Objective Feedback: The Views of Pedagogical Study Programme Students

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ABSTRACT

Aim. The study aims to determine the views of the pedagogical study programme students about providing objective feedback in the educational process to identify its main characteristics.

Methods. The study uses a mixed research design through the collection and analysis of quantitative and qualitative data within the framework of one study. The study included 82 (n=82) participants studying in part-time bachelor's and master's study programmes. The study addresses three research questions: RQ1: At what level do students assess the statements describing the provision of objective feedback? RQ2: What is the difference in students' views about objective feedback based on the study programme level and their employment? RQ3: What are the main characteristics of objective feedback? SPSS version 22 was used for quantitative data analysis, but the qualitative data were processed using content analysis.

Results. Most respondents agree that objective feedback is significant and motivates students to learn. The study identifies nine main characteristics of objective feedback that were divided into three groups: teacher personality traits, teaching and learning outcomes, and teacher professionalism. The study found that those students who, in parallel with their studies, work part-time in one of the general education institutions rate the competence of teachers in providing objective feedback statistically significantly higher than those students who work in a profession outside the education system or do not work at all.

Conclusion. The findings provide a better understanding of the main characteristics of objective feedback, thereby reducing the subjectivity in assessment.

Keywords: objective feedback, pedagogical study programme students, educational process, teaching and learning outcomes, teacher personality traits, teacher professionalism

Introduction

Feedback is an integral part of the educational process, as it is one type of formative assessment that sheds a light on the performance to improve it. The positive impact of feedback on learning has been acknowledged by several researchers, who believe that feedback is beneficial in a student-centred approach (Yaseeni, 2021) and promotes student progress based on the continuity of development (Banerjee, 2014).

Nowadays, the effectiveness of feedback is widely studied. The scientific literature analysis discovered that seven characteristics of effective feedback have been identified (Wiggins, 2012), a model of good feedback, and seven principles have been explained (Nicol & Macfarlane-Dick, 2006), as well as a conceptual model, which includes eight student-oriented feedback components, has been created (Ryan et al., 2023). Researches indicate that effective feedback must be clear, targeted, meaningful, and consistent with prior knowledge (Hattie & Timpeley, 2007), and the comments provided should be usable, detailed and personalised (Dawson et al., 2019). On the other hand, if feedback is delivered online, it will be effective if it is timely, personal, manageable, motivating and related to assessment criteria (Hatziapostolou & Thessaloniki, 2010). Feedback is effective if it is learner-oriented and provides quality content (Lin et al., 2023). Effective feedback encourages development, provides guidance, opens up new possibilities and can only be given and received through practice and based on experiences (Lichtenberger-Majzikné & Fischer, 2017).

Feedback can be internal, provided by students who manage their learning by themselves, and external, provided by the teacher or classmates. It might be written or oral. However, no matter how the feedback is delivered, it should promote performance. Researchers believe feedback must be accurate (Palmer et al., 2015) and useful (Henderson et al., 2021) to improve students' performance. Several factors can affect performance. For example, a study conducted by Serhat Erat and colleagues (Erat et al., 2022) revealed that students' performance can be affected by overconfidence. Because of that, the students who tended to be overconfident more often experienced performance decline. Thus, as the degree of confidence increased, actual performance decreased.

Feedback could be both positive and negative. On the one hand, positive feedback is the one that highlights the positive aspects and is encouraging, making students feel well. Asryan Ani (2023) states that it is one of the strategies used by a teacher to improve the learning environment and student learning outcomes. According to Emily Faulconer and colleagues, positive feedback in online environments is also essential for students' success (Faulconer et al., 2022). On the other hand, negative feedback is critical and highlights the negative aspects, but this does not mean that it should be entirely avoided, as this type of feedback can also improve students' performance. Lynne Kennette and colleagues (Kennette et al., 2021) point out that not everything has to be positive because students have to learn to cope with failure when it occurs. In addition, Tracii Ryen and colleagues (Ryan et al., 2022) state that critical information is supported if it is clear

and specific, and criticism should be constructive and focus on what has been done, not on personality traits.

