

SELİN SETHİ

PERCEPTIONS OF INTERNATIONAL BACCALAUREATE DIPLOMA
PROGRAMME (IBDP) TEACHERS, GRADUATES AND STUDENTS ON
SUSTAINABLE FEEDBACK: A CASE STUDY IN AN IB WORLD SCHOOL

SELİN SETHİ

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To my beloved grandmother, Fatma Güzin Sarıca, whose loving care during my childhood shaped who I am today.



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Graduates and Students on Sustainable Feedback: A Case Study in an IB World
School

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Selin Sethi

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Selin Sethi

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I certify that I have read this thesis and have found that it is fully adequate, in scope
and in quality, as a thesis for the degree of Master of Arts in Curriculum &
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Assoc. Prof. Dr. Armağan Ateşkan (Advisor)

I certify that I have read this thesis and have found that it is fully adequate, in scope
and in quality, as a thesis for the degree of Master of Arts in Curriculum &
Instruction.

Asst. Prof. Dr. İlker Kalender (Examining Committee Member)

I certify that I have read this thesis and have found that it is fully adequate, in scope
and in quality, as a thesis for the degree of Master of Arts in Curriculum &
Instruction.

Asst. Prof. Dr. Jale Onur, İstanbul Maltepe University (Examining Committee
Member)

Approval of the Graduate School of Education

Prof. Dr. Ali Paşa Ayas (Director)

ABSTRACT

Perceptions of International Baccalaureate Diploma Programme (IBDP) Teachers, Graduates and Students on Sustainable Feedback: A Case Study in an IB World School

Selin Sethi

MA in Curriculum and Instruction

Advisor: Assoc. Prof. Dr. Armağan Ateşkan

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This single case study investigated the perceptions of teachers, graduates, and students on sustainable feedback in an International Baccalaureate Diploma Programme (IBDP) school through survey design. The data were collected through *Feedback for Learning Survey*, originally developed by Henderson, Boud, Molly, Dawson, Phillips, and Ryan (n.d.) for the research project Feedback for Learning: Closing the Assessment Loop and adapted to the IBDP school context. The survey explored participants' perceptions on the purpose of feedback, characteristics, and factors influencing its sustainability. The results of this single case study showed that IBDP teachers primarily recognized feedback as a tool for students' growth, reflection, and self-regulation while IBDP graduates and students primarily viewed feedback as a means of improving the quality of the student work. The findings also revealed that teachers know their feedback is effective when they clearly see its impact on learning outcomes and improvement between the first and subsequent tasks whereas graduates and students define effective feedback as detailed, specific, personalized, and criteria-referenced. Another major finding is that while sustainable feedback practices such as dialogic feedback, encouraging students to seek feedback and designing follow-up tasks to support future performance, are present across the school, their frequency and visibility differ according to stakeholders. Therefore, this research can contribute to the sustainable feedback literature by illustrating how feedback is perceived and enacted in an IBDP school setting. Furthermore, it offers implications for enhancing feedback literacy of stakeholders and for developing institutional strategies that support sustainable feedback practices.

Keywords: IBDP school, feedback, feedforward, effective feedback, sustainable assessment, sustainable feedback

ÖZET

Uluslararası Bakalorya Diploma Programı (IBDP) Öğretmenleri, Mezunları ve Öğrencilerinin Sürdürülebilir Geri Bildirim Hakkındaki Algıları: Bir IB Dünya Okulunda Vaka Çalışması

Selin Sethi

Eğitim Programları ve Öğretim Yüksek Lisans Programı

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Bu vaka çalışmasının amacı Uluslararası Bakalorya Diploma Programı (IBDP) uygulayan bir okulda IBDP öğretmenlerinin, mezunlarının ve öğrencilerinin sürdürülebilir geri bildirim algılarını tarama deseni yoluyla incelemektir. Veriler, Henderson, Boud, Molly, Dawson, Phillips, ve Ryan (t.y.) tarafından Öğrenme İçin Geri Bildirim: Değerlendirme Döngüsünü Kapatmak” araştırma projesi için geliştirilen ve IBDP okul bağlamına uyarlanan “Öğrenme İçin Geri Bildirim Anketi” aracılığıyla toplanmıştır. Bu anket ile katılımcıların geri bildirim amacı, etkili geri bildirim özellikleri, ve sürdürülebilirliğini etkileyen faktörler hakkındaki görüşleri araştırılmıştır. Çalışmanın sonuçları IBDP öğretmenlerinin geri bildirim öncelikli olarak öğrencileri geliştiren, yansıtma ve öz düzenleme yapmasını sağlayan bir unsur olarak gördüklerini ve mezunların ve öğrencilerin ise geri bildirim öncelikli amacının öğrenci ödevlerinin kalitesini geliştirmeye yarayan bir araç olarak gördüklerini ortaya koymuştur. Ayrıca, öğretmenlerin sağladıkları geri bildirim etkili olup olmadığını öğrenme çıktılarından ve ilk ve son ödev arasındaki gelişim ile anladıkları tespit edilmiştir. Mezunlar ve öğrenciler ise etkili geri bildirim daha spesifik, detaylı, bireyselleştirilmiş ve kriter odaklı olarak tanımlamıştır. Öğrencilerle diyalog kurarak geri bildirim vermek, onları geri bildirim istemeye teşvik ederek aktif konuma getirmek veya yapılandırıcı değerlendirmeyi gelişim odaklı planlamak gibi sürdürülebilir geri bildirim uygulamaları okulda mevcut olsa da, bunların ne derece görünür olduğu ve sıklıkla uygulandığı konusunda paydaşlar arasında farklı görüşler tespit edilmiştir. Bu araştırmanın bulguları bir IBDP okulunda geri bildirim nasıl algılandığını ve uygulandığını göstererek sürdürülebilir geri bildirim literatürüne katkı sunmaktadır. Ayrıca bu araştırma IBDP uygulayan okullarda ortak bir geri bildirim algısı ve kültürü oluşturulmasında ve bu doğrultuda kurumlarda sürdürülebilir geri bildirim uygulamalarının geliştirilmesinde etkili olabilir.

Anahtar kelimeler: Uluslararası Bakalorya Diploma Programı (IBDP) okulu , geri bildirim, ileri besleme, etkili geri bildirim, sürdürülebilir değerlendirme, sürdürülebilir geri bildirim

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CHAPTER 1: INTRODUCTION

Introduction

This study explores the concept of sustainable feedback within the International Baccalaureate Diploma Programme (IBDP) context. It draws on previous research into the significance of feedback, and characteristics of effective feedback and compares the old paradigm of effective feedback to a new one known as sustainable feedback. This study aims to investigate the perceptions of IBDP teachers, graduates, and students about sustainable feedback. This chapter includes information on the following: background, problem, purpose of the study, the research questions, and significance.

Background

Understanding nature and characteristics of formative assessment and implementing it effectively is key to improving student success and guiding teachers to shape and modify their teaching practices. In other words, formative assessment is regarded as feedback both for teachers and students (Black & William, 2010; International Baccalaureate Organization [IBO], 2021). Unlike high-stakes assessments that focus on cumulative results and ‘function more as snapshots of student progress’ (Heritage, 2007, p. 140), formative assessment is an ongoing process of collecting evidence from students’ performances, works to track their progress and judge whether they have desired skills (Sadler, 1989, p. 120). Black and William (1998) highlight that feedback is so crucial for learning and making progress with reference to research studies that have shown the futility of solely providing marks or grades without teacher comments. In fact, they suggest that without using

teacher feedback it is not possible to regard assessment as formative. Boud (2000), in his article, *Sustainable Assessment: Rethinking Assessment for the Learning Society* emphasizes the interconnectedness of summative and formative assessment in an educational setting and suggests that teachers need to consider their impact on both learning and learners. While prioritizing the outcomes of the learning process to make a judgment about the merit of these two types of assessments, teachers tend to ignore the power of feedback and its effect on learning. This is because they have given more attention to grades and certificates of achievements; “Grades or marks are a form of code familiar to teachers, but act as a barrier to student understanding” (Boud, 2000, p. 155).

Similarly, more recent research indicates the necessity of enhancing formative assessment and feedback practices. According to Cañadas (2021), assessment becomes truly formative when teachers design tasks systematically to follow student progress and provide feedback based on a predetermined assessment criteria shared with students. Only when teachers provide iterative feedback to indicate the level of progress, does assessment serve to facilitate learning (Cañadas, 2021). This, of course, raises the question of what makes effective feedback. Sadler (1989) points to three steps of characteristics of effective feedback taking place simultaneously:

The learner has to (a) possess a concept of the standard (or goal, or reference level) being aimed for, (b) compare the actual (or current) level of performance with the standard, and (c) engage in appropriate action which leads to some closure of the gap. (p. 121)

Likewise, Hattie and Timperley (2007) highlight a feedback model that addresses three major feedback questions: “Where am I going? (What are the

goals?), How am I going? (What progress is being made toward the goal?), and Where to next? (What activities need to be undertaken to make better progress?)” (p. 86). While their model significantly shaped the understanding of delivering effective feedback, subsequent research in this field has focused more on fostering long-term learning skills. Therefore, it is important to address the recent shift in literature for sustainable feedback that expands students’ capacity for self-regulated learning and prepares them for future tasks (Boud, 2000; Carless et al., 2011; Hounsell, 2007).

Given this theoretical background, it is essential to present how formative and summative assessment practices are defined within the International Baccalaureate (IB) framework because classroom assessments and formative feedback align with the pedagogical approaches of an IB education. Within the IB context, quality assessment is considered as relevant, meaningful, multi-modal, fair, inclusive, and authentic. These principles are important because assessment is not only confined to measuring learning, but they also align with real-life practices, cater for the needs of diverse learners, and foster higher-order cognitive skills. By placing emphasis on these principles, IB informs its educators that designing meaningful formative assessment and generating useful feedback to both students and teachers are core practices of Approaches to Teaching (ATT) (International Baccalaureate Organization [IBO], 2021). Therefore, the next section provides a more detailed review of IB’s educational philosophy.

International Baccalaureate and Diploma Programme

IB defines its mission as creating a more peaceful and better world by offering an educational framework that enables young people to navigate their way through complex circumstances and that equips them with the skills and knowledge

they need to act with integrity and responsibility to find solutions for future problems (IBO, 2019).

To achieve its mission, IB emphasizes the significance of developing physically, intellectually, emotionally, and ethically, with the help of a curriculum that nurtures intercultural understanding and critical thinking. Another characteristic of the IB curriculum framework is being “broad, balanced, conceptual and connected” (IBO, 2021, p. 5). IB programmes emphasize the significance of providing students with opportunities to connect what they learn in the class to real-life. IB was founded in 1968 and includes 4 different programs that can be implemented either as a continuum or separately. The first IB program, launched in 1968, was the Diploma Programme (DP), which is a rigorous two-year program for students aged 16-19. The DP curriculum includes courses that can be selected from six subject groups and three core elements: extended essay, creativity-activity-service, and theory of knowledge. As one of the core elements that showcase the rigor of the DP, Extended Essay (EE) is a 4000-word essay that a student is required to write on a subject of interest and develop independent research and academic writing skills.

Both requirements for the core elements and six diploma subjects could be very challenging for DP students and educators. While designing this rigorous curriculum, IB also reminds its educators that they need to consider six aspects of ATT and five aspects of Approaches to Learning (ATL) to support the academic development of their students in a way that aligns with IB’s curriculum goals. For the purposes of this study, it is necessary to refer to the six key pedagogical principles, known as ATT:

- based on inquiry: A strong emphasis is placed on students finding their information and constructing their understandings.
- focused on conceptual understanding: Concepts are explored to both deepen disciplinary understandings and to help students make connections and transfer learning to new contexts.
- developed in local and global contexts: Teaching uses real-life contexts and examples, and students are encouraged to process new information by connecting it to their own experiences and to the world around them.
- focused on effective teamwork and collaboration: This includes promoting teamwork and collaboration between students, and the collaborative relationship between teachers and students.
- designed to remove barriers to learning: Teaching is inclusive and values diversity. It affirms students' identities and aims to create learning opportunities that enable students to develop and pursue appropriate personal goals.
- informed by assessment: Assessment plays a crucial role in supporting, as well as measuring, learning. This approach also shows the importance of providing students with quality feedback (IBO, 2019, p. 6).

IBDP's Approaches to Teaching: Informed by Assessment and Feedforward

Having adapted the conceptual framework in the literature, IB recognizes that formative assessment needs to be a part of both the curriculum and the instruction. IB highlights that for designing a meaningful formative assessment, teachers need to pay attention to five key strategies:

- (1) clarify the intentions and the criteria of the task
- (2) support student learning through in-class discussions and observations

- (3) provide a roadmap about how students need to improve
- (4) encourage peer assessment and peer learning in class
- (5) activate student agency and self-regulated learning.

As one of the core elements of formative assessment, providing effective feedback is utterly important in supporting students' progress in internal assessment. IB defines effective feedback as timely and future-oriented to help students realize how to close the intended gap and suggests it is a dialogue between students and teachers where both parties respectfully listen to each other (IBO, 2021).

Additionally, Boud's sustainable assessment and feedback definition that encompasses the definitions for effective feedback are clearly promoted in IB's five strategies for designing meaningful formative assessment.

Problem Statement

“Providing feedback to students to assist in their learning is the bread and butter to teaching and learning, but it can become so commonplace that it gets ignored and becomes under-conceptualized.”

— Boud, 2000, p. 155

Even though a plethora of research in literature presents models for delivering effective feedback and supports the presence of feedback practices in classrooms, there is still a lack of satisfaction with the quality of feedback and its implementation (Boud & Dawson, 2021). “An interactive exchange in which interpretations are shared, meanings negotiated” (Carless, et al., 2011, p. 397) does not consistently occur to support student learning.

Several surveys conducted in secondary and tertiary education settings voice growing concerns regarding the quality of feedback. A study investigated secondary school students' conceptions of assessment and feedback in New Zealand schools

found that students need honest and concise feedback that focuses on how to bridge the gap between where they are and where they need to be” (Peterson & Irving, 2007). In another study conducted with 193 primary and secondary school students in New Zealand, Harris et al. (2014) analyzed survey responses and student drawings to explore their feedback perceptions and experiences of feedback. The study revealed that students mainly associated feedback with teacher-led practices such as written comments or grades despite New Zealand’s strong emphasis on student-centered assessment practices. While teacher-led formative feedback was dominant in this study, there was also evidence for accepting peer feedback and self-feedback as a legitimate and valid form of feedback, especially by primary students.

Another study conducted in Hong Kong with grade eleven students from three different schools measured students’ perceptions of feedback in School-Based Assessment (SBA) in English Language and investigated whether students responded to feedback as a feedforward (Tong, 2011). SBA is a new core component in Hong Kong, promoting assessment for learning, and is included in the Hong Kong University public entrance exam. The findings of this research suggest that students received limited feedback in scope, and it mainly focused on surface-level aspects such as pronunciation, grammar or vocabulary. Besides, feedback provided by their tutors lacked useful information about how to develop and organize ideas (Tong, 2011).

A separate exploratory case study conducted in an IB school in South Florida investigated the perceptions of teachers providing written feedback in the IB Diploma Programme and specific challenges encountered by these teachers while providing feedback (Earl, 2020). The study’s key findings revealed DP teachers’ experiences and challenges regarding the process of written feedback creation as well

as aspects of the feedback creation process as job demands. Even though teachers reported that they applied various strategies to provide feedback, large class sizes and the limited time allocated for planning limited the effectiveness of feedback. The study found that time commitment and workload were the two major challenges in providing quality feedback (Earl, 2020).

In Turkey, Karaca (2011) conducted a survey with 278 high school students in Eskişehir and Kütahya to determine the perceptions of students regarding the value, requirement, and quality of feedback in the teaching and learning process. The findings of the research showed that although students valued and believed feedback is required for quality education, tutors did not provide enough feedback and students ignored negative or critical feedback. Furthermore, the findings indicated that feedback is effective when it is clear, readable, and related to the learning outcomes and assessment criteria.

