for Teaching Evaluation and contain both numerical data and open questions to be adopted by the user, if necessary. The access is granted to a university teaching staff individually by the Central Office for Teaching Evaluation. Those evaluated voluntarily share the results with supervisors and colleagues, or may be obliged to do so by the internal processes within single departments. Additional evaluation methods like conversations with students are optionally applied by university teaching staff.

2.3. Procedure

Data were collected via semi-structured interviews in German, the participants' native language. An interview guide was approved by the ethics committee of Friedrich-Schiller University Jena on 02 January 2023. It included open-ended questions about experiences with evaluations, learning from them, expectations, perceptions of teaching, and learning intentions. A pilot interview refined the guide before use in the main study.

16 interviews were held with university teaching staff individually, and lasted around 30 minutes. Interviews were held both in person and online. The consistency and objectivity of the interviews were secured by being conducted by the same person who is not a part of the research group. The interviewer received an individualized training on interviewing techniques by the researchers, and did a pilot interview before the main data collection.

All 16 interviews were assigned a Roman numeral from I to XVI, representing each analyzed case, and transcribed by a transcription software programme. The average length of the interview transcripts is 8.6 pages per interview transcript, for a total of 138 pages transcripts. The transcriptions were reviewed and approved by a native and were analyzed using grounded theory through MAXQDA by three of the researchers.

2.4. Data Analysis

Data analysis followed Grounded Theory methodology based on the Straussian approach (Strauss & Corbin, 1998). Following this approach, the methodology consists of a three-stage procedure including open coding, axial coding and selective coding.

In open coding, the 16 interview transcripts were coded for each piece of verbal data without a predefined coding list. The open codes cover the main ideas or concepts of the data and have the form of an NVivo code based on the interviewees' exact words or of a constructed concept. Three members of the research group coded all interview transcripts independently and then discussed the results to find a consensus between the codes of at least two of the raters. In axial coding hypothetical relationships between categories were identified for each interview to study how the ideas represented by the concepts relate to each other and contribute to the phenomenon under study (Strauss & Corbin, 1998). The coding paradigm suggested by Strauss and Corbin (1998) was used for axial coding. The purpose of selective coding is to modify a theory or to develop a new one based on the results of axial coding (Strauss & Corbin, 1998). One core category that connects all the categories from the 16 axial paradigms has to be selected. The central phenomenon of the study was identified, followed by determining the properties and dimensions of this core category. The data were related to property and dimensional level of each of the major categories and the relationships were validated. Again, the relations within the axial coding paradigms were contextually, consequently, causally and strategically analyzed to form a typology.

3. Findings and Interpretations

The central category derived from the 16 axial paradigms is "dealing of university teaching staff with negative feedback". In the definition of the latter, we follow the considerations of Heckhausen and Heckhausen (2018) regarding the impact of idiosyncratic interpretation of the situation on behavior instead of its objective sense. It implies that negative feedback is perceived as such by the teaching staff, having been produced by individual thoughts under the influence of personal factors. It does not exist in a consensual sense. Therefore, the interpretation of the feedback by the university teaching staff has a more profound impact on the learning process in comparison to its objective interpretation.

From the 16 axial coding schemes, 16 different phenomena were distributed across four main axes, revealing the four modes within a two-dimensional model (Table 1). These axes primarily hinge upon two fundamental viewpoints: unconditionally regarding students as a feedback giver versus conditionally doing so, and engaging in negative feedback for teaching versus non-engagement. When a student is perceived as a conditional feedback provider, it denotes that the university teaching staff view feedback from students as considerable only under specific conditions. Instead of universally embracing student feedback, the university teaching staff selectively acknowledge feedback that meets certain criteria determined by them, such as relevance and consistency with other students' feedback. The axis of the engagement in negative feedback, on the other hand, denotes if university teaching staff incorporate negative feedback into behaviour. These axes unveil four modes as *open, instrumental, norm-oriented and structure-oriented* (Figure 1).

Table 1. List of phenomena of the modes of dealing with negative feedback.