Although plenty of studies have been carried out on feedback in education, there is insufficient analysis regarding the importance and features of objectivity in providing it and the impact of subjectivity on the quality of assessment. In addition, objective feedback does not exclude its effectiveness, performance improvement and how it may be delivered. Objective feedback is based on data and facts, not on emotions, subjective thoughts and beliefs about students' achievements. However, François-Marie Gerard (2022) admits that human judgement will involve subjective in some cases. For the assessment to be more objective, on the one hand, it must be as transparent as possible and, on the other hand, based on concrete criteria. Meanwhile, a study by Douglas Johnson (2013) has found that sufficient information about learning achievements is an essential component of feedback and that a combination of objective and evaluative feedback is the best way to boost students' performance.

Providing feedback that decreases subjectivity and increases objectivity may be challenging for the teacher, as several conditions must be met to achieve that. Because of that, *the aim of the study* was to determine the views of the pedagogical study programme students about providing objective feedback in the educational process to identify its main characteristics.

Methods

Participants

The study involved 82 (n=82) students who studied part-time in the pedagogical study programmes, and most students also worked alongside their studies. The respondents worked at preschool educational institutions (22.0%), general educational institutions (37.8%), interest-related educational institutions (8.5%), vocational education schools (1.2%) or other educational institutions (7.3%). 19.5% of students worked in a field unrelated to the education system, and only 3.7% of respondents did not work alongside their studies. All respondents study at the same university and all of them are female. The respondents involved in the study were divided into four groups according to their type of job (Table 1).

Table 1

Respondents current job

Respondents group	Current job	F(n)	F(%)
1. group	Working at a preschool educational institution	18	22.0
2. group	Working at a general educational institution	31	37.8

Respondents group	Current job	F(n)	F(%)
3. group	Working at other educational institutions	14	17.0
4. group	Working in a non-educational field or unemployed	19	23.2

Source. Own research.

Students of both bachelor's and master's study programmes were involved in the study (Table 2). Most participants were students in the bachelor study programme (72%), and only 28% studied in the master study programme.

Table 2
Level of respondents' study programme

Level of study programme	F(n)	F(%)
Bachelor's study programme	59	72.0
Master's study programme	23	28.0

Source. Own research.

The participants studied in the second academic year. Topics on assessment in education were offered for students of the bachelor's study programme, as they learn the methodology of various subjects, but students of the master's study programme are allowed to choose a study course on assessment in modern education.

Data Collection Instruments

The study used a mixed research approach characterised by collection, analysis, and combination of quantitative and qualitative data within a framework of a single study to determine the students' views about objective feedback. A three-part questionnaire was designed to find out the students' views. The first part included general questions about the respondents' study programme level and employment, but the second part comprised statements about objective feedback. The third part contained an open-ended question on what the teacher should consider to ensure the objectivity of the feedback. The open-ended question left the answer entirely up to the respondent, and there was no limitation on the scope.

The study addressed three research questions:

–RQ1: At what level do students assess the statements describing the provision of objective feedback?

–RQ2: What is the difference in students' views about objective feedback based on the study programme level and their employment?

–RQ3: What are the main characteristics of objective feedback?

The respondents rated the statements in the second part of the questionnaire according to a 4-point Likert scale: 1 = disagree, 2 = rather disagree, 3 = rather agree, and 4 = agree. It assumed that the range from 1.00 to 2.00 points is a low assessment level, the range from 2.01 to 3.00 points is a medium assessment level, and the range from 3.01 to 4.00 points is a high assessment level. The points between 1.00 and 2.50 indicate a negative attitude towards one of the statements, while points between 2.51 and 4.00 indicate a positive attitude.