Based on the three successive national surveys conducted with first-year students in Australia, two out of five participants expressed their discontent with tutor feedback comments. (Krause, et.al, 2005). Research findings, primarily drawn from relatively small-scale qualitative studies in the UK focused on specific subject areas, suggest that while students value feedback, their experiences of receiving feedback were inconsistent (Hounsell, 2003).

Furthermore, there is a discrepancy between the opinions of teachers and students about the usefulness of feedback. Unlike teachers who advocate that the feedback messages are communicated transparently, students either view feedback comments as difficult to comprehend due to the 'expert' language of academic disciplines (Mutch, 2003; Weaver, 2006) or find them inadequate in terms of giving tacit explanations on what was wrong and how far the assignment could have been

improved (Higgins et al., 2001). Maclellan's (2001) survey conducted with 130 students and 80 lecturers at the University of Strathclyde to explore their perceptions of assessment reinforces these views. Out of 40 questions, four focused on feedback, and revealed significant differences between the views of students and lecturers. While most lecturers thought that their feedback was often detailed enough to support student learning, most students reported that feedback was partially helpful in terms of level of detail. Additionally, 30% of students stated that feedback never helped them understand. Although 63% of lecturers indicated that feedback frequently led to discussions with a tutor, only 2% of students agreed, with 50% of students saying feedback never prompted such discussions.

The recurrent feedback issues have led many scholars to rethink and reconceptualize feedback practices; thus, one has to bear in mind the evolving nature of feedback and whether educators are aware of the necessity to utilize new feedback practices. The new paradigm, sustainable feedback which is sometimes interchangeably used with effective feedback encapsulates the characteristics of effective feedback prevalent in literature such as its timeless, teacher and peer dialogue about learning, self-regulated learning, and the development of iterative dialogic feedback cycles (Nicol & Macfarlane Dick, 2006; Beaumont O'Doherty & Shannon, 2008). However, building upon Boud's notion of sustainable assessment, Hounsell (2011) introduces the notion of sustainable feedback:

- (1) provisioning 'high-value' feedback that is related to the tasks beyond current learning episodes; (2) repositioning the learner's role as a co-partner in generating, interpreting, and engaging with feedback; and (3) enhancing the congruence between guidance and feedback by encouraging constructive dialogue.

While IB encourages teachers to adopt this new paradigm of feedback practices by engaging in “dialogic interactions in which teachers are expected to ask their students to reason, justify, analyze and evaluate their learning” (IB, 2021), evidence suggests that feedback in IB schools, particularly in Turkey, do not always reflect these ideals. DP students in Turkey cannot always benefit from effective and timely feedback indicated as one of the major problems in Polat’s study (2019). This qualitative study conducted in a Turkish setting with 12 students enrolled in the IBDP and three teachers working at schools implementing the IBDP revealed a lack of satisfaction with the quality of feedback and teachers’ inadequacy in addressing students’ feedback needs.

Similarly, a qualitative study conducted by Schongalla (2024) in a private Turkish high school implementing the IB Diploma Programme aimed to examine how well teachers’ feedback practices enhance student learning. Having drawn upon Boud and Dawson’s feedback literacy competency framework and Hattie and Timperley’s feedback model, Schongalla had semi-structured interviews with thirteen IBDP teachers. The findings of this study demonstrate that teacher's feedback practices were affected by summative assessment pressure, transmission-based, and needed to shift from summative to formative.

IBDP is an academically rigorous two-year challenging programme; however, it becomes more challenging in the Turkish context as all grade 12 students in Türkiye are required to take the national university entrance examinations, the results of which determine students’ placement in universities. Thus, feedback practices are very crucial for fostering student progress in the IBDP. While some national or international studies have investigated feedback perceptions or practices in secondary and tertiary settings, relatively few of them have specifically explored

the concept of effective or sustainable feedback by including the perspectives of different stakeholders - graduates, students, and teachers - in a high school implementing IBDP. To address this gap, this case study explores the perceptions of IBDP teachers, graduates, and students regarding sustainable feedback in a foundation private high school implementing IBDP.

Purpose

The purpose of this single case study is to explore perceptions and practices of sustainable feedback in a high school context implementing the IBDP. Specifically, it investigates how IBDP teachers, May 2024 IBDP graduates, and 12th-grade IBDP students perceive sustainable feedback and what feedback strategies teachers use for IBDP style summative and formative assessment. This study aims to gain a more comprehensive understanding of how feedback is perceived across stakeholder groups to evaluate the needs of IBDP students effectively and develop a more structured and consistent feedback framework within the school.

Research Questions

The main research question for the study is: What are the perceptions of IBDP teachers, graduates and students on sustainable feedback in an IBDP school? To address this main question, the following six sub-research questions were generated:

1. What are the perceptions of IBDP teachers, graduates, and students about the purpose and role of feedback?
2. What makes effective feedback, according to teachers, graduates, and students?
3. To what extent are IBDP teachers, graduates, and students aware of sustainable feedback practices?

4. How do teachers describe their feedback practices and the rationale behind them?
5. To what extent do IBDP graduates and students find feedback useful and sustainable?
6. What are the challenges of providing effective feedback in an IBDP setting, and what can IBDP schools do to support more effective feedback?

Significance

Although several studies have investigated the perceptions of either teachers or students regarding feedback practices in high school or higher education context, this study addresses the gap between student expectations and teacher comments by exploring the perceptions of IBDP teachers, graduates, and students regarding sustainable feedback through a questionnaire survey. With the help of this study, it might be possible for the researcher to identify the issues with feedback for DP assignments and the reasons behind those issues. The greatest advantage of this study could be to reconstruct formative assessment practices in alignment with the new paradigm of sustainable assessment which refers to “knowledge, skills, and predispositions required to underpin life-long learning activities” (Boud, 2000, p. 151).

This study, furthermore, enables IBDP teachers to reflect upon their feedback practices and to evaluate whether the feedback culture in the school aligns with the ATT in the IBDP. The survey conducted with IBDP teachers, graduates, and students is expected to help the IBDP coordinator, the school’s pedagogical leader, identify underlying causes of ongoing issues with feedback and take steps towards standardizing IBDP teachers’ approach to formative feedback. In addition to this, this study can build a foundation for developing professional development sessions

aiming to foster a culture of feedback within the school that aligns with the guiding principles of formative assessment in the IBDP.

Definition of Key Terms

Assessment: Assessment is an integral part of teaching and learning that requires systematic collection, review, and use of both quantitative and qualitative data to enhance student learning and progress. The three core questions at the heart of the assessment are:

1. What are our goals for student learning?
2. How far does our students' performance match these goals?
3. How can we improve learning outcomes so that students can achieve these goals? (Cal State Fullerton, n.d.).

Summative Assessment: Summative assessment is the evaluation of a student's learning progress and academic achievement at the end of a defined instructional period such as course, semester, or academic year (Ed Glossary, 2014).

Formative Assessment: Formative assessment encompasses various methods teachers use to evaluate students' understanding, learning needs, and progress during an ongoing lesson, unit, or course. Its purpose is to pinpoint areas where students face challenges—whether with concepts, skills, or standards—so that teachers can adjust their instruction, techniques, or support accordingly (Ed Glossary, 2014).

Feedback: Information provided by the agent to the students to close the gap between the current and the desired level (Ramaprasad, 1983; Hattie & Timperley, 2007).

Feedforward: It is a fundamental principle of quality feedback that suggests strategies for student progress and guides their next steps of learning. Feedforward focuses on future-oriented solutions (Dulfer & Akhlaghi Koopaei, 2021).

Self-Regulated Learning: Self-regulated learning refers to a process of learning in which students could actively control their learning by setting goals, monitoring their progress, and adjusting strategies without the need of external sources like a parent or teacher (Pintrich, 1995; Zimmerman, 2002).

Sustainable feedback: It is the new paradigm of feedback advocating the idea that feedback is not only given but also sought. Sustainable feedback is defined as ‘high-value’ feedback whose impact exceeds the immediate task and increases student agency by allowing the students to generate, interpret, and engage with the feedback process (Hounsell, 2007). It includes dialogic processes and activities that not only help students comprehend the current task but also enhance their self-regulation for future performances (Carless et al., 2011).

Dialogic Feedback: It is a process of interactive exchanges between teachers and students when “they share interpretations, negotiate meanings, and clarify expectations” (Carless et al., 2011, p. 397).

CHAPTER 2: LITERATURE REVIEW

Introduction

In this case study, the researcher aims to discover the perceptions of IB Diploma Programme teachers, graduates and students about sustainable feedback. The literature presents us with a wide range of studies about why feedback is a crucial component of formative assessment, how effective feedback should be given, and in what ways educators can make feedback more sustainable to activate student agency more in seeking feedback and develop self-monitoring skills to become life-long learners. With this understanding of feedback evolving towards a more sustainable approach, teachers are expected to encourage students to ask for feedback from their peers and teachers in a series of dialogues which will make them independent learners. While several studies have explored the perceptions of students and lecturers about sustainable feedback in a university context, there is no similar research comparing the perceptions of different stakeholders such as teachers, graduates and students within the context of the IB Diploma Programme. This is how I intend to contribute to the literature with my study.

In this chapter, first, I address the viewpoints on why formative assessment is not sufficiently prioritized. Then, I provide definitions of feedback and explain why it is an important component of formative assessment. Next, I present the major problems with feedback highlighted in the literature. Stating these problems matters as they have persistently indicated student dissatisfaction with feedback practices. I further outline the characteristics of effective feedback delivery by presenting some feedback models. In addition, I include the transformative approach to developing

sustainable feedback practices and summarize the findings of several studies investigating teachers' and students' perceptions of effective and sustainable feedback.

Formative Assessment- The Necessity of a New Approach to Formative Assessment

Assessment is defined as determining “appropriate standards and criteria for making a judgment about the quality” (Boud, 2000) and we categorize all actions undertaken within the assessment under two umbrella terms: formative and summative assessment. Both summative and formative assessment have different influences on learning. While summative assessment influences learning by providing a “*de facto* agenda” and strictly shaping what students need to focus on and learn, formative assessment has a more covert influence; it is a “tuning mechanism” guiding students about what to learn and how to learn (Boud, 2000). Formative assessment refers to “activities undertaken by teachers - and by their students in assessing themselves - that provide information to be used as feedback to modify teaching and learning activities” (Black & William, 2010). In other words, formative assessment includes a wide range of tools such as homework, self-evaluations, and reflections on performance that help teachers diagnose the difficulties students experience and adjust teaching strategies to maximize learning outcomes (Dixon & Worrell, 2016). Unlike summative assessments that aim to determine students’ level of proficiency with high-stakes exams, formative assessment emphasizes the learning process and how it can enhance students’ performance during their learning journey (Dixon & Worrell, 2016). This process activates students to recognize, evaluate, and reflect on their learning as well as that of their peers (Bell & Cowie, 2001).

Although summative assessment and formative assessment are closely intertwined and not separable in real-life practices, each assessment type needs to be evaluated in terms of its impact on learning and learners (Boud, 2000). The extensive literature review by Black and William shows that enhancing formative assessment practices has a considerable influence in increasing student performance to a higher level. It is possible to raise the standards, especially for low achievers by strengthening the strategies for formative assessment (Black & William, 2010). The discussion about placing more emphasis on formative assessment and valuing the process of learning where students engage in a dialogue with their peers and teachers is not new; however, educators' and parents' obsession with high-stakes exams, grading, and certification overshadows the potential of formative assessment. This shows that the shift towards constructive approaches to learning has not resulted in constructivist approaches to assessment. Boud (2000) criticizes current assessment practices, specifically summative assessment due to its insufficiency to shape a learner society by placing too much power on "control mechanisms" such as educational institutions and teachers.

Similarly, Blake and William (2004) report some difficulties with assessment by saying that current assessment practices in education often promote surface-level learning, with teachers using tests that encourage memorization over deep understanding, even when their stated goal is to foster comprehension. Moreover, the overemphasis on grading and ranking creates a competitive environment rather than one focused on personal growth. This approach negatively impacts students, especially those who struggle, as they may begin to believe they lack the ability to learn. Additionally, teachers' feedback often serves social and administrative

functions more than learning needs, leaving teachers with limited insight into their students' specific areas for improvement (Boud, 2000).

If the purpose of the formative assessment is to equip students with lifelong learning skills, then as educators we need to develop a wider understanding of learning and assessment rather than merely focusing on the course-related goals (Boud, 2000). This shift in how teachers should approach formative assessment is expected to be the catalyst to embrace a similar approach to how we deliver feedback.

Before focusing on studies conducted on sustainable feedback practices and how teachers can apply this strategy, it is important to review the evolving definitions of feedback over time and refer to the studies that prove its significance in assessment for learning.

Feedback -A Paradigm Shift in the Literature About the Definition of Feedback

There are several definitions of feedback in literature and the one that is repetitively addressed also defines two sequential actions at the heart of formative assessment. The first one is the act of the learner realizing a gap between the desired goal and his or her current level of performance. The second one is the act of closing this gap by the learner to reach the level of the desired goal (Ramaprasad, 1983). Another major definition by Sadler (1989) is that feedback is “information about how successfully something has been or is being done”. According to Sadler (1989), to point out how successful a performance is, there has to be a competent teacher possessing the knowledge of relevant skills, distinguishing poor performance from a fine one, and modeling that fine performance to close the feedback loop. This, however, does not only confine the purpose of the feedback to close the gap because providing information about what is missing does not necessarily mean the outcome

will change or the performance will enhance to close the indicated gap. To be able to close this gap students should have the same quality concept as their teachers to judge the quality of their work and regulate their learning experiences while working on their assignments (Sadler, 1989). Some other cognitive strategies such as confirming whether students are correct or incorrect or leading students to the right direction could also be used to close the feedback loop (Hattie & Timperley, 2007). These cognitive strategies are echoed in another feedback definition by Winnie and Butler, “feedback is information with which a learner can confirm, add to, overwrite, tube or restructure information in memory, whether that information is domain knowledge, meta-cognitive knowledge, beliefs about self and tasks, or cognitive tactics and strategies” (as cited in Hattie & Timperley, 2007, p.82). Furthermore, teachers are not the single agents supporting students with these cognitive strategies; parents, peers, or books could provide feedback to devise alternative strategies or offer clarification about a concept (Hattie & Timperley, 2007).

Over decades, the definition of feedback has also changed especially in the early 2010s, suggesting that feedback is not merely given but actively sought. In other words, based on this new paradigm students are expected to be more active in the feedback process. This emerging definition of feedback aligns with the mission of IB Diploma Programme to foster life-long learning. If feedback has been recently regarded as an ongoing process, then teachers and students must be aware of how this process operates and what they need to do to be involved in this process actively (Boud & Dawson, 2021).

The Power of Feedback: How Effective Is Feedback?

“Just as a thermostat adjusts room temperature, effective feedback helps maintain a supportive environment for learning.” (William, 2016)

Progress in learning depends on five factors: providing effective feedback, increasing student involvement, adjusting approaches to teaching based on assessment outcomes, and being aware of the impact of assessment on self-esteem and motivation (Black, Harrison, Lee, Marshall, & William, 2004). When provided with appropriate and valid comments, feedback could motivate students to enhance their performance by giving them a sense of clarity (Brown & Knight, 1994). Having defined effective feedback as one of the factors contributing to student achievement, it is worth reviewing several major studies in literature that underscore the power of feedback.

Hattie and Timperley (2007) compared the influence of feedback to the other influential factors on student achievement by reporting about 500 meta-analyses including 450.000 effect sizes from 180.000 studies. At least 12 of these meta-analyses referred to specific feedback and included 196 studies with 6.972 effect sizes. The average effect size, 0.79, was among the top 5 to 10 influential factors such as direct instruction (0.93), reciprocal teaching (0.86), and students' prior cognitive ability (0.71) in comparison with some other influences such as socioeconomic influences (0.44), homework (0.41), the use of calculators (0.24), and reducing class size (0.12). This clearly shows that feedback is a powerful tool for helping students to make sense of their learning experience. However, there are so many features of feedback that could minimize or maximize its effectiveness. Studies conducted on feedback types, how feedback is delivered, the timing of feedback, and

its complexity and length present interesting findings and define the conditions for effective feedback.