Mode	Phenomena
Open Mode of Dealing with Negative Feedback	Lack of meta-cognition regarding the use of evaluation (I)
	Perception of missing impulses by evaluation (II)
	Compensation for evaluation deficits to improve teaching (III)
	Emotional reaction (IV)
	Evaluation as feedback (VIII)
	Desire for teaching improvement (IX)
	Detecting needs and their satisfaction through evaluation modified evaluation (XIII)
	Reflection on constructive feedback (XIV)
	Achieve optimal teaching with evaluation (XV)
	Implementation of didactically sensible and feasible suggestions (XVI)
Instrumental Mode of Dealing with Negative Feedback	External attribution of unsatisfactory reviews (V)

Continued

Structure-Oriented Mode of Dealing with Negative Feedback	Frustration with the evaluation form (XII) Considering evaluation form from a distance (XI) Desire to improve teaching (VI)
Norm-Oriented Mode of Dealing with Negative Feedback	Overestimation of the importance of feedback about the personality (X) Disappointment with the current negative review (VII)

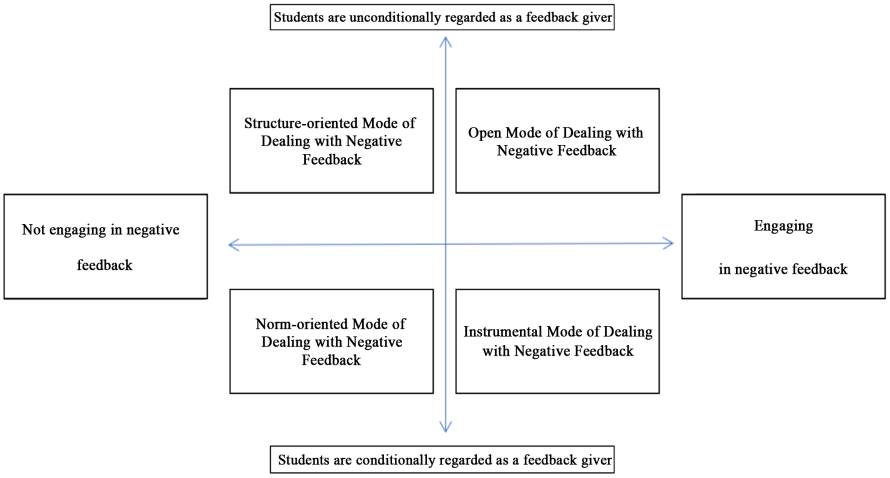

Figure 1. Modes of learning from negative feedback (LeNeF-Model).

3.1. Open Mode of Dealing with Negative Feedback

An open mode of dealing with negative feedback is the predominant type of learning within the defined core phenomena, including over half of cases (nine in total). The central axis of the selective coding is characterized as follows. Students are unconditionally perceived as feedback givers, implying that their negative feedback is typically recognized as a learning chance. Therefore, teaching staff broadly engage in it during the implementation of evaluation results. It is opposed to the conditional perception of their role as such, as by norm-oriented and instrumental modes, and not engaging in negative feedback for teaching, as by structure-oriented mode, which is further explained below. The motivational theory of Deci and Ryan (2000, 1993) applies well to this study, as it emphasizes an individual's inherent growth and development tendency. Regarding the fundamental importance of engagement originating from the individual for effective learning, we argue for the predominance of intrinsic motivation and integrated self-regulation by learning from negative feedback among university teaching staff of this learning type.

> "...I'm also interested in this feedback: how was our performance received? That's why…this kind of mixture is compulsory on the one hand…but it's more intrinsically motivated…" (XIII)

In our analysis of the university teaching staff of this type, we emphasize their natural tendency towards development reflected in curiosity, exploration and interest related to learning from evaluations and active engagement with tasks promoting growth, which represents self-determined behavior (Deci & Ryan, 2000).

An expectation of a university teaching staff for constructive feedback is the primary causal condition for an open mode of dealing with negative feedback. These university teaching staff proceed with the results of SETs according to their explanatory value and traceability criteria. They value students' honesty and reasonable critical attitude and acknowledge differences in their perception of a learning process. They value positive feedback for strengthening the perception of one's competence. At the same time, we observe the potential of negative feedback for supporting intrinsic motivation, as it is experienced as a challenge and shows the learner how to cope better with the task in the future (Deci & Ryan, 1993).