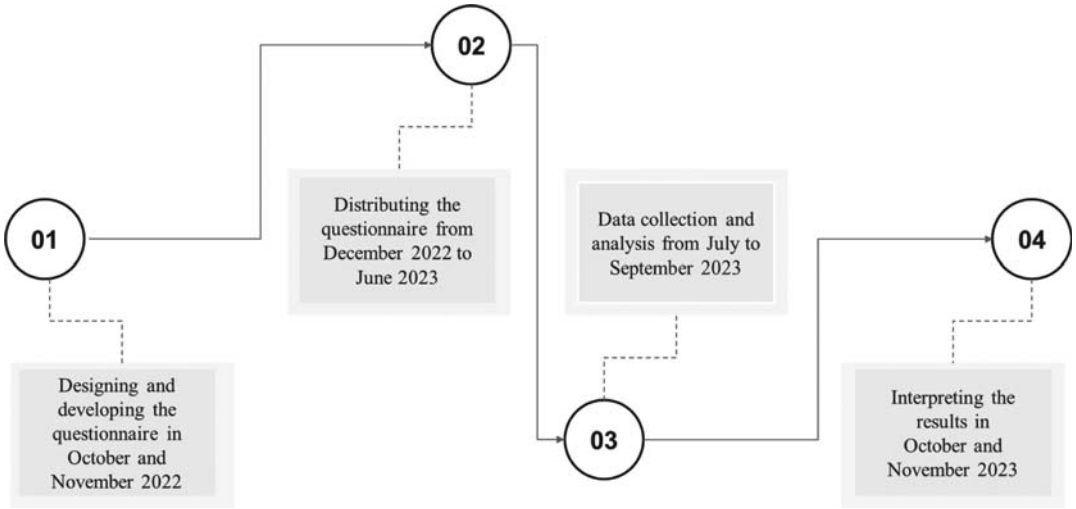
The question in the third part of the questionnaire did not offer multiple-choice answers. It allowed respondents to freely write their views on what the teacher should take into account to provide objective feedback, thereby minimising subjectivity in the assessment.

Data Collection Procedure

The study was conducted in the period from October 2022 to November 2023. The study process consisted of four phases: designing and developing the questionnaire, distributing the questionnaire, data collection and analysis, and interpreting the results (Figure 1).

The questionnaire was created using Google Drive and distributed on the MS Teams platform. Four groups of respondents were involved in the study. The first group of respondents filled out the questionnaire in December 2022, the second and third groups in May 2023, and the fourth group in June 2023.

Figure 1
Study phases



Source. Own research.

The questionnaire was anonymous, and participation was voluntary. Before completing the questionnaire, the respondents were informed about the purpose of the survey and that the data collected will be used in a summary manner. The time needed to complete the questionnaire was between 20 and 25 minutes. Each respondent could refuse to participate in the survey at any time.

The fundamental principles of research ethics were respected, as the respondents have the right to be anonymous, and it was possible to refuse to participate in the study at any time and without any consequences. The study considers the European Code of Conduct for Research Integrity (All European Academies, 2023) adopted by the European Academies of Sciences, which defines good research practice guidelines.

Data Analysis

The statements in the first two parts of the questionnaire provide the opportunity for quantitative data collection and analysis. Cronbach's Alpha coefficient was calculated to determine the reliability of the statements in the second part of the questionnaire. Based on studies conducted by Darren George and Paul Mallery (2006) and by Yudhistir Jugessur (2022) on the Cronbach's Alpha coefficient in educational research, it was assumed that a coefficient higher than or equal to 0.9 has excellent reliability, a coefficient that is in the range from 0.7 to 0.9 has a good reliability, for the coefficient in the range from 0.6 to 0.7 the reliability is acceptable, for the coefficient in the range from 0.5 to 0.6 the reliability is poor, and for the coefficient lower than 0.5 the reliability is unacceptable.

Descriptive statistics were used to analyse the statements in the study. The Arithmetic mean, median and mode were defined for each statement. The arithmetic mean made it possible to determine the assessment level of the statements — high, medium or low level, and to identify if there is a positive or negative attitude towards some statements related to objective feedback. The median was measured to describe the symmetry of the distribution with relevance to the arithmetic mean, and the mode was defined to determine the most frequent value of the statements. It was also essential to calculate the dispersion measures such as standard deviation, Skewness (SKW) and Kurtosis (KRT), which determined the stability of statements.

The Kolmogorov-Smirnov test was used to examine the consistency of the data with the nominal distribution. As a result of data analysis, it was determined that the data did not correspond to the nominal distribution, and therefore, non-parametric tests were applied. Spearman's correlation coefficient was calculated to determine the relationship between variables. The Mann-Whitney *U* test was used to determine whether there was a statistically significant difference between the views of bachelor

and master students. The Kruskal-Wallis and the Jonckheere-Terpstra tests were used to determine whether there is a statistically significant difference in students' views according to their employment.

The purpose of using content analysis in the study was to obtain a detailed description of objective feedback. The initial results of the content analysis identified 35 concepts describing objective feedback. Comparing the concepts mentioned revealed that some concepts have the same meaning, but different words to describe them. As a result of combining such words, we found 16 concepts of object feedback that can be divided into three categories: (a) teacher personality traits, (b) teaching and learning outcomes, and (c) teacher professionalism (Table 3). Each category is related to several sub-categories.