Types and Features of Feedback

Apart from defining feedback as a powerful tool, Hattie and Timperley's meta-analyses refer to other studies that define what types of feedback are effective or ineffective. For example, studies with higher effect sizes include students who received specific feedback about the task and how to do it more effectively whereas lower effect sizes were attributed to praise, rewards, and punishment. Moreover, more than 7000 studies and 13.370 effect sizes illustrated that the type of feedback that provides cues and reinforcement as well as relating to a goal is the most beneficial for students (Hattie & Timperley, 2007). Deci et al.'s (1999) meta-analysis of the effects of feedback on motivation showed a negative correlation between extrinsic rewards and task performance (-0.34). According to Deci et al. (1999), tangible rewards such as stickers should not be considered feedback at all as they "do not provide a means of expressing appreciation for doing a task or doing it well because they are not linked to the task" (p. 654) and they hinder students from taking responsibility and self-regulating themselves.

A more systematic meta-analysis on the effects of various feedback types conducted by Kluger and DeNisi (1996) included 13 studies with an estimated effect size of 470 based on 12,652 participants and 23, 633 observations. Their meta-analysis reveals that feedback is most influential when it focuses on the correct response instead of the incorrect one and indicates progress from previous attempts. Furthermore, feedback has the most impact when assignments are challenging, less complex, and have a specific goal. In another extensive literature review giving a better insight of the features and functions of feedback, Schute (2008) focuses on

features of formative feedback and defines it “as information communicated to the learner that is intended to modify his or her thinking or behavior for the purpose of improving learning”. There are two crucial features of formative feedback: verification and elaboration (Kulhavy & Stock, 1989). The first one is simple judgement of whether an answer is correct or incorrect that could be done explicitly or implicitly while the latter is giving information and providing cues to learners to lead them to the correct answer. Feedback elaboration has several aspects such as addressing the topic, addressing the response, discussing particular errors, providing successful examples and giving careful guidance. These two features are essential for delivering effective feedback (Schute, 2008).

Having summarized some meta-analyses in the field that display different feedback effects and some reviews that focus on types of feedback, I intend to address some other conditions that change the influence of feedback in the next section.

Feedback Complexity and Length

Feedback complexity and length are two factors that determine whether specific feedback is influential. Too long and too complicated feedback can dilute the message or distract students from paying attention to it. There are some studies that showed either no effect or negative effects of complex feedback. A meta-analysis of 15 experimental studies on feedback in computer-based instruction and programmed instruction showed that the amount of information is not greatly linked with feedback effects, yet feedback effects in computer-based instruction are significantly larger than in programmed instruction (Schimmel, 1983).

Kulhavy et al. (1985) conducted a study with a group of college undergraduates to investigate the issue of feedback complexity. Undergraduates who

were asked to read a 2,400-word passage and answer 16 multiple-choice questions about it, received one of four types of feedback increasing in complexity. The simple feedback was correct answer feedback and complex feedback was a combination of verification, correct answer, and an explanation about why the incorrect answer was wrong with guidance to the relevant section in the passage. This study showed that feedback complexity was inversely related to the ability to correct the errors and learning efficiency. Furthermore, complex feedback has a minor impact on students' ability to correct their mistakes, and the least complex feedback was more beneficial in terms of efficiency and learning outcomes than complex feedback (Kulhavy et al., 1985).

The inconclusive results on no effect or negative effect of feedback complexity shows that there are some other dynamics such as directing students towards their learning goals.

Feedback Timing

Like the studies about feedback complexity, studies on the timing of the feedback in literature, specifically on delayed and immediate feedback, yield conflicting results. Immediate feedback may be defined as the one given to the student right after a student has submitted an assignment or responded to a quiz or an exam while delayed feedback usually occurs minutes, hours, weeks or longer after the completion of an assignment or exam. The effects of the feedback timing variable indicate mixed results irrespective of the unit of time. Despite the inconsistent main effect of timing, research shows some interactions between the timing of feedback and learning (Schute, 2008).

The most renowned view on the support for delayed feedback is *interference-preservation hypothesis* which asserts that when feedback is delayed, students are

more likely to forget their initial mistakes, so those mistakes do not interfere with learning and remembering the correct answers (Kulhavy & Anderson, *as cited in Schute*, 2008). This is also referred to as delay-retention effect (DRE). Schroth (1992) investigated the effects of delayed feedback and the type of verbal feedback on transfer with a concept-formation task in an experiment where four conditions of delayed feedback were: 0 s, 10 s, 20 s, and 30 s, and verbal feedback conditions included three categories such as verification feedback, correct-nothing feedback (no feedback was given if student answered correctly) and nothing-incorrect feedback (no feedback was given if student answered incorrectly). As a result of testing all participants seven days after an initial learning trial, it was found that delayed feedback enhanced transfer even though it hindered the rate of initial learning.

Supporters of immediate feedback claim that the sooner the correct information is given, the easier the retention will be. Corbett and Anderson (2001) used immediate feedback to explore the differential timing effects on student learning in their ACT Programming Tutor. Students in this study could prefer over four types of feedback conditions:

- (a) Immediate feedback and immediate error correction
- (b) Immediate error flagging and student control of error correction
- (c) Feedback on demand student control of error correction
- (d) No-tutor condition and no step-by-step problem-solving support

Students who received immediate feedback completed their tasks the quickest, followed by those in the error-flagging, demand-feedback, and no-tutor groups. Additionally, students who were in the three tutor supported groups performed similarly on criterion tests (Corbett & Anderson, 2001). This study showed that immediate error feedback supported immediate learning.

The findings from the aforementioned studies by Schroth (1992) and Corbett and Anderson (2001) indicate that delayed feedback could be prioritized for promoting transfer of learning, specifically in concept-formation tasks, whereas immediate feedback is more useful in the short run and for procedural skills. Schmidt, Young, Swinnen, and Shapiro (1989) conducted a study on a simple timing task where verification feedback was given after different numbers of trials such as 1, 5, 10, or 15. Although all students improved during the practice, those who received feedback with longer delays performed worse than those with more frequent feedback. In a later test, however, they found that while longer delays caused poorer performance, they resulted in better retention compared to shorter delays.

In their meta-analysis of 53 studies of immediate and delayed feedback, Kulik and Kulik (1988) found that some delays are useful at the feedback at task level (0.36), but at the process level such as engaging in ongoing classroom activities, immediate feedback is more effective (0.28). Another study on the effects of immediate feedback by Clariana, Wagner, and Royer Murphy (2000) demonstrated that the effectiveness of delayed versus immediate feedback varied based on the difficulty of the items, the task or a test. These researchers suggested that delayed feedback gives better chance to process the task with difficult items, whereas delayed feedback is unwanted and unnecessary with easy items that do not require this type of processing.

Research about the impact of feedback timing on learning and performance presents inconsistent results. A possible approach to resolve this inconsistency could be to take into consideration the positive and negative learning effects of both immediate feedback and delayed feedback. Immediate feedback, for instance, can encourage students to practice and find the connections between actions and

outcomes; yet it may make students too dependent on information which is not present during transformation. Delayed feedback can enhance cognitive and metacognitive processing; but it might be a frustrating experience for struggling or less motivated students and jeopardize their learning progress (Schute, 2008).

What Is Effective Feedback? The Old Versus the New Paradigm

Although findings from several studies in the literature on feedback delivery, length, and timing yield diverging results, these studies contributed significantly to the development of effective feedback practices. To answer what effective feedback is, one must consider the changing perspectives of feedback delivery in education. In recent years, several studies have reframed the process of providing effective feedback. The new paradigm, which could also be defined as sustainable feedback does not place the entire responsibility on the teacher as the sole feedback provider. Instead, it aims to define why and how students should proactively seek feedback and make sense of feedback comments for self-evaluation and improvement (Winstone & Carless, 2019). Before listing the characteristics of effective feedback and then sustainable one as the new paradigm of feedback, the former feedback paradigm is addressed as the sustainable feedback is an expansion upon the old one.

Models for Effective Feedback

Feedback models have evolved as the researchers have designed their feedback typology by considering different educational theories and focusing on different variables such as the timing of feedback, the provider of feedback, and the student's level in comparison to the desired level to attain goals. Although there are several feedback designs, it is more feasible for the scope of this thesis to give an overall view of the former models and explore the ones that have been referred to in the literature extensively. The two feedback models that I will explore in more detail

will help me justify the transition from the old feedback paradigm to the new one.

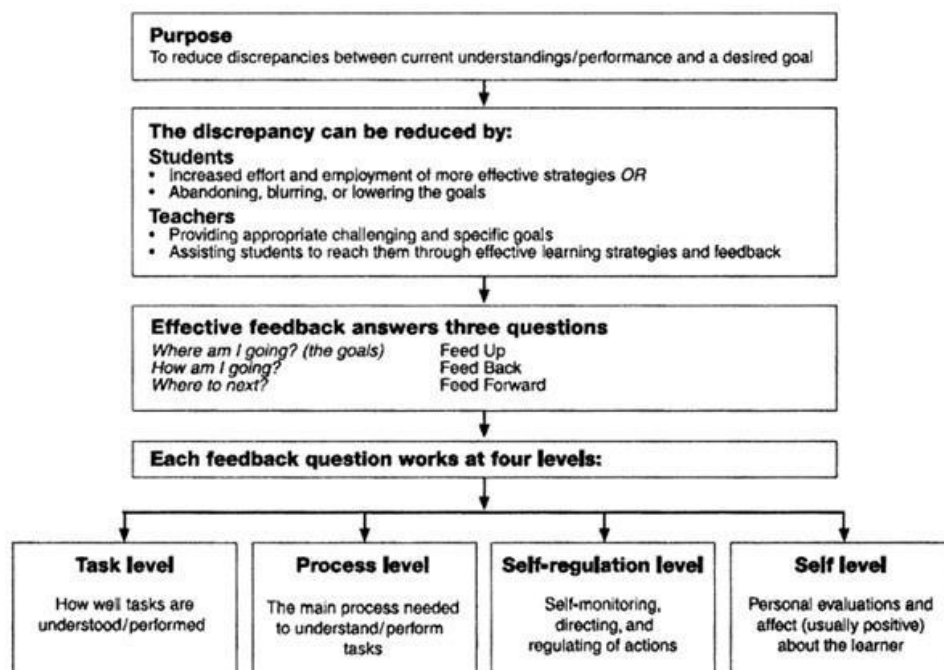
Furthermore, these two models also define strong justification for what an effective feedback model is and bring up strategies for applying the principles.

Hattie and Timperley's Feedback Model

Earlier, Sadler (1989) pointed out three conditions for the feedback framework he proposed for students: a) having a concept of the standard, a goal or a reference point students could aim for, (b) closing the feedback loop, and (c) being a part of relevant action to replace the actual level of performance with the desired level of performance. In their feedback model (Figure 2), Hattie and Timperley (2007) similarly claim that the purpose of the feedback is to lessen the discrepancy between the current understanding and performance and a goal; however, they relate their feedback framework to four different levels. Based on their framework, both teachers and students should ask three major questions for effective feedback: “Where am I going? (What are the goals?), How am I going? (What progress is made toward the goal?), and Where to next? (What activities need to be undertaken to make better progress?)”. In other words, these three major questions define feed-up, feedback, and feed-forward as see below in Figure 1.

Figure 1

A Model of Feedback to Enhance Learning. (Hattie & Timperley, 2007, p. 87)



The first question in this model corresponds to feed-up and requires the teacher to guide the student on how to attain specific learning goals. The two dimensions of goals, challenges and commitment are motivating factors for seeking feedback. Challenging goals not only inform students about what kind of performance is to be achieved so that they can adjust and evaluate their actions and efforts accordingly but also enable both students and teachers to set further appropriate goals for an ongoing learning experience (Locke & Latham, 1990). Without clearly defined goals, teachers cannot help their students understand the need to reduce the gap between current learning and intended one.

The second question in this feedback model corresponds to feedback. This dimension becomes powerful when a teacher provides information about the level of progress based on an established standard or a previous performance as well as how to proceed. The third dimension corresponds to feedforward informing students

about the action they must take to attain learning goals. This is the key dimension of this model as answering the question, “Where to next?” encourages students to undertake bigger responsibilities such as enhancing self-regulation in the presence of challenges and developing deeper understanding (Hattie & Timperley, 2007).

What is distinguishing in their feedback framework is a detailed analysis of how the three feedback questions listed above function at four major levels: task level (FT), process level (FP), self-regulation level (FR), and self-level (FS).

Feedback at the task level is the most common one and guides students toward different or correct answers whereas feedback at the process level is more related to the learning processes that require comprehension and task completion. The third level, feedback focusing on the self-regulation level, aims to develop skills for self-evaluation and boost confidence for completing the task. Feedback that is directed to the “self” is more personal and includes statements like “You are a great student”, “That’s an intelligent response, well done.” (Hattie & Timperley, 2007). This last one is the least desirable as it is often unrelated to the performance.

While providing an insightful comparison of feedback at these four levels, Hattie and Timperley (2007) also highlight the conditions that render feedback effective or ineffective at these four levels by addressing the findings of several studies in this field. FT, also known as corrective feedback, means providing feedback to students about how well they have achieved or performed a task. FT becomes more effective when accompanied by the teacher’s clarification of “faulty interpretations” rather than simply pointing out the lack of information. However, too much feedback at the task level might result in focusing on the immediate goal rather than developing cognitive strategies to reach that goal. FT is most useful when it

enables learners to discard incorrect hypotheses and guides them to look for strategies.

FP is mostly about relations in the environment, relations perceived by the person, and relations between the environment and the person's perceptions. FP is linked with student's strategies for error detection which naturally involve self-feedback. FP underlying a task can also function like a cueing mechanism and encourages students to look for more effective task strategies (Hattie & Timperley, 2007). FP is more effective than FT for enhancing deeper learning as "using goal processing feedback with the goal setting appears to be a direct and powerful way of shaping an individual's task strategy and using outcome feedback is a much less efficient way of shaping strategy" (Earley et al., 1990).

Feedback about self-regulation is about how students monitor, direct, and regulate actions to reach their learning goal. FR has at least 6 indicators that increase the effectiveness of feedback: capability for self-feedback and self-assess, enthusiasm for finding the effort to seek and deal with feedback information, the degree of confidence and certainty in the correctness of the response, the attributions about success and failure, and the level of proficiency at seeking feedback.

Having shown how feedback functions at four different levels in their framework, Hattie and Timperley highlight that feedback about the process and feedback about self-regulation are the most influential ones as they stimulate cognitive strategies for learning. They argue that feedback at the task level is useful when the information provided leads to improving strategies and enhancing self-regulation whereas feedback about the self as a person is the least effective one.