> "…You are happy when there is positive feedback, but for me, suggestions and critical points are just as valuable... That's an important point of reference for me." (VIII)

Reflection and implementation of critical feedback is the central strategy of the actors.

> "It is important because you don't want to stand still yourself and want to make progress in teaching…and have a feeling that there is a flow…so it is important to implement these things and then to reflect on them again." (XVI)

This dimension produces the most variety among the analyzed cases regarding the complexity of both notions. For instance, the reflection occurs as a result of concrete feedback to make direct changes (VIII) and takes more generalized forms as a retrospective assessment of teaching (II) and its development (IX) as well as meta-cognition upon own learning processes (I). University teaching staff also differ regarding their reflection on the process of implementation of the negative feedback. Some of them reflect upon its informative value (III, XV), its didactic reasoning and realizability (XVI) or the implementation process on its own (IV, XIV, XVI). The strategies of the analyzed university teaching staff exhibit further qualitative differences in cognitive orientation and information processing by implementing negative feedback. They include formulating the learning intention based on negative feedback to develop one's teaching practices (IX, XV), implementation of the learning intention (VIII, XIV, XVI) and evaluation of one's teaching mode after prior implementation of feedback from SETs and the attribution of its limitations to the latter (II, III), followed by implementation of alternative evaluation methods.

The phenomenon of the open mode of dealing with negative feedback occurs within *the context of the personal importance of evaluations* for university teaching staff, independent of the amount of experience with them, their results and general teaching experience, as these characteristics exhibit high variation

among study participants. Apart from the positive feelings due to good evaluation results, it also includes emotional reactions to negative feedback, potentially undermining intrinsic motivation and the necessity for a university teaching staff to cope with it.

> "You also have to deal with this, or rather, you have to organize it, so that you don't just spend the next three years sticking to it…I find it difficult, so that it leads to moroseness towards teaching and that it's perhaps unfair how the students judge you…it says…difficult things." (IV)

The processes described above result in continuous development as a university teaching staff and personal development (VIII, XIII, XIV), experiencing increasing self-efficacy (IX, XV) and generally positive feelings upon them (III).

> "It's a form of self-efficacy when it somehow says things are going well…" (IX)

These changes in teaching practice gain importance for personal life domains and, therefore, could be defined as *significant learning*. As described by Rogers (1974), these are intellectual transformations as well as those in individual behavior, attitudes, course of action etc. With this, the importance of acquiring information upon concrete teaching practices decreases in favor of their meaning and coherence within the personal context. At the same time, different domains of these learning experiences constantly interact synergistically. Similarly to the notion of significant learning, Deci and Ryan (2000, 1993) directly relate optimal learning to developing the individual self.

> "We continue to develop, I also continue to develop, and that's a great feeling…it takes a bit more effort, but I'm happy to accept that." (XIII)

As argued by the authors, we support the positive impact of intrinsic goals on individual well-being, optimal functioning and performance. The appreciation of the learning goal by the university teaching staff remains fundamental for the quality of learning and personal development.

3.2. Instrumental Mode of Dealing with Negative Feedback

The minor type represented by one interview (V) is the mode of *dealing with negative feedback instrumentally.* In terms of the determining patterns, it arises that (1) the learning facilitator conditionally regards the student as a feedback giver, combined with the action pattern that (2) the staff engage in negative feedback for teaching. The interviewee works as an independent training staff without a long-term fixed contract, among others, at the university and has many years of experience in both teaching and being evaluated.

The *phenomenon* under study is the *instrumental dealing with negative feedback*. *External attribution of unsatisfactory reviews* is the sub-phenomenon of this mode. This mode shows that typically the motivation to engage in negative feedback for teaching results from the subjective expectancy to reach a specific

consequence. In the current mode, the central consequence of teaching well to reach a good assessment is valuable, both subjectively and professionally.