Table 3

Categories and sub-categories of the qualitative research

Category	Number of sub-categories	F(n)	F(%)
Teacher personality traits	7	34	20.2
Teaching and learning outcomes	3	32	19.1
Teacher professionalism	6	102	60.7

Source. Own research.

In total, 168 answers from 82 (n=82) respondents were analysed and outlined in numbers and percentages. As a result of the analysis, the main characteristics of objective feedback provided by the teacher were identified through the aggregation of categories and subcategories.

Results

The study determined that the Cronbach's Alpha coefficient of the statements included in the second part of the questionnaire is a = .691, which means that the internal consistency and reliability are acceptable. The results explained the impact of objective feedback on increasing teacher workload, promoting collaboration between and with students, motivating students to learn, and if it is significant (Table 4). The respondents mostly agreed that objective feedback is significant (M = 3.46, SD = .592, Mo = 4.00; D (82) = .333, p = .000) and motivates students to learn (M = 3.29, SD = .728, Mo = 4.00; D (82) = .270, p = .000). At the same time, the respondents moderately assessed the impact of objective feedback on increasing the teachers' workload (M = 2.86, SD = .812, Mo = 3.00; D (82) = .257, p = .000) and the collaboration with students and among them (M = 2.97, SD = .769, Mo = 3.00; D (82) = .308, p = .000).

Table 4

Statements about objective feedback

Statements	M	SD	SE	Mdn	Mo	SKW	KRT
Objective feedback is significant	3.46	.592	.065	4.00	4.00	-.587	-.572
Increasing teacher workload	2.86	.812	.089	3.00	3.00	-.312	-.372
Promoting collaboration with students and among them	2.97	.769	.084	3.00	3.00	-.625	.438
Motivating students to learn	3.29	.728	.080	3.00	4.00	-.714	-.053

Source. Own research.

Students believe that objective feedback increases teachers' workload if students do not value it sufficiently ($r = .454$, $p < 0.01$). The collaboration between teacher and students, and among students, is promoted when objective feedback motivates students to learn ($r = .409$, $p < 0.01$). On the other hand, to encourage students to learn, it is essential that teachers know how to provide objective feedback ($r = .290$, $p < 0.01$).

The survey also included statements that explored respondents' views about providing objective feedback in teacher's educational work. It was meaningful to find out whether teachers know how to provide objective feedback, whether they are competent to use it, how often they implement it into the educational process, whether it is easy to do it and whether it requires digital resources (Table 5). Most respondents believe that teachers know how to provide objective feedback (M = 3.02, SD = .666, Mo = 3.00; D (82) = .286, p = .000) and they use it often (M = 3.01, SD = .823, Mo = 3.00; D (82) = .241, p = .000). However, the respondents think that it is not so easy to do (M = 2.74, SD = .813, Mo = 3.00; D (82) = .309, p = .000) and are even more critical in their views about the teacher's competence to provide objective feedback (M = 2.46, SD = .918, Mo = 3.00; D (82) = .226, p = .000).

Table 5

The provision of objective feedback

Statements	M	SD	SE	Mdn	Mo	SKW	KRT
Teachers know how to provide objective feedback	3.02	.666	.073	3.00	3.00	-.027	-.689
Objective feedback requires digital resources	2.67	.685	.075	3.00	3.00	-.174	-.026
It is easy for teachers to provide objective feedback	2.74	.813	.089	3.00	3.00	-.480	-.062
Objective feedback is often used	3.01	.823	.090	3.00	3.00	-.430	-.464
Teachers are competent to provide objective feedback	2.46	.918	.101	2.00	2.00	.110	-.773

Source. Own research.

The study found that it is easier for teachers to provide objective feedback when they have sufficient knowledge of how to do it ($r = .285$, $p < 0.01$) and if there are enough digital resources to implement it ($r = .334$, $p < 0.01$). It is also easier to do it if teachers understand that objective feedback is significant ($r = .352$, $p < 0.01$) and if the students acknowledge it ($r = .247$, $p < 0.01$).

The study revealed that the respondents highly value the importance of objective feedback and its impact on the student's motivation to learn. On the other hand, the respondents moderately agreed that objective feedback increases the teacher's workload and promotes collaboration with and among students. Teachers' knowledge of providing feedback and how often they use it in their teaching work are also highly valued. Nevertheless, the statements on whether it is easy to provide objective feedback, whether its implementation requires digital resources and whether teachers have sufficient competence to do this are rated at a medium level.