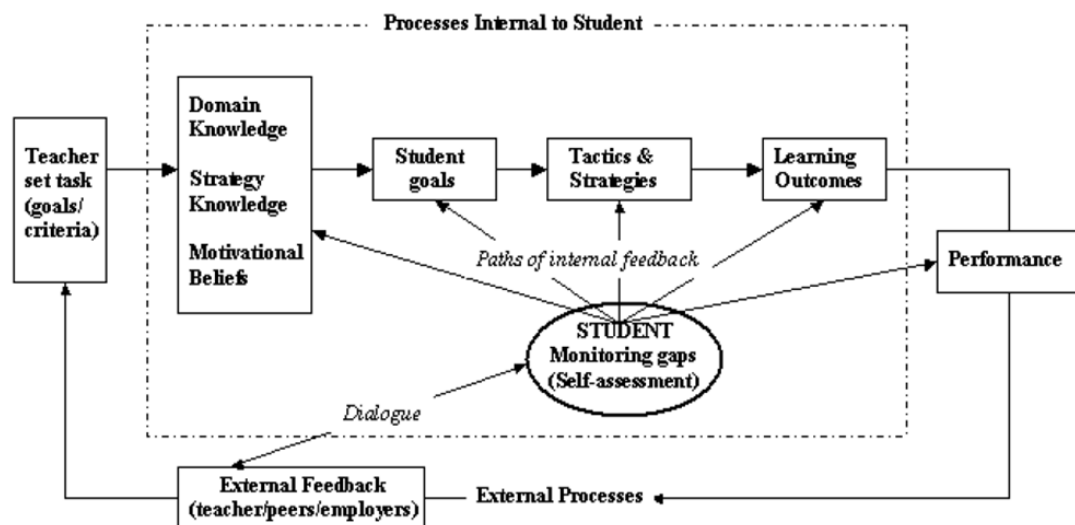
Seven Principles for Effective Feedback by Nicol and MacFarlane-Dick

Although there is an emphasis on the need to embrace a constructivist approach in delivering feedback, teachers have not fully embraced it yet as they mostly believe that their role is confined to transmitting feedback messages. However, this should not be the only focus for teachers. Based on the studies they reviewed on formative assessment, Nicol and MacFarlane-Dick (2006) came up with seven characteristics of effective feedback (see Figure 2):

1. Facilitates the development of self-assessment (reflection) in learning.
2. Encourages teacher and peer dialogue around learning.
3. Helps clarify what good performance is (goals, criteria, expected standards).
4. Provides opportunities to close the gap between current and desired performance.
5. Delivers high-quality information to students about their learning.
6. Encourages positive motivational beliefs and self-esteem.
7. Provides information to teachers that can be used to help shape the teaching (p.3).

Figure 2

A Model of Formative Assessment and Feedback. (Nicol & MacFarlane-Dick, 2006, p.2).



The framework in Figure 2, which outlines seven principles of quality feedback, is well structured and thoroughly justified. The rationale is supported by the findings from significant studies that highlight concepts such as self-evaluation, peer assessment, and self-esteem - key elements that contribute to sustainable feedback.

To justify the first principle, Nicol and MacFarlane-Dick (2006) suggest that teachers need to encourage students to self-assess their learning process or their progress by addressing Sadler's (1989) argument; students must have the same evaluative perspective that their teachers have to increase their performance to the expected level. To have this evaluative perspective and develop self-regulation, the process of monitoring gaps, and setting internal tasks and goals, teachers should more purposefully and meticulously design activities for self-monitoring and goal-evaluation.

In the second principle they include, Nicol and MacFarlane-Dick (2006) emphasize the role of teacher and peer dialogue in feedback delivery which helps

students to reassess what they know and believe. This encourages students to engage in a meaningful conversation with an external source, their teachers so that they can receive information instantly and discuss with their teachers to better understand expectations, correct faulty misinterpretations, and seek immediate solutions to challenges. Another external source of feedback is peers who can explain what is learnt in a salient way. Peer feedback can motivate students to persist and regard their peer's work as a "yardstick to measure their performance against" (Nicole & Boyle, 2003 in Nicol, D., & MacFarlane-Dick, 2006). Thus, effective feedback dialogue can be integrated into class activities such as one-minute papers, peer discussions of feedback, and identifying useful feedback comments based on criteria and group projects.

The third principle in this framework justifies the importance of goals. If students' conceptions of goals, criteria, and assessment standards do not meet with those determined by their teachers, then they cannot make use of the feedback message. Weak or incorrect conceptions of criteria and assessment standards will also diminish the power of feedback (Hounsell, 1997). To prevent this and help students better grasp the goals and the task teachers could provide better definitions for requirements by preparing carefully written criteria sheets, giving sample assignments with attached comments, and discussing or even planning the nature of the tasks, assessment standards, and the criteria with students (Nicol & MacFarlane-Dick, 2006).

The fourth principle in the model questions whether feedback changes students' behavior. If feedback does not result in any change or improvement, then it is a missed opportunity (Black & William, 1998; Sadler, 1989). To close the gap, teachers need to ask whether their feedback results in a change in students' behavior

especially during the learning process (Yorke, 2003). To help students turn feedback into action, teachers could try several strategies such as increasing the number of re-submissions, modeling the expected standard, jotting down some action points along with their regular feedback comments, and allowing students to come up with their own action points (Nicol & MacFarlane-Dick, 2006).

The fifth principle defines good quality external feedback as information “that helps students troubleshoot their performance and take action to close the gap between the intent and effect” (Nicol & MacFarlane-Dick, 2006). As seen in Figure 2.2 feedback is shaped by contextual factors in the environment and each of these factors could be improved. Strategies that increase the quality of feedback drawn from research include:

1. Giving feedback based on predefined criteria, paying particular attention to the number of criteria.
2. Providing feedback soon after a submission.
3. Providing corrective advice, not just information on strengths and weaknesses.
4. Limiting the amount of feedback so that it is used.
5. Prioritizing areas for improvement.
6. Providing online tests so that feedback can be accessed anytime, anywhere, and as many times as students wish.
7. Focusing on students with the greatest difficulties (Nicol & MacFarlane-Dick, 2006, p.6).

The sixth principle is a question that teachers need to raise: how can we motivate students to learn more and to set goals with our feedback? The importance students attach to motivational beliefs and self-esteem is one of the key aspects of the

model presented in Figure 2. In this model, students develop their motivation by evaluating the teaching, learning, and assessment environment. This evaluation shapes the personal and academic goals they set and their level of commitment to achieving these goals. To apply this sixth principle, teachers could provide grades after students receive and respond to written feedback, allow time for students to rewrite any selected work as well as give them another chance to resubmit their works and drafts (Nicol & MacFarlane-Dick, 2006).

The seventh principle in Nicol and MacFarlane-Dick's (2006) conceptual model reminds teachers that "the act of assessing influences the assessor as well as the student (Yorke, 2003). Good quality feedback contributes to the quality of teaching practices and tailors teaching based on the needs of their learners. Thus, teachers need accurate data on student progress and must actively review and reflect on this information to address learning gaps. In the conceptual model (Figure 2), learning outcomes are transformed into observable performances through assessment tasks, classroom questioning, and observation. This process helps teachers identify subject-specific challenges, such as conceptual misunderstandings, and difficulties with study methods, enabling targeted support.

As for the seventh principal proposed in this model, teachers can distribute one-minute assessment tasks submitted anonymously at the end of lessons, ask students to identify challenges they faced when they turn in a work and allow them to request the type of feedback they wish to have when they submit an assignment (Nicol & MacFarlane-Dick, 2006).

Towards More Sustainable Feedback

Students can only achieve a learning goal if they understand the goal, take ownership of it, and can assess their progress (Black & William, 2010; Sadler, 1989).

This is the most precise statement that is the essence of the new paradigm for formative assessment and feedback. Sustainable feedback promotes the idea that feedback is both a central element of the curriculum and a process rather than merely a product or outcome (Carless et.al, 2011). It also places learners at the center of seeking feedback and setting new learning goals after receiving feedback. While its foundations have long been present in the formative assessment literature, it has not been fully put into practice. According to Boud (2000), this is a neglected area; therefore, we need to anchor student involvement into assessment to transfer our formative assessment and its central component feedback into a sustainable practice. His concept of sustainable assessment is balanced: it is possible to fulfill the current assessment requirements while ensuring that students develop knowledge, skills, and attitudes essential for lifelong learning.

Feedback is beneficial when provided promptly and encourages students to take meaningful action. However, to direct feedback practices to a more sustainable path, we cannot consider feedback as one-way transmission and confine it to conventional practices such as providing written feedback on the first or final version of assignments, verbal comments in individual or group studies, or giving feedback collectively in class (Carless et.al, 2011).

The next section therefore aims to explore how this new feedback paradigm has emerged and present models that advocate the necessity of directing feedback towards a sustainable path.

Hounsell's Three Strands of Sustainable Feedback

Building on Boud's concept of sustainable assessment, Hounsell promotes three strands for sustainable feedback to reverse the "downward spiral" in feedback beliefs and practices in higher education. These three pathways are related to

delivering high-value feedback, changing the role of students in feedback, and improving the alignment between guidance and feedback (Hounsell, 2007).

Hounsell thinks it is fruitful to distinguish between ‘low-value’ feedback and ‘high-value’ to understand the impact of feedback on student learning. How far is feedback effective at that point to ensure their ongoing academic studies and development in the long run? Based on this perspective, the longer the impact of feedback lasts, the more ‘sustainable’ it becomes. Under this first strand, Hounsell makes suggestions for high-value feedback. Evaluating nature and comments on teachers’ feedback on the returned work is one way to discern if feedback is of high value. However, increasing the quality of student work does not simply depend on the transparency of feedback comments. It also is related to the “seasonal nature of feedback” (Hounsell, 2007). Feedback has greater longevity and helps students grasp core components when a particular assignment or assessment is repeated instead of being piled up at the end of a semester. A study on an undergraduate history course indeed shows that ongoing support by teachers to build the necessary skills progressively for writing an essay is very beneficial (Mc Creery, 2005, *as cited in Hounsell, 2007*). A promising strategy is to center written coursework on the ‘patchwork text’ integrating tasks with recursive comments and opportunities for revision (Scoggins & Winter, 1999).

The second route to sustainable feedback cannot take place without transforming the role of students in the feedback process. This transformation requires adopting various roles such as “targeting, generating and interpreting feedback” as well as engaging in a reflective and collaborative dialogue with teachers (Askew, 2000; Hounsell, 2007). There are several strategies to activate new roles for students. For instance, unpacking the assessment criteria through a wide

range of examples or creating opportunities for peer assessment and dialogue between teachers and students could foster student agency. Another possible strategy is to allow students to give more detailed feedback comments on the polished works of their peers. Finally, increasing student engagement in ‘learning conversations’ motivates students to take ownership of their learning journey (Robinson & Udall, 2006).

As for the third condition for sustainable feedback, Hounsell underscores the importance of redesigning the teaching-learning environment. To maximize the congruence between guidance and feedback, teachers need to be aware of the benefits of external and internal feedback. The first type of feedback is the one given to the submitted assignment largely produced by the student outside the scheduled class time whereas the latter one is embedded into the everyday teaching and learning environment giving students the freedom to raise questions as they are working on their assignments. This type of enriched teaching and learning environment nurtures collaboration among students and devise strategies for completing challenging tasks since their assignments are not considered to be end products submitted to teachers but are visible to all or some students in class.

Finally, the feedback landscape could only be fertile when we make feedback practices more visible and change our pedagogy: “But perhaps the truest mark of feedback rehabilitation would mean considering it not simply as a worthwhile means to an end but as an invaluable end in itself, beyond as well as within the university” (Hounsell, 2007).

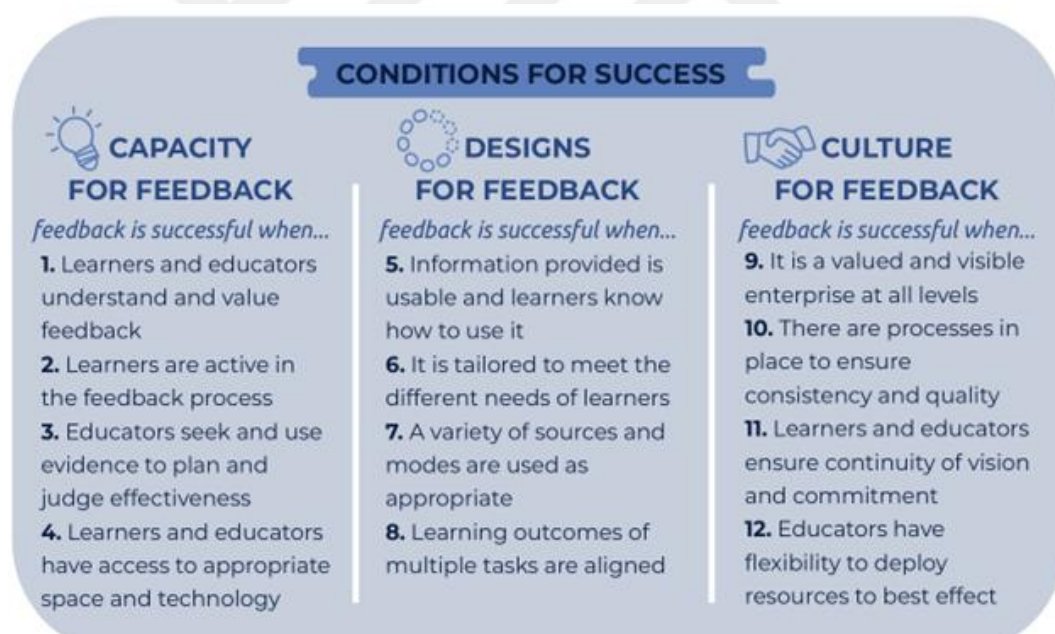
Sustainable Feedback Framework for Learning

Henderson et al.'s framework, *Feedback for Learning*, blends previously defined characteristics of effective feedback by Hattie and Timperley, Nicol and MacFarlane-Dick, and Hounsell expands upon those characteristics by providing specific suggestions, each of which is justified by the findings of case studies they conducted.

Feedback for learning framework includes twelve conditions for facilitating successful feedback assessment and falls under three categories: capacity for feedback, design for feedback, and culture for feedback (see Figure 3).

Figure 3

Feedback for Learning (Henderson et al., n.d.).



As they expand upon each condition for empowering feedback practices, Henderson et al. summarizes very relevant outcomes from the case studies they conducted. For understanding and valuing feedback, students need to be trained systematically to acquire feedback literacy skills and teachers should continuously allocate class time for the design and the purpose of the feedback. Learners could

also utilize different sources such as automated online sources for seeking feedback. In one of the case studies, students were encouraged through gamification to post their works to the hashtag to obtain feedback (Henderson et al., n.d.).

Another case study conducted in a large-scale first-year Biology subject in higher education highlights that feedback doesn't always have to come from educators. Technologies like quizzes, simulators, and collaborative tools (e.g., forums, wikis, and shared documents) enable immediate and peer-driven feedback. For instance, in this case study, an online discussion forum encouraged learners to engage in problem-solving and reduced educators' workload. Additionally, rendering information feedback useful means working on feedback design. Comments should both look backward and forward. In other words, feedback comments on past assignments should be evaluated to support feedforward. Other suggestions for a more sustainable feedback design include:

- Keeping in mind that students need to benefit from feedback from a variety of sources; feedback comments provided by students' wider network such as their family or friends as well as other sources such as online media users or online tutors could be useful.
- Giving feedback through different modes or mixed modes such as video and audio recordings or screencasts to help students figure out how they can use feedback comments for further assignments.
- Tailoring feedback comments according to year groups as students in secondary schools or in their freshman year might need extra support.
- Tailoring feedback comments based on the assessment tasks and aligning the purpose of the task with feedback tone and register.

- Purposefully designing consecutive assessment tasks so that their competencies will overlap to give students more opportunities to benefit from peer and teacher feedback and devise new strategies (Henderson et al., n.d.).

The other aspects of this framework are more related to the third category, which is creating a culture for feedback. The four conditions in this category build upon Hounsell's understanding of feedback as an inseparable part of pedagogy. However, this framework puts more emphasis on a collective and collaborative effort in institutions to create an ongoing culture of feedback. Therefore, institutions should inspire innovation by offering professional development opportunities, exemplars, and showcases of effective feedback practices, and resources to their teachers. Moreover, institutional policies should explicitly promote feedback quality and distinguish feedback from grading, encouraging clarity, diverse feedback forms, and authentic assessments (Henderson et al., n.d.).