> "I want to work as well as possible,(...) it has something to do with wanting to work pleasantly… And of course financially: Imagine if I constantly have bad evaluations… , then I won't get any follow-up orders." (V)

The values of the consequences correspond with the specific causal conditions and the context: The *causal condition*s related to that phenomenon are primarily an honor code for good teaching and the importance of the recognition of the work which indicate an introjected and an external motivation following Deci and Ryan (1993). However, the wish to work as well as possible indicates intrinsic motivation. The professional importance of evaluation belongs to the *context condition* of this type. To receive further orders in case of being a freelance university teaching staff it is crucial to achieve good evaluation results. This context shows that the consequences of work are seen to be important and that the motivation is also determined by others (Deci & Ryan, 1993).

The *strategy* of dealing with negative feedback is twofold:

1) The individual *tries to assign negative ratings to individual students*.

> "As a result of the evaluation, I don't have a 1.0… because I had five shy people in the course." (V)

2) The action is about *implementing small corrections* to improve teaching and achieve very good evaluation results.

> "As a lecturer, it's clear that now it's fine adjustments…" (V)

As the university teaching staff sometimes read previous positive feedback or externally attributes negative feedback, the strategy has a self-image protective function. In line with Alicke and Sedikides (2009), this behavior is a response to experienced threats to the self-concept. The university teaching staff who has a positive self-image as a teacher seeks affirmation in the form of excellent ratings. Even if according to self-affirmation theory (Sherman & Cohen, 2006), the realized strategy is self-affirmation, it can be regarded as enhancement oriented, echoing Hepper et al. (2010).

The *consequences* of this strategy lead to a learning process that allows the university teaching staff to change behavior through building up new small means-end relations. Through the students' feedback the teaching staff learn to modify actions according to the difference between expected and reached outcome. Consistent with existing literature, negative feedback identifies areas needing improvement, and responding to it can significantly improve teaching (Spooren et al., 2013).

Normally, the interviewee discusses the evaluation results with the client, with whom he has a trusting relationship.

> "And if the person reading the evaluation trusts me, which is usually the case, then I can say, look here, you can see again, that is just typical of …" (V)

Because of the many years of experience, the interviewee has learned to provide reasons for the negative feedback that from her perspective can be understood by the client.

The instrumental mode of dealing with negative feedback shows that in accordance with expectancy-value theory the achievement teaching behavior is predicted by expectancies for success, and subjective task values (Eccles, 1983).

As individuals of this mode reflect the understanding of their own teaching assumptions in terms of negative feedback they become aware of the competition between teaching goals leading to good rates and didactically valuable teaching goals.

Instrumental or operant conditioning has been extensively investigated by Skinner (1938). He used the term to refer to non-reflexive behavior. In contrast to Skinner, in the current study the term instrumental learning is also related to reflexive behavior that is instrumental in contributing to changes. Through frequently recurring consequences, such as the positive feedback of students, the teaching staff of this mode is learning stable instrumental behavior.

3.3. Structure-Oriented Mode of Dealing with Feedback

Structure-oriented mode of dealing is the second predominant type of learning after the open mode of dealing with negative feedback as seen in **Table 1**. Those sub-phenomena are *frustration with the evaluation form* (XII), *considering the evaluation form from a distance* (XI), *desire to improve teaching* (VI).

In this mode, individuals prioritize recognizing organizational issues for improvement, which paradoxically hinders their learning from evaluation forms. Consequently, while individuals view students as typical feedback providers, they attribute students' negative feedback to external, unchangeable structural factors, rather than engaging with them as learning the teaching opportunities. In selective coding, the main *causal condition* of their approach to negative feedback was determined as *negative experiences,* not always resulting from evaluation outcomes. Those negative experiences can be based on a negative self-image (VI) oppositely positive self-image (XI, XII) or lack of time for preparation for and organization of seminar (XI). The main common point of individuals in this mode is that they perceive the main limitation preventing them from attaching importance to negative feedback as *the structural constraints that they cannot change*.

Two main *strategies* of attributing negative feedback to structural factors were determined as *reflecting on the changeability of structural factors* and *not considering the implementation of the feedback that cannot be changed.* In this learning mode, individuals reflect by questioning the feasibility of the negative feedback they receive, instead of open reflection. If they are convinced that there are unchangeable structural constraints, they avoid implementing the knowledge they attained through negative feedback.