The study determined that the assessments of master's study programme students (Mean Rank = 54.72) on the importance of objective feedback were higher than bachelor's study programme students (Mean Rank = 36.35). Mann-Whitney test indicated that this difference in views was statistically significant ($U = 374.50$, $z = -3.551$, $p = .000$). The same issue observed regarding students' view on how often objective feedback is used and whether teachers are competent to provide it, as master's study programme students rated them (Mean Rank = 54.24; Mean Rank = 50.72) higher than bachelor's study programme students (Mean Rank = 36.53; Mean Rank = 37.91). Mann-Whitney test shows that this difference in views is statistically significant in both cases ($U = 385.50$, $z = -3.230$, $p = .001$; $U = 466.50$, $z = -2.303$, $p = .021$).

The study revealed that students who work at general educational institutions alongside their studies had the highest assessments of the statement about teacher's competence in providing objective feedback (Mean rank = 52.97), followed by students who work at one of the preschool educational institutions (Mean Rank = 40.78) and students who work at other education-related institutions (Mean Rank = 37.29). Most students who work in a profession outside the education system and those who do not work at all underrated the teacher's competence in providing objective feedback in the educational process (Mean Rank = 28.16). The Kruskal Wallis test shows a statistically significant difference in the views about the teacher's competence to provide objective feedback between groups of students ($H (4) = 14.932$, $p = .002$). On the other hand, the Jonckheere-Terpstra test gives the opportunity to conclude that the assessment of students who work in general education institutions about the teacher's competence to provide objective feedback is statistically significantly different from the assessment of students who work in a profession unrelated to the education system or do not work at all ($TJT = 970.00$, $z = -2.394$, $p = .017$).

The content analysis discovered that the teacher personality traits, teaching and learning outcomes, and teacher professionalism influence the teacher's ability to provide objective feedback significantly. Most respondents believe that the main factor

in providing objective feedback is the teacher professionalism (Table 3), which comprises the teacher's knowledge, skills, comprehension, competence, experience and behaviour in different situations (Table 6).

Table 6
Teacher professionalism

Sub categories of teacher professionalism	F(%)
Knowledge	21.6
Skills	31.4
Comprehension	8.8
Competence	12.7
Experience	4.9
Behaviour	20.6

Source. Own research.

Respondents believe objective feedback depends often on the teacher's skills, knowledge and behaviour. The knowledge helps the teacher to provide accurate and more informed feedback about the student's performance. Feedback based on knowledge reduces subjective opinion. The respondents think that the teacher should be knowledgeable:

–about students' abilities and skills;
–in his/her subject and field to be perfectly familiar with the teaching topics, standard and achievable outcomes;
–about the criteria for providing objective feedback.

It is also significant for the teacher to be able to provide objective feedback, which makes it possible to identify, evaluate and explain the student's strengths and weaknesses more easily. The respondents admit that the teacher should be able to:

–analyse and evaluate the information and performance;
–formulate the achievable learning outcomes correctly, develop appropriate and structured assessment criteria, and identify positive features;
–look at feedback in an unemotional, neutral and consistent way;
–provide feedback in a way that improves student performance;
–reflect on student performance based on criteria, and setting a specific level of learning;
–give feedback to the student individually without comparing to other students;
–apply knowledge of objective feedback.

The teachers' behaviour indicates how they apply their knowledge and skills, their attitude towards students and how feedback is delivered. The respondents believe feedback will be objective if the teachers:

–do not act according to personal preferences;
–look at the performance of each student unemotionally and realistically;
–are able to separate the student's behaviour from the assignment to be performed;
–look at the student's performance but not judge their personality;
–are committed to their work and the student's performance.

A small percentage of respondents believe objective feedback is related to competence, comprehension, and experience. These three sub-categories influence each other because competence is connected with professional experience and comprehension. Respondents acknowledge that:
–experience is an integral part of objective feedback;
–understanding the nature of objective feedback and how to apply it is essential.