Ensuring consistency and quality in feedback is also crucial, particularly in large classes with diverse teaching teams. Institutions must train and support educators through guidebooks or examples explaining the purpose of feedback and advice on feedback comments. Regular team meetings and moderation processes can address disparities in feedback quality and help teachers recognize the need for feedback moderation. Furthermore, mentoring less experienced educators can improve their feedback skills. Though it may seem an ambitious goal, the most important condition in this model is a common long-term vision embraced by both leaders and educators for redesigning feedback. These strategies collectively ensure that feedback remains meaningful, consistent, and aligned with institutional goals (Henderson et al., n.d.).

As a final suggestion in their model, Henderson et al. acknowledge that creating a sustainable feedback culture depends on balancing educators' workloads. The teachers in their case studies had the opportunity to reimagine their workload and allocate time for designing and conducting authentic feedback practices. All things considered, this final feedback framework unlike other models places greater emphasis on the role of not only students and teachers but also institutions in guiding our current understanding of feedback towards a more sustainable path (Henderson et al., n.d.).

The Feedback Model in the IB Diploma Programme

The feedback model presented by the IB addresses the foundational studies of feedback literature and includes many significant features of feedback: “actionable, timely, concrete, forward-looking, attending to the affective aspect of assessment, promoting student agency, relevant, and in some way personalized (Dawson et al., 2019; Gibbs & Simpson 2004; Hattie & Timperley 2007; Nicol & Macfarlane-Dick 2006; Yeager & Dweck 2012). I wanted to address IB's definition of effective feedback separately to show how it aligns with the constructive formative feedback approaches in the field and what aspects of sustainable feedback conditions could have been adopted.

IB suggests students can only benefit from rich feedback when formative assessment is designed meaningfully. To create this meaningful formative assessment design, teachers should be cognizant of the individual differences of each student in terms of their background, strengths, interests, and potential for growth. Therefore, formative assessment must be varied and multimodal to reflect the diversity of DP learners.

In line with insights from research on formative feedback, IB defines four conditions for effective feedback:

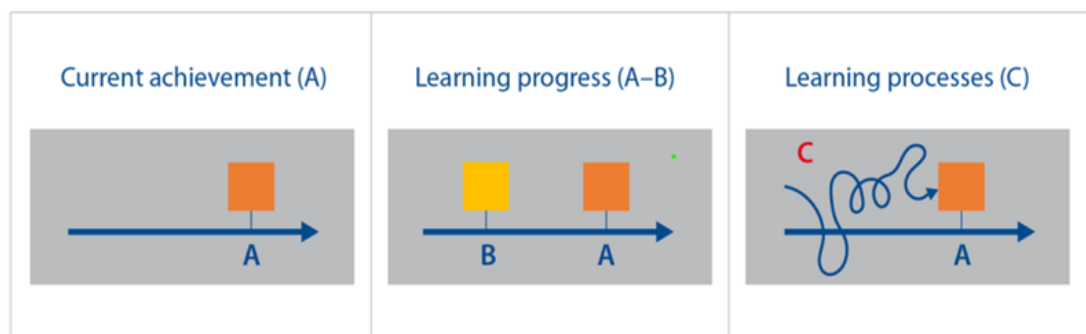
1. Effective feedback must not only guide students about where they are but also must show “where to go next” and “how to get there”. Besides, it must be timely and future-oriented to help students improve their future performance by discovering their strengths and weaknesses (Hattie & Timperley, 2006; Nicol & MacFarlane-Dick, 2006).
2. Constructive criticism could be useful to enhance intrinsic motivation. Students might generally prefer positive comments, yet negative feedback does not mean it will ruin intrinsic motivation. Constructive criticism is specifically useful when it is criterion-based, is given individually, and provides a concrete road map for development (Fong et al., 2019).
3. Effective feedback is in a dialogue between teachers, students, and peers meaning all parties should actively listen to each other. When teachers provide feedback through questions encouraging students to reason, justify, and analyze, then students demonstrate agency by evaluating their performance and choosing strategies for improvement. Thus, they enhance their self-assessment and self-regulation which is the goal (Adie et al., 2018; Carless et al., 2015.)
4. Formative feedback aims to support student improvement rather than justify a grade. Students value detailed and relevant feedback knowing its impact on their motivation and self-perception. This shows that teachers should focus on designing effectively delivered,

timely, and iterative feedback with face-to-face discussions, rubrics, or staged assignments (Dawson et al., 2019).

Furthermore, IB raises two significant questions that are highly relevant to effective feedback: “What aspects of learning should teachers focus on while giving feedback?” and “What is the best way to assess learning progress and learning process?” (IBO, 2021, p.19). Effective assessment design has three major components: tasks, conversations and observation, and inferences. Successful assessment design requires anticipating in advance both inferences and the kind of feedback that will be shared with students as demonstrated in Figure 4.

Figure 4

What Aspects of Learning Do We Want to Provide Feedback on? (IBO, 2021, p. 19).



According to IB, the key to increasing quality feedback lies in being less concerned about the reliability and comparability of summative and formative assessments and being more concerned about designing formative assessments that are construct relevant, fair, manageable, and unbiased. Even though IB’s definition of what makes effective feedback is inspired and shaped by the canonical views on designing effective formative assessment and feedback practices, it does not explicitly refer to the term, sustainable feedback. The fact that IB stresses being fair and inclusive in formative assessment, activating student agency through peer evaluation and student-teacher dialogues indicates that the new feedback paradigm

has been present in the IB's approaches to teaching and learning. However, one condition that could further be emphasized is the feedback culture endorsed in Henderson et al.'s feedback framework, which is a more holistic approach to developing a sustainable feedback culture with the support of institutional leaders.

Having presented the models on effective and sustainable feedback, I intend to summarize some important findings from the studies on effective and sustainable feedback in the final part of my literature review.

Studies Measuring Perceptions of Teachers and Students on Effective and Sustainable Feedback

One of the studies that explored the differences between students' and teachers' perceptions of feedback and the implications for enhancing the feedback process was conducted by Carless (2006) in the context of higher education in Hong Kong. In this study, the aim was to clarify differences in Hong Kong Chinese students' perceptions during the assessment process. To investigate various aspects of assessment, Carless used a large-scale questionnaire survey with 36 Likert-scale items and one open-ended question completed by 460 teachers and 1740 students in the eight publicly funded universities. Follow-up focus group interviews with university staff addressed issues raised in the survey. Additional qualitative data were collected from third- and fourth-year Bachelor of Education students in Hong Kong, who were trainee English as a Foreign Language teachers and native Cantonese speakers. These data included a small-scale open-ended survey completed by 52 students, which explored their views on feedback, grading, and suggestions for improvement, and semi-structured interviews conducted with 15 students (Carless, 2006).

One of the findings about differing perceptions revealed a significant discrepancy between teachers' and students' perceptions of feedback. While 38.4% of teachers believed students often received detailed feedback to improve their assignments, only 10.6% of students agreed. Additionally, 37.8% of students felt feedback was rarely followed by actions for improvement, compared to 16.1% of teachers. Focus group discussions with teachers suggested that students' perception of ineffective feedback might be accurate due to challenges such as large class sizes, limited time, and rare feedback on examinations. Another contrasting data was between a student who thought the purpose of the assessment was to grade rather than improve student learning and teachers who complained about students being too grade-oriented. Overall, the survey yielded two major results on the theme of differing perceptions: Teachers believe that they give more feedback than students believe, and they consider their feedback more useful than students do (Carless, 2006).

Another study that focuses on investigating students' and teachers' perceptions about the use and value of sustainable feedback was conducted by Geitz et al., (2016) in the context of higher education with 62 marketing students. They set up an intervention study to specifically explore the impact of sustainable feedback on self-efficacy and goal orientation. They also conducted semi-structured interviews with eight students and four staff members to gain more insight into teachers' and students' perceptions of sustainable feedback interventions. Within the context of this research, sustainable feedback was implemented in a first-year Dutch marketing course, using problem-based learning (PBL) groups. The course spanned an 8-week period, with students completing group and individual assignments worth 15 European Credits (EC). PBL group work was assessed collectively, with adjustments

possible for individual contributions, while related courses were assessed individually via exams. Students received blank feedback forms and were tasked with identifying personal learning points based on their PBL experiences. These learning points were formulated as feedback questions about collaboration skills and shared with peers and tutors in subsequent sessions. At the end of every feedback session, students noted down what feedback they asked for. Midway through the 8 weeks, they could revise or add new feedback questions (Geitz et al., 2016).

The data collected from this investigation was categorized thematically as perceptions of formulating feedback questions; asking for or receiving unsolicited feedback; forms of feedback; quality of feedback; self-efficacy and goal orientation and future perspectives. Teachers and students had diverging comments on formulating feedback questions which probably stem from their differing perceptions of a good feedback question. While teachers reported that students struggled to generate these questions, students claimed they wrote down questions easily and quickly. Teachers were dissatisfied with the quality of feedback questions and felt that students were easily satisfied with the questions they produced. Furthermore, teachers reported that some students did not put in adequate effort to produce feedback questions. These findings from the research highlight the necessity of enhancing students' uptake of 'good feedback questions.' Regarding asking and seeking feedback, all students agreed that they improved on the learning points that they formulated as feedback questions. One more finding is about forms of feedback. All teachers and students based their feedback on the feedback questions. Students used group dynamics feedback in contrast to teachers who claimed this term was not initiated by teachers or students very often. Teachers reported that students resorted to process feedback whenever they faced trouble whereas students stated that they

used process feedback. While students recognized task feedback, teachers thought of task feedback as process feedback. Neither teachers nor students mentioned self-regulation feedback despite its positive impact on learning. These findings show that distinguishing types of feedback is challenging and enhancing teachers' understanding of feedback types could improve feedback practices (Geitz et al., 2016).

The most noteworthy aspect of Geitz et al. 's (2016) study is the findings about the relation between sustainable feedback, goal orientation, and self-efficacy. Students reported positive comments about sustainable feedback suggesting their sense of confidence and competence increased. However, three other key factors influence their learning and behavior. Firstly, having an increased sense of competence supported students' self-efficacy. In contrast, students with low self-efficacy struggled to ask and receive feedback which resulted in limited growth and mastery. Secondly, individual personal traits influenced whether students sought feedback from their tutors. Students opted for feedback from their teachers due to their mastery. Students also suggested that peer feedback could trigger performance comparison that could result in changes in goal orientation. In the case of someone equal to them giving feedback, it may result in goal switching. Goal switching means students either shift from approach goals to avoidance goals or from master to performance goals. Thirdly, teachers' perception of sustainable feedback was more technical and was not a part of PBL, so this restricted the integration of sustainable feedback into the learning process and assessment dialogues as well as prevented student agency and self-regulation.

Apart from the studies that display the diverging perspectives of effective and sustainable feedback between teachers and students, some studies explore the

implementation of effective or sustainable feedback practices. In a more recent two-staged study conducted with university students, Mutch et al. (2018) investigated how teachers can develop sustainable feedback processes to enhance students' self-evaluation and reflection. The first stage of the study, which was a pilot for the second stage, was conducted with 268 first-year students taking a core course named Health Systems and Policy whereas the second stage was conducted in a newly designed Introduction to Public Health.

The first stage of this study was a pilot on peer feedback; thus, the design included five steps for scaffolding student understanding of assessment and peer review: presentation on effective feedback and types, discussion of assessment criteria, review of a wide range of assessment exemplars, providing written feedback on peer work and group reflections on feedback given and received. Students identified what they learned most and rated the usefulness of feedback through a short survey. Out of 185 students (69% response rate), 80% found the peer feedback activity "very useful" or "somewhat useful," with 76% viewing it as a valuable learning tool. Nearly half (44%) reported learning most from writing and receiving feedback, while 25% found reviewing peers' work most beneficial. More than two-thirds of the students "agreed" or "strongly agreed" that the feedback given would improve their written work (Mutch et al, 2018).

Following stage 1 of this study, stage 2 aimed to address feedback challenges such as ongoing feedback practice by redesigning the peer feedback activities. Students were familiarized with the critical appraisal process and the key elements for reviewing an academic paper. Students also completed a baseline survey that revealed their perceptions of feedback, as well as their needs, and their confidence levels in self and peer evaluation. Based on the results of this second stage, the

quality of peer feedback varied, and most students gave feedback on superficial elements such as spelling. As for confidence in peer and self-evaluation, 60% felt "very" or "somewhat confident" in reviewing peers' work, and 55% in self-evaluation. Despite being asked to provide honest and critical feedback, students avoided giving critical feedback as they did not feel comfortable about it. However, more detailed guidance on scaffolding students' understanding of sustainable feedback practices enhanced their self-evaluation skills. Overall, this study shows that sustainable feedback practices must be embedded thoroughly into the curriculum as an ongoing process, and training students to develop skills of constructive peer review and evaluation takes time (Mutch et al, 2018).

In another study aiming to explore feedback and feedforward practices, Dulfer and Akhlaghai Koopaei (2021) analyzed 18 teachers' practices and perceptions about feedback and feedforward in IBDP classrooms in Hong Kong and Australia. This small-scale research with a case study approach had two areas of focus: to examine teachers' pedagogy regarding feedback and feedforward and to investigate how teachers implement principles of effective feedback and address feedforward in the classroom. That is to say, the study is based on what teachers say and what they practice in real-life contexts. The teacher participants selected had varying levels of teaching experience, age, IBDP subject they were teaching, and gender. With the online survey conducted, teachers were asked to reflect on their teaching and learning strategies as well as their views on differentiated teaching strategies.

Additionally, the observation instrument was designed in alignment with the Assessment Research Center of the University of Melbourne to be used in 54 lesson observations. Following the lesson observations, teachers took part in semi-

structured interviews. The outcomes of this study revealed that although teachers believed in the significance of feedback for improving learning outcomes, they accepted that they were not consistent in their feedback and feedforward practices. More than 90% of teachers uttered that feedback is “*very important*” or “*important*” for students as it includes specific scaffolding strategies to guide students into the next step which is defined as feedforward. Nevertheless, only 45% of teachers thought they used feedforward “*frequently*” and almost 55% said that they give feedforward “usually or occasionally” (Dulfer & Akhlaghai Koopaei, 2021). The qualitative data based on the 54 lesson observations indicate that feedback was given in almost 67% of the lessons; yet all teachers did not use feedforward to guide students’ next steps. Another finding from these 45 lesson observations shows that teachers integrated feedback on product or feedback on processes only in 28% of the lessons. While almost all teachers used feedforward in one or two of the observed lessons, only seven participating teachers included feedforward in all their lessons.

This study also relates some of teacher responses in semi-structured interviews to the role of the about dialogic conversation, an element of sustainable feedback as well as IBDP subjects. Based on these interviews, some teachers used feedback for differentiation whereas others structured the lesson and guided students into the next step not only in the classroom but also outside the classroom. Therefore, the dialogic conversation can be an opportunity for empowering student agency constrained by the nature of the IBDP assessments. Participant teachers’ comments also underscore the significance of preparing appropriate, adequate, accurate, and authentic rubrics collaboratively to maximize usefulness not only for teacher intervention and differentiation but also for self-assessment and peer feedback. Furthermore, a few teachers in the interviews suggested that conferencing, a form of

‘conversational dialogue’, could be an effective way for feedback. This type of dialogue fosters student autonomy and self-regulated learning through interpretation, questioning, discussion and reflection (Feeney, 2007; Hyland & Hyland, 2006).

Overall, this study presents strong examples of feedforward practices in IBDP classrooms as teachers use varying strategies to feedforward such as leading students into next steps with rubrics or checklists, class discussions, conferencing, dividing the task into smaller parts, encouraging peer feedback and self-reflection. However, feedforward is not used in every classroom as a learning tool or a differentiation strategy, which shows the need for training teachers systematically to help them grasp the concept of feedforward and the role of quality feedback.

Conclusion

Feedback is a fundamental element of assessment for learning as it provides students with opportunity for reflection and development. Feedback also encourages teachers to review and shape their teaching practices to guide their students to close the gap between the current level and the expected level. How teachers create feedback culture in their class environment has a considerable impact on student learning and achievement. Specifically, in rigorous international programs such as the IB Diploma programme where internal and external assessments contribute to the final diploma grade, giving utmost care to creating sustainable feedback culture is a must.