> "The structure of the whole thing is also relatively clear, (…)there are a lot of mathematical equations in the lecture, so I can't change much about it." (XII)

Structural constraints include the course subject necessitating undiscussable facts (XII), course capacity questioning the meaningfulness and generalizability of limited feedback against university teaching staff (VI), and course category restricting teaching methods (XI).

> "The course was small, there were simply not many people completing the evaluation(…)So I couldn't find much useful information for myself(…)It was not representative." (VI)

These strategies result in *structure-controlled learning* in which individuals distance themselves from the evaluation outcomes and question the applicability of the possible solutions to negative feedback by engaging with the structural requirements.

> "…the criticism that it has to be an internship(…)why you choose the design of the course the way you choose it. So I haven't made any major changes. But I continued to focus on the positive things" (XI)

Consequently, in this mode, individuals are limited to achieve learning through negative feedback. These consequences emerge in the *context* of individuals' *critical attitude towards evaluation* caused by the questionability of the representativeness and meaningfulness of evaluation form because of the lack of participants (VI & XI & XII).

> "It is relatively difficult to motivate students to fill out these evaluations(…)the students aren't particularly cooperative." (XII).

Moreover, it is essential to emphasize that even when the overall perception of the teaching evaluation process is positive, the university teaching staff often express that they do not find it beneficial and are unable to learn from it (XI).

> "My experiences with teaching evaluation were consistently positive in my case." (XI)

Based on Kelley's attribution theory (1967), causal explanations can be dispositional (internal characteristics) or situational (external circumstances). Fiske and Taylor (1991) explain that attribution theory examines how information is gathered and combined for causal judgments. In the structure-oriented mode of handling negative feedback, individuals attribute reactions to situational factors. This hinders the successful implementation of new knowledge and skills (Dörnyei, 2001), limiting reflective attempts to improve teaching. Despite reflecting on better teaching pathways, perceived structural norms hinder learning application and change.

3.4. Norm-Oriented Mode of Dealing with Feedback

In the norm-oriented mode, individuals see students as conditional feedback providers and do not view negative feedback as a learning opportunity, as it conflicts with their teaching standards. Their strength lies in their strong didactic norms.

As a result, negative feedback rarely leads to action. The sub-phenomena of this mode are overestimation of the importance of feedback about personality (X) and disappointment with the current negative review (VII).

The main inducement of not recognizing negative feedback as a learning opportunity is the normative principles in teaching, which act as a filter. Interviews indicated that individuals who seek strong approval for their teaching behavior and maintain a positive self-image tend to react emotionally, such as feeling disappointed (VII) or overestimating personality-related feedback (X). Since the main factor triggering these sorts of reactions is the *normative image of teaching*, it becomes the *causal condition* of the phenomenon that emerges in *the context* of *emotional reaction to negative feedback*.

The *strategies* to deal with negative feedback include *reflecting negative feedback with a teaching-norm background* and *non-implementation of norm-discrepant feedback*. While reflecting on the negative feedback, individuals try to overcome negative emotions by attributing them to external factors (VII) or by deciding not to engage with the feedback personally (X).

Accordingly, the main *consequence* of these strategies eventuates as *norm-compliant learning.* When negative evaluation outcomes clash with norms, individuals perceive them as incomprehensible and focus solely on positive feedback that aligns with their beliefs (VII). In cases of overestimation, they decide to set learning goals aimed at interpreting evaluation results objectively within the framework of teaching norms, rather than excessively attributing them to personal factors (X).

"I see feedback about myself in it, and I want to avoid that." (X)

Additionally, in this mode, it was determined that there was no difference in adherence to norms in the context of evaluation experience, as one of the participants in this mode had a lot of experience with evaluation (VII), while the other had few experiences (X).

According to the Focus Theory of Normative Conduct by Cialdini, Kallgren, and Reno (1991), effective norms include descriptive social norms, injunctive social norms, and personal norms, which influence behavior based on how others would behave, approve or disapprove, or how individuals perceive their conduct. Both participants in this study interpreted feedback differently based on these norms: one used personal norms (VII) while the other relied on injunctive social norms (X). Despite this difference, they both exhibited similar behavior, as neither allowed negative feedback to be objectively reflected upon as a learning opportunity. In contrast, respondents in the open mode of dealing with negative feedback (II, III) modified evaluation instruments, demonstrating a unique awareness of learning opportunities and potential for change in feedback conditions.