Respondents believe objective feedback depends most on teacher personality traits such as equity and honesty (Table 7). Equity enables the teacher to provide equal feedback to each child, which is significant for objectivity. Students recognise that equity helps:
–providing feedback not in a way that says I love these students and I want them to have more positive feedback, but by focusing on their performance more objectively;
–be consistent in situations where the action has to be similar, defining the same requirements for the same task.

Honesty, on the other hand, is a teacher's characteristic value and quality, according to the respondents: "It enables students to trust the teacher and does not give the impression that feedback is unfair."

Table 7
Teacher personality traits

Sub categories of teacher personality traits	F(%)
Honesty	29.4
Equity	32.4
Flexibility	14.8
Responsibility	8.8
Organisation	8.8
Creativity	2.9
Confidence	2.9

Source. Own research.

A smaller percentage of respondents associate objective feedback with the personality traits of a teacher, such as flexibility, responsibility, organisation, creativity and confidence. Flexibility allows teachers to adapt and be open-minded to new things, and

creativity helps them to find new and fascinating ways to provide objective feedback. Nevertheless, responsibility is a sense of obligation to ensure that assessment is not subjective, but organisation ensures that feedback is uncomplicated to understand and, therefore, usable. The respondents believe that an organised teacher "should have distance from personal biases and emotions, which is essential in providing objective feedback." A confident teacher is one who is sure of his ability to provide objective feedback.

An equal number of respondents consider that focusing on the learning-related goals and criteria is the best way to deliver objective feedback (Table 8).

Table 8

Teaching and learning outcomes

Sub categories of teaching and learning outcomes	F(%)
Criteria	46.9
Goal	46.9
Self-and peer-assessment	6.2

Source. Own research.

Setting criteria helps the teacher to ensure that the feedback is based on specific standards and goals. Respondents agree that objective feedback has to be constructed on the criteria set and should be *concretely, clearly and comprehensibly formulated*. If the description of performance levels is built on assessment criteria, they must be unambiguous.

If the feedback is not goal-oriented, it may be subjective. A goal helps the teacher to understand what is needed and what to focus on when giving feedback. The respondents admit that it is possible to provide objective feedback if:

–the achievable learning outcome of each task is clearly and comprehensively formulated;

–concrete steps are defined to understand how to achieve the goal set;

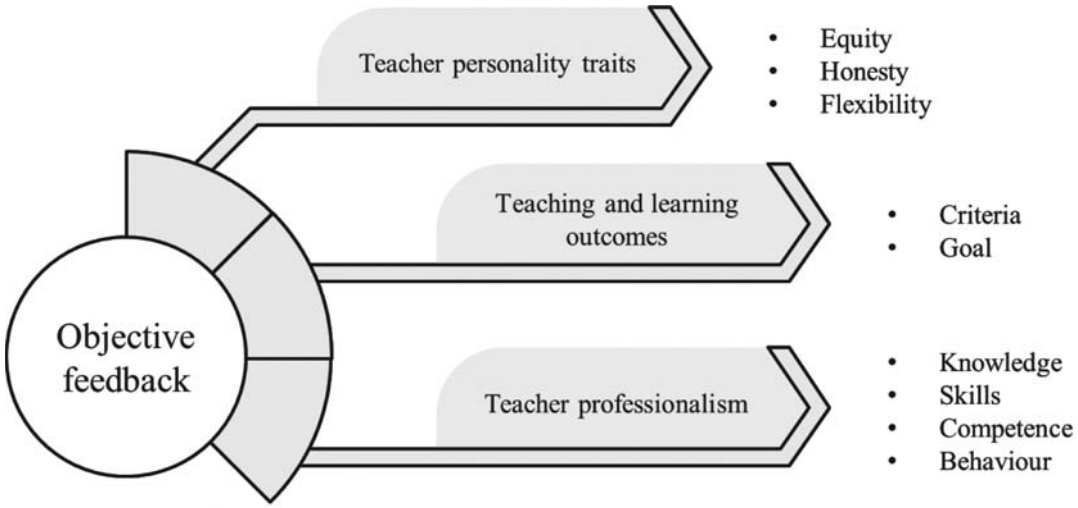
–monitoring the learning outcome is possible.

Although a small percentage of respondents believe that self-and-peer assessment should be used to provide objective feedback, it is recognised that self-and-peer assessment helps to check one's thoughts and gives an opportunity to comprehend the objectivity of feedback.

As a result of the content analysis, nine main characteristics of objective feedback provided by the teacher were identified through the aggregation of categories and sub-categories (Figure 2).