This study focuses on the IBDP teachers and students’ perceptions of sustainable feedback. With this purpose, the literature review first underscores the need to value formative assessment and feedback as an essential component of assessment for learning. The review then presents characteristics of effective feedback and some models for delivering effective feedback. The literature review

further elaborates on the new paradigm of delivering effective feedback: sustainable feedback. Although the term sustainable feedback encompasses effective feedback characteristics, it places higher importance on student agency in seeking feedback. The literature review ends with the studies conducted to measure both teacher and student perceptions of effective and sustainable feedback.

Within the light of these studies, specifically the last one conducted in IBDP classrooms, it is inferred that the two major issues, teachers' feedback practices and their views on these two concepts need to be further explored, especially in IBDP settings. Moreover, students' perceptions in IBDP classrooms must be explored along with those of teachers because several studies conducted to explore the perceptions of different stakeholders were in higher education settings. Therefore, aligned with the problem statement presented in the introduction, students' dissatisfaction with feedback, the researcher intends to conduct a case study to explore the perceptions of different groups: IBDP teachers, graduates, and students.

CHAPTER 3: METHODOLOGY

Introduction

The purpose of this single case study is to investigate the perceptions of IBDP teachers, graduates, and students regarding sustainable feedback, a new paradigm of delivering effective feedback that encapsulates the term effective feedback with more emphasis on the role of activating student agency and self-regulated learning. How far elements of sustainable feedback - timeliness, meaningfulness, feedback, feedforward, dialogic conversations, and fostering of student agency and self-regulation - are embedded in feedback culture requires further exploration, specifically in a high school IBDP setting. This chapter consists of four sections, presenting research questions, the research design, the participants, the procedure through which the research is carried out, and the data analysis.

Research Questions

The main research question is “What are the perceptions of IBDP teachers, graduates, and students about sustainable feedback?”. To further explore this main question, six sub-questions were generated:

1. What are the perceptions of IBDP teachers, graduates, and students about the purpose and role of feedback?
2. What makes effective feedback, according to teachers, graduates, and students?
3. To what extent are IBDP teachers, graduates, and students aware of sustainable feedback practices?

4. How do teachers describe their feedback practices and the rationale behind them?
5. To what extent do IBDP graduates and students find feedback useful and sustainable?
6. What are the challenges of providing effective feedback in an IBDP setting, and what can IBDP schools do to support more effective feedback?

Research Design

This study employs a case study design to explore the perceptions of IBDP teachers, graduates, and students on sustainable feedback within a single IB school context. A case study approach is defined as a holistic in-depth investigation of a phenomenon within its real-life context, “especially when the boundaries between phenomenon and context are not clearly evident” (Yin, 2003, p.13). Creswell (2012) additionally notes, a case study involves a bounded system such as a program, group, or organization, and the purpose is to develop a comprehensive understanding of the issue with detailed data collection. A case study is suitable when the researcher specifically aims to unveil contextual conditions, there are more variables of interest than data points, and the research uses existing theoretical propositions (Yin, 2003). Since the researcher aims to explore perceptions of different stakeholders within the IBDP context, guided by the theoretical framework of sustainable feedback, the researcher chose to employ this design. This single case study, therefore, is bounded by one private foundation school implementing the IBDP program and takes place during the 2024-2025 academic year with the participation of IBDP teachers, May 2024 graduates, and grade 12 students.

A cross-sectional online survey was used as a primary means of data collection in this single case study. According to Creswell (2012), survey design is

feasible when the researcher aims to describe trends or identify beliefs, attitudes, or opinions of individuals. Furthermore, surveys provide useful information about programs implemented in the educational context. Therefore, the researcher utilized a cross-sectional online survey to analyze the data through descriptive statistics to report on participants' perceptions of sustainable feedback, as well as to explore feedback practices practiced in the school. The data collected through online surveys were analyzed both through quantitative and qualitative methods.

Research Context

The context of this case study is an IB World School, which is a private foundation high school located in eastern Türkiye and has been implementing international curricula as well as national curricula since the beginning of its foundation. Established in 2007, the participating school aims to deliver high-quality education with international standards and contribute to the development of Türkiye by equipping students with the relevant knowledge, skills, and vision to prepare them as future leaders. Due to its mission and vision, the school places international programs at its core and aims to raise global citizens skilled at using and utilizing cutting-edge technology. The participating school offers two international programs: International General Certificate of Secondary Education (IGCSE) for 9th and 10th grades and IBDP for grades 11 and 12. Unlike many high schools in other countries that offer IGCSE or IBDP as an optional add-on program, both IGCSE and IBDP are required for all students in this private foundation high school. In fact, the high school is one of the few schools in Türkiye, where grade 12 students have to successfully pass the IB Diploma to qualify for the high school diploma given by the Ministry of National Education (MoNE) in Türkiye. The school is also accredited by Council of International Schools (CIS), making in-house professional development

sessions compulsory for all stakeholders. Throughout the academic year, teachers and students participate in several projects, field trips, social events, and clubs to flourish not only academically but also socially and spiritually. The school's elementary division implements IB's Primary Years Program (PYP), and the middle division is preparing to authorize the implementation of IB's Middle Years Program (MYP) so that the school can be an IB continuum school. Having established high standards of education to cater to the needs of every individual, the school places greater emphasis on the continual professional development of its academic staff by providing opportunities for master's and PhD. There are 61 teachers in total, including all divisions, and 447 students in total. In high school, 22 teachers actively teach either the IGCSE or the IBDP.

The academic environment is highly competitive in this single case study school. Students are awarded scholarships ranging from 100%-10% depending on their scores in the high school admission exams. To maintain these scholarships, students must achieve a minimum end-of-year grade point average (GPA) determined for each scholarship bracket. Depending on their GPA, students' scholarship percentages may decrease to 70% or 40% scholarship or increase up to 100%, provided that the quota permits.

Within the context of this case study, it is important to outline six different IBDP combinations available to prospective students. Eligibility to continue with the IBDP program in grade 11 requires specific criteria: students must achieve at least a B in the corresponding IGCSE subjects to take it at a High Level (HL) and at least a C to take it at Standard Level (SL). Another eligibility criterion is having a minimum C in an IGCSE subject. Based on the student profile and career aspirations, students select from six IBDP combinations comprising three HL and three SL subjects. The

combinations offered at school are prepared in consideration with students for further studies. The majority of the graduates prefer to study Law, Engineering, Business Management, and Economics. Across all combinations, the common DP subjects are Turkish Literature (SL/HL), Turkey in the 20th Century (SL), English A Language and Literature (HL/SL) or Literature and Performance (SL), Mathematics (HL/SL), and a compulsory core subject, Theory of Knowledge. The six combinations are as follows:

- Combination 1-Medicine: Includes Biology HL and Chemistry HL, along with Math or Turkish offered either at HL or SL level
- Combination 2-Engineering: Requires Chemistry, Physics, and Math at HL level.
- Combination 3-Business/Law: Focuses on Global Politics (effective of 2024-2025 Academic Year, Economics was offered earlier), English A Language and Literature, and Turkish A at HL level with Biology offered as the only SL level science subject.
- Combination 4-Engineering: Similar to Combination 2, but Chemistry is offered at SL instead of HL.
- Combination 5-Architecture: Includes Turkish A: Literature, Mathematics, and Physics at HL. At SL level, students can also choose German B (language acquisition) or Visual Arts based on their interests.
- Combination 6-Computer Science: Similar to Architecture, this combination requires Turkish A: Literature, Mathematics, and Physics at HL, but offers Computer Science at SL level.

Another important factor within the context of this single case study is the eligibility criteria for interdepartmental transfer established by the affiliated

University Board. Graduates of this school may transfer into the faculties of Law and Engineering at the affiliated university with a minimum IB Diploma score of 32 out of 45, whereas entry into other faculties requires a minimum score of 30.

Participants

Since the researcher aimed to explore the sustainable feedback perceptions of different stakeholders within the IBDP context, participants in this single case study were IBDP teachers, graduates, and students. The researcher included May 2024 IBDP graduates, who had completed high school eleven months prior to the study, as well as grade 12 students, since both groups had completed several assignments and could easily reflect on the feedback received. A total of 12 teachers, 21 DP May 2024 graduates and 24 grade 12 students completed the *Feedback for Learning Survey*.

Table 1

Demographics of DP teachers Participating in the Survey

Teacher ID	Gender	Country of Birth	Country of Education	Years of Teaching Experience
T1	male	Türkiye	Türkiye	11-15
T2	male	Canada	USA	1-5
T3	female	Türkiye	Türkiye	1-5
T5	female	Türkiye	Türkiye	Less than one year
T6	male	Türkiye	Türkiye	1-5
T7	female	Poland	USA	1-5

Teacher ID	Gender	Country of Birth	Country of Education	Years of Teaching Experience
T8	female	Türkiye	Türkiye	6-10
T9	male	Türkiye	Türkiye	16-20
T10	female	Germany	Germany	6-10
T11	male	Türkiye	Türkiye	11-15
T12	male	Türkiye	Türkiye	6-10

As can be seen in Table 1, among 12 teachers who completed the survey, seven are male and five are female. Three of the teacher participants are international. Two of these international teachers completed their education in Canada, and one teacher completed her education in Germany. Twelve teachers vary in terms of teaching experience within international programs. Six teachers have one to five years whereas three teachers have more than six to ten years of teaching experience in the IBDP. There are two teachers with 11-15 years of teaching experience. There is only one teacher who has the most teaching experience of 16-20 years. All participant teachers completed either the IB Diploma or Cambridge IGCSE face-to-face, online, or virtual training sessions before teaching the international curriculum. In addition to compulsory DP trainings, as a part of their in-house professional development sessions, all DP teachers attend PD sessions to prepare for an IB-CIS synchronized evaluation visit the school will undergo in April 2026 based on a selected theme titled “Pathway 2: Integrating Global Citizenship and Intercultural Understanding into the curriculum both vertically and horizontally.”

Table 2

Distribution of Graduates and Students by Age Group and Status (N = 45)

Age Group	12th Grade, n (%)	Graduate/Former IBDP student, n (%)	Total, n (%)
17–19	24 (80.0)	6 (20.0)	30 (66.7)
20–24	0 (0.0)	15 (100.0)	15 (33.3)
Total	24 (53.3)	21 (46.7)	45 (100.0)

Note. Percentages in the first two columns are row percentages (within each age group). Percentages in the Total column are out of the full sample (N = 45).

Table 2 demonstrates the age and status distribution of the May 2024 graduates and grade 12 students. Among 21 IBDP graduates, 15 were between 20-24 years old, while 6 were between 17-19 years old. All grade 12 students were aged between 17-19.

Both cohorts successfully passed the IGCSE examinations and became eligible to continue their IBDP studies. While studying for the rigorous IB Diploma Program, they prepared for the national university examinations concurrently. The Table 3 below shows the distribution of students according to selected IBDP combinations for each cohort.

Table 3

The Distribution of Graduates and Students According to Their IBDP Combinations.

	C1 Medicine	C2 Engineering 1	C3 Business & Law	C4 Engineering 2	C5 Architecture	C6 Computer Science
Graduates Total: 21	7	None	3	6	2	3
Students Total: 24	14	None	5	3	2	None

Note. C stands for combination.

Out of 45 survey respondents, 21 were 2024 graduates and the remaining 24 were grade 12 students that achieved the IB diploma in July 2025. Among 21 IBDP graduates, 7 studied in the Medicine combination, 6 in Engineering 2, 3 in Business & Law, and another 3 in Computer Science. As for grade 12 students, 14 studied in the Medicine combination, 5 in Business & Law, 3 in Engineering 2, and 2 in the Architecture combination. The Engineering 1 combination was not selected by any members of graduates/students.

Instrumentation

In line with the purpose of the research, data were collected to reveal the perceptions of IBDP teachers, graduates, and students on sustainable feedback. The first stage of data collection includes the redesign of the *Feedback for Learning Survey* into two separate surveys for IBDP teachers, grade 12 DP students, and May 2024 IBDP graduates, and grade 12 IBDP students during December 2024.

The survey was originally developed (Henderson, Boud, Molloy, Dawson, Phillips, & Ryan, 2016) for the research project titled *Feedback for Learning: Closing the Assessment Loop* and the link to it is available on the research project website, [Publications & Resources – Feedback for Learning](#). Developers of this instrument stated on the website that researchers were free to use and modify the survey (see Appendix C). They also justified the validity of this survey on the relevant website. To collect data that would support an in-depth and multifaceted analysis, this study used both quantitative and qualitative data coming from *the Feedback for Learning Survey* to identify current feedback practices and general experience with feedback in an IBDP school setting.

Feedback For Learning Survey

The online survey used for this study is called *Feedback for Learning Survey* and was adapted to the high school context from the original one developed collaboratively by Monash University, Deakin University, and Melbourne University for the *Feedback for Learning: Closing the Assessment Loop* research project (Henderson et al., 2016). The researchers of this project compiled questions from existing questionnaires about educator and student experiences with assessment feedback, obtaining permission to use and modify them as needed. The research team of the *Feedback for Learning Closing the Assessment Loop* project collaboratively refined the existing questionnaires in the literature, involving multiple revisions and the addition of new items as needed. They shared the finalized questionnaire with local and international feedback experts for their input and incorporated suggestions from experts. Finally, they tested the online version of the survey for content validity with a pilot group of six academic staff and five students (Henderson et al., 2016). Since the *Feedback for Learning Survey* used by the researcher is intended for a high school context, some questions were adapted or duplicated to align with the IBDP curriculum and the high school setting. Additionally, two versions were created: one for teachers and another for both students and graduates, ensuring convenience for each group. Both the teacher survey (TS) and the graduate/student survey (SS) were finalized in March 2025. The TS included 46 items, whereas the SS included 97 items.

The common and the diverging sections of TS and SS are listed below (as detailed in Appendix A and Appendix B):

- School context (teachers and graduates/students)
- General experiences with feedback (graduates/students only)

- Context of assessment tasks (graduates/students only)
- Role profiling (teachers only)
- Current state of feedback practices (teachers only)
- Understanding the nature of comments relating to students' work (teachers only)
- Design of feedback (teachers only)
- General frequency of feedback practices (teachers and graduates/students)
- Effective feedback practices (teachers and graduates/students)
- Demographics (staff and graduates/students only)

Based on the listed items above, eight sections relate to teachers whereas six sections relate to students. The first section about the school context is common for all participants. TS has three questions under this section which includes questions about teachers' positions and what grade level of the program they are in charge of. The second section, role profiling, includes six items. Role profiling includes questions about teachers' years of experience in assessment design, the number of classes they teach, and the number of students they are responsible for assessing.

Section three, the current state of the feedback practices, of the TS consists of five items asking teachers to select what type of assessment tasks are assigned and type of performance related information given to students. Section 4, understanding the nature of comments relating to students' work, has six items in total. This section focuses on the submission platform of external and internal assessments, modality of feedback, and the source of feedback. Teachers were also asked to rate a 10-point Likert scale (ranging from 0 = 'Not at all' to 10 = 'Extremely') for the level of detailedness and individualization of their comments. Moreover, teachers selected

multiple options that align with the focus of comments they provide after submissions.

The fifth section, design of feedback, asked teachers to select key influences that shape their feedback designs as well as to rate the factors (1=Not at all, 2=Slightly, 3=Moderately, 4=Very, 5=A great deal, 6=Not applicable) that influence the quality of the feedback they give. This section also includes two open-ended questions about how technology helped or challenged teachers to provide effective feedback. The sixth section, general frequency of feedback practices, asked teachers to rate how often they and their colleagues practice listed feedback characteristics. Section six, furthermore asked teachers to define what the purpose for feedback is and how teachers know whether their feedback is effective.