4. Conclusion and Implications

This study aims to investigate the informal learning of university teaching staff from student feedback using a grounded theory approach with a selective group

of university teaching staff who participate in the study to learn how to benefit from student feedback.

The semi-structured interviews that were held with the university teaching staff with learning intention revealed the significance of negative feedback, the importance of conditions on the degree of reflection, and, consequently, the constraints in learning from negative feedback, as well as typology with different ways of dealing with negative feedback. Regarding the constant comparative method of the grounded theory (Glaser & Strauss, 1967), our typology is consistent, plausible, and close to the data. At the same time, the current research presents only one possible construction of the phenomenon, whereas further competing definitions of the situation constitute the potential for future studies. The revealed typology consists of four modes as follows: Open mode, instrumental mode, structure-oriented mode and norm-oriented mode of dealing with negative feedback.

The developed typology shows the different modes of dealing with negative feedback for explaining informal learning from SETs by university teaching staff. *An open mode of dealing with negative feedback* provides the most optimal way of learning from SETs, as compared to other types, whereas its internal variation provides sufficient basis for improving learning processes. The acquisition of knowledge upon the latter and uncovering the learning potentials of negative feedback is an essential prerequisite for their sustainability under persistent intrinsic motivation.

Despite their strong enhancement orientation, learners of the *instrumental mode* have the potential to further develop their way of learning from negative feedback. Their potential lies in changing the way of knowing (Kegan, 1994). Enabling individuals to understand their way of knowing about how they learn from negative feedback is important to promote their way of learning from instrumental to significant (Rogers, 1974) and transformative learning (Mezirow, 1990).

Similarly, in the *structure-oriented mode*, university teaching staff's potential is limited as they overlook the benefits of feedback, attributing negative feedback to unchangeable course structures. Schön (1983) stresses continuous reflection for professional growth. Encouraging awareness of their attributions and recognizing situational factors may prompt reflection and learning (Kelley, 1967; Fiske & Taylor, 1991). Furthermore, creating a supportive environment and promoting social learning among staff (Bandura, 1986) can foster adaptability within constraints.

Comparatively, *norm-oriented mode* hampers learning due to entrenched norms or formed over years of educational experience or the desire to establish norms through excessive self-reflection with limited experience (Cialdini, Kallgren & Reno, 1991). Festinger's Theory of Cognitive Dissonance (1957) suggests individuals change beliefs and behaviors to ease discomfort from conflict. Facilitating cognitive dissonance in this mode can spur change. Reflective practices (Schön, 1983) aid in identifying conflicts, enabling learning by reflecting on beliefs, attitudes, and behaviors.

When the model is compared with existing models, it is evident that it introduces a new typology of learning from feedback and approaches learning situations

from a different perspective. Other typologies also acknowledge diverse informal learning processes, as Eraut (2004) includes implicit, reactive, and deliberative learning, while Schugurensky (2000) features four optional elements: self-directed, incidental, integrative, and tacit learning. Tannenbaum et al. (2010) introduced a flexible process for informal learning in the Dynamic Model, which has feedback as a component. Furthermore, Dawson et al. (2023) focused on feedback and developed a feedback literacy framework comprising five factors to maximize students' ability to leverage feedback effectively. The current study introduces a typology focusing on how university teaching staff handle negative feedback, emphasizing its significance in informal learning, thus expanding existing theories.

This study has potential limitations. The volunteer sampling strategy may compromise the study's rigor and theoretical saturation, affecting the generalizability of the findings. Additionally, the inherent limitations of qualitative methodology, such as subjective interpretation, apply. However, working in a research group with continuous comparison and verification during coding helps minimize these impacts.

Future research should explore different contexts, like autocratic settings, to expand the knowledge base. Implementing a theoretical sampling strategy would strengthen the methodology for extending or developing typologies. Furthermore, our findings highlight variations in handling negative feedback, suggesting a need for more detailed study of individual self-regulation and action styles.

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Conflicts of Interest

The authors declare no conflicts of interest regarding the publication of this paper.

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