Figure 2

The main characteristics of objective feedback



Source. Own research.

Objective feedback depends on the teacher's professionalism, which is comprised of knowledge, skills, competence and behaviour in certain situations. In order to reduce subjectivity, it is significant that the feedback is based on concrete criteria and is goal-oriented. Personal traits such as equity and honesty are also essential and should be intrinsic values for teachers when providing objective feedback. Flexibility as a personality trait enables teachers to be open to other opinions in communication with colleagues and students and to adapt to new circumstances because that is necessary to provide more objective feedback. Further research is needed to explore in more detail how to expand the characteristics of objective feedback by including sub-categories rated in lower percentages by the respondents.

Conclusion

The first research question intended to discover at what level the statements that describe the provision of objective feedback are rated. The study found that the respondents rated none of the statements at a low level, and all assessments were positive, with the exception of one statement describing teachers' competence to provide objective feedback. The study determined that objective feedback increases the teacher's workload in some matters. In order to make it easier for teachers to provide objective feedback, they must have sufficient knowledge and digital resources, as well as comprehend that objective feedback is essential for the student. On the other hand, the teacher expects that students acknowledge the objectivity of the feedback. The study revealed that objective feedback is able to motivate students to learn and thus promote collabo-

ration between the teacher and students, as well as among students, which is an integral part of a successful educational process.

The second research question should identify the difference in students' views about objective feedback according to the study programme level and their employment. The study revealed that the assessments of master's study programme students are statistically significantly higher than bachelor's programme students related to the importance of objective feedback, the frequency of its use and the teachers' competence to provide it in the educational work. The study determined that those students who work in one of the general educational institutions rate the teachers' competence in providing objective feedback statistically significantly higher than those students who work in a profession outside the field of education or do not work at all.

The third research question was to identify the characteristics of objective feedback. The content analysis defined nine main characteristics of objective feedback that can be divided into three groups: teacher personality traits, teacher professionalism and teaching and learning outcomes. The teacher's professionalism is comprised of knowledge, skills, behaviour and competence. Teaching and learning outcomes are connected with criteria and set goals. On the other hand, honesty, equity and flexibility are the most relevant characteristics of a teacher's personality, which help to provide objective feedback to the student.

The study results provide an opportunity to identify and better understand the characteristics of objective feedback and how to reduce subjectivity in assessment.

Discussion

In the study, the respondents mentioned some words, such as consistent, goal-oriented, clear, comprehensible, concrete, correct, appropriate and neutral, to describe objective feedback. Grant Wiggins (2012) highlighted the fact that effective feedback should be goal-referenced, transparent, actionable, timely, ongoing, user-friendly and consistent. In addition, Sin Wang Chong and Tingjun Lin (2024) discovered that good feedback, which must maintain objectivity, is corrective, accurate, detailed, constructive, contains evidence-based comments, and provides specific and reasonable suggestions that give the opportunity to act. The study concluded that effective and good feedback has several characteristics in common with objective feedback. For example, it is goal-oriented, clear, consistent and correct.

The study determined that objective feedback can motivate students to learn and also promote collaboration between the teacher and students. Some researchers have discovered that students are also encouraged to learn by positive feedback (Ani, 2019; Câmpean et al., 2022), and feedback that motivates is the crucial determinant of student learning (Singh, 2019).

Also, the study found that objective feedback increases the teacher's workload in some matters. Researchers recommend implementing digital technologies to save teachers' time (Willis et al., 2021), as it can also improve the learning experience and help personalise feedback (Al-Bashir et al., 2016). It is true that using automated feedback tools also requires the appropriate competencies (Shum et al., 2023). In addition, it should pay attention that automated feedback tools must also include all factors that influence the characteristics of objective feedback.

The teacher's ability to maintain objectivity when providing feedback is still debatable. Only artificial intelligence is able to exclude the human factor and ensure absolute objectivity of feedback. Ayse Taskiran and Mujgan Yazici (Taskiran & Yazici, 2021) believe that artificial intelligence-based software can facilitate learning assessment by providing effective and immediate automated feedback. However, there is a lack of evidence that such feedback is student-friendly and contributes to their growth because, according to John Hattie and Helen Timpeley (2007), feedback involves both giving (teacher) and receiving (student), and there can be a gap between the two entities involved in the assessment.

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