Section seven, effective feedback practices, has six open-ended items and one multiple option item. Open-ended items asked teachers to report effective feedback practices they observed in their school, what made those practices effective, how teachers knew that type of feedback worked, and challenges of designing effective feedback.

As for the graduate/student version of the survey, the school context comes first with six items. Graduates/students are asked to respond to what DP combinations students are currently studying or previously studied, and what denominator best represents their performance in the DP.

The second section, general experiences with feedback, includes four multiple-response questions. Each item related to this area asks graduates and students how many times they received feedback on their IBDP external and internal assessments by responding to the options of none-one-two-three-four-five-more than five.

The third section, the context of assessment tasks, is designed for students and graduates and includes 68 items about the nature of DP internal and external assessment, who provided feedback, what type of feedback has been provided, and the frequency of feedback. For this section, graduates/students also need to answer rating questions about how useful the feedback they received was (1=Not at all, 2=Slightly, 3=Moderately, 4=Very, 5=Extremely). Additionally, the third section includes questions that require graduates/students to rate items (strongly disagree, disagree, neither disagree nor agree, agree, strongly agree, not able to judge) that measure whether feedback was tailored to meet their needs, or whether they trusted the expertise of their assessors. In this section, some Likert-type items (1=strongly disagree, 2=disagree, 3=neither disagree nor agree, 4=agree, 5=strongly agree) specifically asked graduates and students to rate whether feedback was explicable, specific, detailed, personalized, and applicable to future tasks.

General frequencies of feedback practices are the fourth section in the SS. Similar to teachers, graduates/students were asked to rate the frequencies of statements defining feedback practices of teachers. Graduates/students were also asked to select what type of comments they have received and would like to receive on assessment tasks. Similar to teachers, they defined the purpose of feedback and what makes feedback effective in this section.

The fifth section, effective feedback, in the SS has six items in total, all of which were open-ended responses asking students/graduates to define and explain both effective or ineffective feedback they received and how they knew whether those practices were effective or ineffective.

Demographics are the final sections in both TS and SS. TS includes seven items whereas SS has nine items under this section. The participants in the last

section were asked for gender, age, country of birth, country of residence, what mother tongue participants spoke, English proficiency level, number of working hours, and whether participants had any disabilities.

Method of Data Collection

The ethical committee approval was granted by Bilkent University mid-April 2025 (See Appendix D). After that, MoNE permission was secured at the end of May 2025. Then, the high school where the case study would take place was informed about the MoNE approval (See Appendix E). *Feedback For Learning Survey* was disseminated to all participant groups via email, along with the parent consent form and the participant consent form (See Appendix F and Appendix G). Both the TS and SS were designed to be anonymous which was also written clearly in the participant consent and parent consent form. The Feedback for Learning Survey was administered via Google Forms, and all participants were given three weeks to complete the survey. The first reminder was given one week later. Another reminder was given in the last week of June. The data was collected from DP teachers, students, and graduates between the last week of May 2025 and June 2025.

Method of Data Analysis

Both quantitative and qualitative data were collected through teacher, graduate/student surveys through Google Forms. Then the responses from the survey were converted into an MS Excel document. There was no need to assign pseudonyms to sample participants as both versions of the survey were anonymous. While reporting the open-ended responses, the researcher assigned numbers to the respondents such as Teacher 1(T1), Graduate 2 (G2), or Student (S3). Following these procedures, the data was analyzed using IBM SPSS Statistics Software to conduct descriptive statistics. To provide a general overview of the sample,

demographic information was examined first by analyzing basic descriptive data to present the female-to-male ratio, age, country of birth, and country of residence. Apart from these, this study reports findings in line with the research questions, including: (1) the perceptions of IBDP teachers, graduates, and students about the purpose and role of feedback; (2) what makes effective feedback according to IBDP teachers, graduates, and students; (3) to what extent IBDP teachers, graduates, and students are aware of sustainable feedback practices, (4) how teachers describe their feedback practices and the rationale behind them; (5) to what extent IBDP graduates use feedback useful and sustainable, and (6) the challenges of providing effective feedback along with the suggestions for supporting more effective feedback in an IBDP school.

As previously mentioned in the instrumentation, for the survey items aligned with sustainable feedback practices, descriptive statistics in SPSS were conducted. The data for the Likert scale items had normal distribution between -2 and +2. Therefore, mean and standard deviation were computed for items 15(a-f), 18A, 18B, 26(a-n), 27(a-n) in the TS, and items 8, 14(a-e), 22(a-n) in the SS. Qualitative data was obtained from eight open-ended responses from *Feedback for Learning Survey*. Below are the eight open-ended survey items about feedback taken from both the TS and SS:

(TS) Item 24/(SS) Item 21, “What is the purpose of feedback?”

(TS) Item 23(a) “How has technology assisted you in creating effective feedback?”

(TS) Item 23(b) “How has technology challenged you in creating effective feedback?”

(TS) Item 24 “What is the purpose of feedback?”

(TS) Item 23(b) “How do you know whether your feedback is effective?”

(SS) Item 24. (c) Please think of a specific time you received feedback. What was it about the feedback that was so effective?

(SS) Item 26 “What do you think IBDP schools can do to support more effective feedback?”

(TS) Item 32 “What do you consider to be the greatest challenge to creating effective feedback, and why?”

To analyze open-ended survey responses, the researcher applied thematic analysis, which is described as “a method for identifying, analyzing and reporting patterns (themes) within data” (Braun & Clarke, 2006, p.79). While applying thematic analysis, the researcher can rely upon a deductive “top-down” approach by moving from a theory to a hypothesis to contribute to the theory or oppose it. Alternatively, they can use an inductive “bottom-up” approach by deriving broader themes from participants’ responses and identifying a theory that will relate to all themes (Creswell & Plano Clark, 2007, as cited in Soiferman, 2010, p.2). This study uses inductive approaches of thematic analysis as the researcher allowed themes to emerge from open-ended responses from the survey. However, the researcher was informed by the existing literature while conducting thematic analysis, particularly from Dawson et al.’s (2018) research exploring staff and student perceptions of effective feedback.

There are six phases of the thematic analysis. The first phase is familiarizing yourself with the data by reading the data actively to identify emerging meanings or patterns. The second phase is generating initial codes from the data, and this process can either be data-driven or theory-driven (Braun & Clarke, 2006). In phase three, the researcher begins seeking themes, which means analyzing codes and figuring out

how codes can lead to overarching themes. Phase four is about reviewing and refining some predetermined themes (Braun & Clarke, 2006). In phase five, the researcher keeps refining the themes, but this time with the purpose of defining them; in other words, with the purpose of finding out what aspect of the data is captured by each theme. Phase 6, the final phase, is about producing the report with the final themes determined and selecting vivid examples or extracts to justify each point concisely, coherently, and logically (Braun & Clarke, 2006).

Following these common steps of thematic analysis, the researcher first imported relevant data from the teacher and graduate/student survey to MAXQDA, then familiarized themselves with the data by reading the open-ended responses several times and color-coded the most repetitive words and phrases emerging from the open-ended responses. Based on the codes generated, the researcher then created broader themes. While generating the codes from the open-ended survey responses, the researcher was guided by some key characteristics of sustainable feedback, many of which overlap with the features of effective feedback existing in literature, such as timeliness of feedback, affective dimension of feedback, feedforward, and dialogic conversation.

To enhance the reliability of the thematic analysis, this study employed an audit trail review as recommended by Lincoln and Guba (1985). “An audit trail in qualitative research is a systematic and comprehensive record of the research process that enables an external reviewer to trace the study’s path and assess the dependability and confirmability of the findings (McLeod, 2024, p.1). An Associate Professor in the Educational Sciences acted as the external auditor and reviewed the open-ended responses, codebook, and emerging themes to ensure that codes reflected participants’ responses accurately and that themes generated were logically derived.

Based on feedback from the external auditor, the researcher made minor amendments in the theme labelling, which strengthened the credibility and confirmability of the analysis.



CHAPTER 4: RESULTS

Introduction

This chapter presents the findings of the study deduced by using the quantitative and qualitative research methods to explore IBDP teachers', graduates', and students' perceptions of sustainable feedback. Both quantitative and qualitative data were collected through *the Feedback for Learning* survey, which was completed by 12 IBDP teachers and 45 IBDP graduates and students. The results were analyzed based on the research questions of the study. Throughout this chapter, the teacher version of the survey will be referred to as the teacher survey, whereas the graduate/student survey will be named as student survey, and it refers to the combined responses of May 2024 IBDP graduates and grade 12 IBDP students.

Findings of the Study

Research Question 1: What are the Perceptions of IBDP Teachers, Graduates, and Students About the Purpose and Role of Feedback?

To explore this research question, item 24 from the teacher survey and item 21 from the student survey were analyzed. Both items asked stakeholders to define the purpose of feedback.

Teachers' Responses to the Purpose of Feedback

Out of ten responses for item 24, "*What is the purpose of feedback?*" (see Table 4), three overarching themes emerged: "Support Learning and Growth", "Improvement", and "Affective Dimension". The participation response rate for this item was 83.33% ($N=12$)

Table 4

Themes Emerging from the Teacher Survey to Define the Purpose of Feedback

Themes	<i>f</i>	%
Support Learning and Growth	22	68.75
Improvement	8	25.00
Affective Dimension	2	6.25

As presented in Table 4, the most dominant theme for the purpose of feedback is “Support Learning and Growth” ($f=22$, 68.75%). This theme captures a wide range of responses such as fostering self-regulation and reflection, and self-assessment/evaluation. T₈ stated, *“The main purpose of feedback is to support student learning and growth by highlighting strengths and identifying areas for improvement. Effective feedback guides students toward meeting subject-specific objectives and IB assessment criteria. It should help students reflect on their performance and develop strategies to improve their understanding and skills.”* Additionally, teachers described feedback as a means of increasing awareness about students’ strengths and weaknesses as well as aligning with assessment standards. T₁₂ specifically stated, *“In the context of education, especially within programs like the IBDP, feedback aligned with clear assessment criteria empowers students to self-assess, set goals, and take ownership of their academic progress.”*

Under this theme, there were also responses related to feedforward, supporting students' cognitive or linguistic development, and guiding students' learning journey. As expressed by T₇, the purpose of feedback is to *“to guide the student to make changes or improve on their assignment - you don't do the work for*

them, but make them reflect on the work or provide examples or specific comments so they can improve the weaker parts of the work they have turned in. Feedback on assessments lets the student know their strengths and weaknesses as a learner.”

“Improvement” theme, with 8 responses 25%, reflects teachers’ emphasis on improvement in several areas such as the quality of student work, students’ understanding of the subject or assessment criteria, communication, and grades. As T₅ stated, “The purpose of feedback is to guide students on their learning journey. It is given to improve their understanding of a topic or a specific task.”

“Affective Dimension” was the least reported theme, accounting for 6.25% ($f=2$) of the responses. This theme indicates that few teachers are aware of the emotional impact of feedback on students, as described by T₁₁, *“By providing positive feedback, it increases the student’s self-confidence and motivation.”*

Graduate and Student Responses to the Purpose of Feedback

To explore the perceptions of IBDP graduates and students about the purpose of feedback, the researcher analyzed item 21 in the student survey. The researcher came up with five overarching themes, shown in Table 5 below. These themes are “improvement”, “formative purpose”, “alignment with assessment standards”, “strategic purpose”, and “affective dimension”.

Table 5*Emerging Themes from the Student Survey to Define the Purpose of Feedback*

Themes	<i>f</i>	%
Improvement	29	39.19
Formative Purpose	28	37.84
Alignment with the Assessment Standards	8	10.81
Strategic Purpose	5	6.76
Affective Dimension	4	5.41

As demonstrated in Table 5, the most frequently uttered reference for the purpose of feedback was to “Improvement” ($f=29$, 39.19%), dominating the responses. This indicates that the majority of DP graduates and students consider feedback a tool for correcting and improving the quality of student work or performance. The corrective function of the feedback was very common among student responses:

Closely following this was the theme “Formative Purpose” of feedback ($f=28$, 37.84%), including aspects such as helping students identify/understand strengths and weaknesses, feedforward, enhancing future learning and self-regulation, and guiding students.

Notably, these two dominating themes together accounting for 77.03% of all responses show that DP graduates and students highlighted improvement through feedback and the formative role of feedback, which can be seen in their responses:

S₂: To see my work from a more experienced point of view and to improve my work and myself.

S₄₀: The feedback while doing the work should include suggestions for the content and corrections in the directions. The feedback after the work has been submitted should explain very clearly what the students' mistakes are and what they can do to change them, and how they can do it with details instead of vague statements.

G₆: To learn my needs and improve the missing parts in the assignment, but also achieve to understanding of these missing parts in the future on my own as part of this process

G₂₁: It's hard to realize mistakes or weak points of your work when you spend much time and effort on it, so feedback ensures that we are aware of our weaknesses and are constantly trying to improve them for a better result.

In contrast, “Alignment with the Assessment Standards” appears in 8 responses (10.81%), indicating a relatively minor focus on improving the assessment quality continuously in alignment with the IBDP standards and enhancing students’ approach to assessment based on the program’s expectations. The remaining themes, “Strategic Purpose” ($f=5$, 6.76%) and “Affective Dimension” ($f=4$, 5.41%) occur far less often. “Strategic Purpose” of feedback captures elements of using feedback as an institutional criticism and receiving high grades whereas “Affective Dimension” refers to boosting self-confidence, motivation and feeling of frustration. Regarding the affective dimension, G₅ stated that the purpose of feedback is “*to improve the students and to encourage them on their journey,*” while G₄₅ expressed frustration with feedback, “*I am angry with some of the teachers because they sabotaged my IB process. The purpose of feedback is to teach me something, not fight with me.*”

Overall, graduate and student responses mostly recognize feedback as an opportunity to improve the student work and increase self-awareness about weaknesses and strengths, while acknowledging its motivational role.

Research Question 2: What Makes Effective Feedback According to Teachers, Graduates, and Students?

This research question was explored through open-ended questions from the teacher survey and students' survey. Item 25 in the teacher survey, "How do you know whether your feedback is effective?" asked teachers to report indicators of effective feedback. Similarly, item 24C in the student survey directly asked graduates and students to reflect on a specific course and situation when the feedback was very effective.

Teacher Responses for What Makes Effective Feedback

Analysis of 12 IBDP teachers about what makes their feedback effective leads to the emergence of four themes shown in Table 6 below. These are learning outcomes and improvement, learner agency and reflection, engagement and application, and instructor expertise.

Table 6

Emerging Themes from the Teacher Survey for Defining Effective Feedback

Themes	<i>f</i>	%
Learning Outcomes and Improvement	11	45.83
Engagement and Application	8	33.33
Learner Agency and Reflection	4	16.67
Instructor Expertise	1	4.17

The most frequently reported theme for this item was “Learning Outcomes & Improvement” ($f = 11, 45.83\%$). In practice, teachers describe this theme as an increase in the quality of further tasks, development of a language skill, and improvement in performance between the initial and the final tasks, or improvement in grade. Several teachers claimed that they knew their feedback was effective when they saw an improvement in the subsequent tasks:

T₇: Usually, I have a quick face-to-face meeting with the students to make sure they understand the feedback, and we create a game plan. I know the feedback is effective if the student turns in a subsequent draft that has drastically improved.

T₁₁: It shows the student's development. The student should make progress between the two assignments and address their weaknesses. I can see a concrete difference between the first and the final work. This indicates development to me.

The second most common theme is “Engagement and Application” with 8 codes (33.33%), where teachers look for learners asking follow-up questions, responding to feedback, referring to previous feedback comments in class or face-to-face sessions, and actively interacting with feedback. This theme also captures students’ ability to transfer or apply feedback in new contexts, as stated by T₅, “*I know when I see a student correct or improve a part that I have previously given feedback. But the most effective one is when I give feedback, and the student uses that feedback for another task as well. Because they generally improve in the next draft, but if a student uses that in other tasks as well, then I know s/he learned.*”

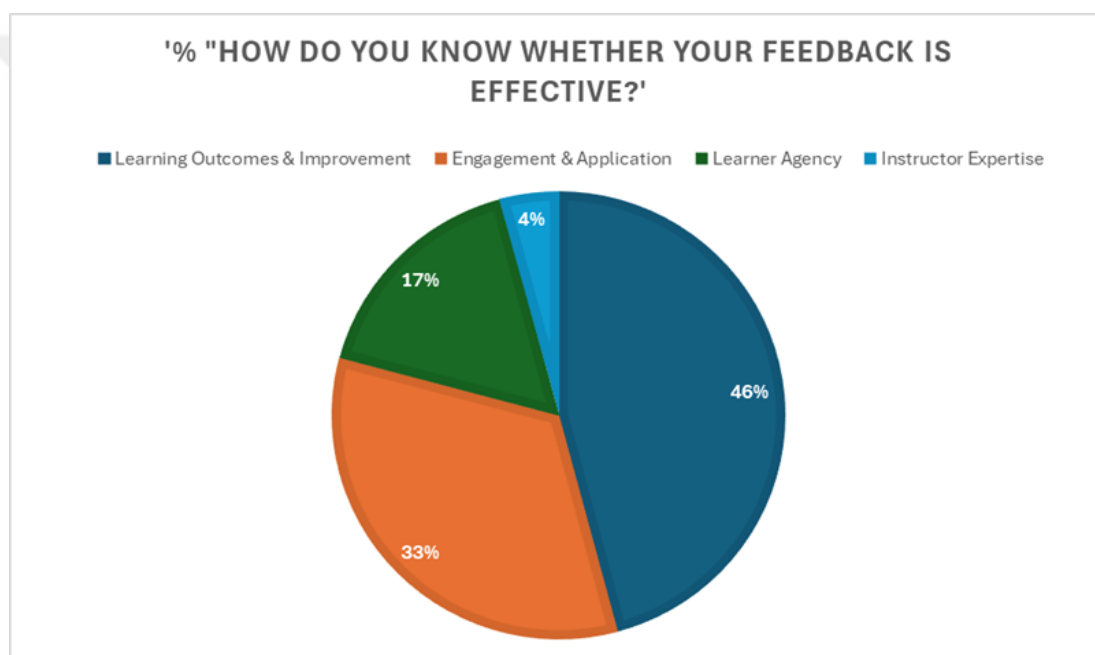
“Learner Agency and Reflection” follows with 4 codes (16.67%), showing moderate emphasis on the elements such as “evidence of metacognitive growth”, “demonstrating confidence/independence”, and “self-regulation”. T₁₂ particularly emphasized these aspects: “*I know my feedback is effective when I see evidence of*

improvement in students' subsequent work, as well as increased engagement and self-awareness in their learning process."

"Instructor expertise" is the least mentioned theme (see figure 5), mentioned only once (4.17%), suggesting minimal reference to the teacher's own expertise in realizing whether feedback is effective or not.

Figure 5

Percentage Distribution of Themes for "How do you know whether your feedback is effective?"



Graduate and Student Responses for What Makes Effective Feedback

Student survey item 24(c) asked graduates and students to think of a specific feedback moment and describe what made it effective. Forty-four combined responses were grouped into four themes (see Table 7), which capture graduate and student descriptions of effective feedback and its delivery.

Table 7*Emerging Themes from the Student Survey Item 24(c)*

Themes	<i>f</i>	%
Content of Comments	61	61
Feedback Design	24	24
Teacher's Pedagogical Approach	14	14
Learner Agency	1	1

As shown above in Table 7, “Content of Comments” ($f=61$, 61%) was by far the most frequently reported theme for effective feedback. Students' understanding of this theme included a wide range of characteristics such as timeliness, personalization, detailedness, specificity, clarity, and being focused. They also mentioned identifying strengths and weaknesses, referring to the criteria, and guidance on content/structure under this theme. Several students specifically highlighted the importance of providing detailed, clear, and specific feedback:

S₉: She told me exactly what I needed to hear and provided spot-on support. Whatever I asked, she was able to answer and gave me incredibly detailed feedback. Throughout the entire IB program, I had never received such thorough and accurate feedback before.

S₁₇: The feedback was very detailed. The teacher took his time to explain what he meant one by one. Every time I had to fix a part in my work, the teacher explained why I should fix that part, so that the learning process became effective.

G₃₅: In my first year at the IBDP, I received particularly constructive, personalized, and detailed feedback on the Individual Oral assessment from my

English A Language and Literature instructor. I received handwritten, electronic and oral feedback from my tutor, who had an in-depth knowledge of my work. I did not hesitate to contact them regarding any aspect of my work because of their willingness to help and their obvious expertise in the subject.

Responses under this theme indicated that feedback was considered more effective when teachers understood students' individual needs and provided targeted comments by utilizing their subject knowledge:

S₃₇: We sat down with my teacher and analyzed my work almost word by word and at the end of the feedback session I had a clear understanding of what to do and what not to do as the feedback I received was entirely focused on my personal mistakes and strengths. My teacher knew me so well that he directed me in the areas where he thought I would be better at. He even helped me to choose a question that fitted my writing style the best.

G₄₂: The teachers knew me and what I was expecting from myself and the assignment and guided me accordingly.

“Feedback Design” was the second common theme with a frequency of 24 (24%). This theme encapsulated multi-modal feedback, feedforward and applicability of feedback for further improvement. Students' responses showed that they preferred to have multi-modal feedback, particularly in the form of digital annotations followed by face-to-face feedback, or vice versa:

S₂: We used many methods at once such as annotating documents through drive, taking voice recordings during face-to-face feedback. Thus, we had a chance to go over every detail multiple times. Also, our teacher was open to communication and encouraged us to ask questions, which was also very helpful.

S₃₁: We had a face-to-face feedback session with my supervisor, and it was about two lessons. He told me the parts that I can think more about and how I can do research about the missing points of the internal assessment. I took notes and he sent me digital written notes.

Feedforward was relatively noticeable under this theme. Representing 25% of the responses, the third most frequently reported theme was “Teacher’s Pedagogical Approach” ($f=25$). This theme captured elements of the teacher’s expertise and resourcefulness in providing feedback. One illustrative response given below highlights the role of the teacher’s resourcefulness:

S₁₉: My teacher was always searching online resources in order to get particular rubrics for the extended essay I wrote in Biology. She was an expert about organizing data through graphs and visuals. So, the feedback she provided helped me take my essay to the next level.

Teachers’ supportive attitude and constructive tone while delivering feedback were also mentioned under this theme. S_2 stated that “Our teacher was open to communication and encouraged us to ask questions which was also very helpful.” The least frequently reported theme was “Learner Agency” ($f=1$, 2.22%). This theme reflects the ability of students to self-evaluate and self-assess their performance.

Research Question 3: To What Extent are DP teachers, Graduates, and Students Aware of Sustainable Feedback Practices?

The extent to which DP teachers, graduates, and students are aware of sustainable feedback practices was examined by analyzing their responses to the selected items in the *Feedback for Learning* survey. The selected items from the survey directly align with the sustainable feedback characteristics such as timeliness, closing the gap, personalization of feedback comments, peer feedback, dialogic

conversation, guidance for learning strategies, affective dimension, student agency, and designing spiraled assessments (Boud, 2000; Carless et al., 2011; Hounsell, 2007; Nicol & MacFarlane-Dick, 2006).

DP Teachers' Awareness of Sustainable Feedback Practices

Item 26 (a-n) of the teacher survey was used to explore their perceptions of assessment feedback, and each sub-item represents either effective or sustainable feedback practice in the literature. These sub-items asked teachers to rate the frequency of feedback practices on a five-point Likert scale (1=Never, 2=Rarely, 3=Occasionally, 4=Frequently, 5=Always) and their responses were analyzed using descriptive statistics as shown below.

Table 8

Descriptive Statistics of DP Teachers' Self-Reported Frequency of Feedback Practices

Item	N	M	SD
26B	12	4.50	0.52
26G	12	4.50	0.52
26A	12	4.41	0.51
26L	12	4.41	0.90
26H	12	4.25	0.75
26I	12	4.25	0.62
26D	12	4.09	0.70
26K	12	4.08	0.79
26C	12	4.00	0.85
26J	12	4.00	1.20

Item	N	M	SD
26M	12	4.00	0.85
26N	12	3.90	0.83
26F	12	3.83	0.83
26E	12	2.41	1.31

Table 8 shows the values for mean and standard deviation of items regarding the frequency of feedback practices. The means of sub-items that illustrate the frequency of teachers' feedback practices vary between 4.50 and 2.41 out of 5.00. Item 26E, which is "providing feedback to students that is not related to assessment tasks," had the lowest mean ($M=2.41$, $SD=1.31$). On the other hand, both 26B, "Your feedback helps students identify the gaps in their knowledge," and 26G, "Students use your feedback to help them improve," had the highest means ($M=4.50$, $SD=0.15$), indicating these practices are implemented almost "always" based on Likert scale anchors. Other items that also demonstrate relatively high means are 26A, "your feedback helps students improve their future performance," and 26L, "students seek feedback prior to submission of their work", each with a mean of 4.41. Closely following these with high means are 26H and 26I ($M=4.25$), which asks whether teachers discuss feedback with their students and whether their feedback influences further tasks of students, respectively.

Several sub-items were given relatively high means, such as 26D, "giving feedback to motivate students in their studies" ($M=4.09$, $SD=0.70$) and 26K, "designing feedback to enable students use it in further tasks" ($M=4.08$, $SD=0.79$). This indicates DP teachers' frequent engagement in these two feedback practices. Three other items which are 26C, "delivering feedback to direct students to most

appropriate strategies", 26J, "You spend time to help students understand the purpose of feedback, including how they should use it", and 26M, "providing follow up tasks to enable students to apply what they have learnt from an initial task" had a mean of 4. In comparison, 26N, "You encourage your students to get feedback from others," averaged 3.90, and 26F, "providing feedback full of encouraging and positive comments," averaged 3.83, indicating modest emphasis on the affective dimension of feedback and fostering learner agency.

While the findings listed above illustrate DP teachers' self-reported feedback practices, Table 9 below displays the findings of item 27(a-n), which asked DP teachers to reflect on the frequency of the same feedback practices as they are generally implemented across the school. Item 27(a-n) allows an insight into the DP teachers' perceptions of school-wide feedback culture and provides a broader view of sustainable feedback practices beyond their classrooms.

Table 9

Descriptive Statistics of DP Teachers' Perceptions of the Frequency of School-Wide Feedback Practices

Item	N	M	SD
27A	11	4.63	0.50
27B	11	4.54	0.52
27G	11	4.36	0.50
27I	11	4.36	0.50
27L	11	4.18	0.60
27H	11	4.18	0.75
27C	11	4.09	0.94

Item	N	M	SD
27D	11	4.00	0.89
27M	11	3.90	0.53
27J	11	3.81	1.07
27K	11	3.81	0.75
27N	10	3.60	0.84
27F	11	3.54	0.93
27E	10	2.70	1.41

The table above displays the values for mean and standard deviation of item 27(a-n) regarding DP teachers' reports on the frequency of feedback practices across the school.

When sub-items were examined, the variable, 27A, that asks whether feedback “helps/helped you improve your future performance,” had the highest mean ($M=4.63$, $SD=0.50$). The average response is between “frequently” and “always” for this item, which suggests that this practice is thought to occur frequently in the school. In contrast, the item that asks how often teachers provide feedback to students that is not related to assessment tasks had the lowest mean ($M=2.70$, $SD=1.41$).

A mean of 4.36, both for the variable 27G, “Students use feedback to help them improve,” and the variable 27I, “Feedback influences what students do in subsequent tasks,” indicate that respondents think these two practices occur “frequently” in the school. Similarly, other feedback practices that are perceived to take place “frequently” in the school are for the variables 27H, “Students discuss feedback with the teacher who provides it and 27L, “students seek feedback from

teaching staff prior to submission of work,” with a mean of 4.18. This might suggest some teachers’ awareness of the dialogic nature of feedback and student engagement in the process of feedback.

The other items with relatively low mean scores include 27M, “Teachers provide follow up tasks to enable students to apply what they have learned from an initial task with a mean of 3.90 as well as 27J, “Teachers spend time to help students understand the purpose of feedback, including how they should use it” and 27K “Units/assignments are designed so that students are able to use the feedback they receive in their next piece of assessed work”, both with a mean of 3.81.

IBDP Graduates and Students’ Awareness of Sustainable Feedback Practices.

Like item 27(a-n) listed in the teacher survey, item 22(a-n) in the student survey asked DP students to rate how often the feedback practices occur. Item 22(a-n) was measured on a five-point Likert scale (1= never, 2= rarely, 3= occasionally, 4= frequently, 5= always). Table 10 presents the frequency of self-reported feedback practices by DP graduates and students.

Table 10

Descriptive Statistics for the DP Graduates and Students’ Self-Reported Frequency of Feedback Practices

Item	N	M	SD
22G	33	4.15	0.83
22B	35	3.91	0.89
22A	30	3.90	0.84
22H	33	3.88	0.99
22I	36	3.86	0.83

Item	N	M	SD
22M	31	3.77	1.15
22C	34	3.44	1.21
22K	29	3.41	1.09
22J	33	3.33	1.14
22L	32	3.16	1.30
22D	29	3.07	1.33
22F	31	2.90	1.35
22N	28	2.82	1.33
22E	39	2.33	1.20
22O	30	2.23	0.97

Reported means for the items listed in Table 10 range from 4.15 to 2.23 across the items. Among the listed feedback practices, the item with the highest mean was 22G, “using feedback to improve” ($M=4.15$, $SD=0.50$). Similarly, other items with high means are 22A “feedback helps you improve future performance” ($M=3.90$, $SD=0.84$), 22B “feedback helps you identify gaps in your knowledge” ($M=3.91$, $SD=0.89$), and 22H “You discussed feedback with your teacher” ($M=3.88$, $SD=0.99$). These three items show that students reported these practices occur frequently. Moderate mean values were recorded for “directing students towards appropriate strategies for learning” ($M=3.44$, $SD=0.21$) and “curriculum design for allowing feedback use” ($M=3.41$, $SD=0.20$), while motivational feedback ($M=3.07$, $SD=0.25$) and follow-up tasks ($M=3.16$, $SD=0.23$) were occasionally experienced. The lowest means were given to receiving unrelated feedback ($M=2.33$, $SD=0.19$),

positive-only feedback ($M=2.90$, $SD=0.24$), and seeking feedback from other people ($M= 2.82$, $SD=0.25$).

Research Question 4: How Do Teachers Describe Their Feedback Practices and the Rationale Behind Them?

This section addresses feedback practices described by DP teachers. Since the primary aim of the overall study is to explore the perceptions of DP teachers, graduates, and students about sustainable feedback, it is important to investigate DP teachers' feedback practices: preferred modes of feedback on electronic submissions, timeliness, the level of details, and individualized comments provided by the DP teachers. These aspects are all related to effective feedback, which is also encapsulated by sustainable feedback.

To gain more insight into how teachers describe their feedback practices and the rationale they offer for these practices, items 15, 18A, 18B, 19, and 20 were analyzed. Item 15, modalities of electronic feedback, is analyzed on a 5-point Likert scale (1= Never or almost never, 2= Sometimes, 3= About half the time, 4= Most of the time, 5= Always or almost). Item 17 is a multiple-choice question used to report the feedback turnaround time of teachers. Items 18A and 18B are a 10-point slider scale allowing teachers to self-assess the level of detail and individual comments they provide while giving feedback. Both items 19 and 20 are checklists: the first one focuses on comments provided by the teachers after submission, and the latter asks teachers to identify key influences that shape their feedback practices.

Modes on Providing Feedback on Electronic Submissions

Item 15(a-f) is a checklist asking DP teachers to report the frequency of feedback modes they prefer to apply on electronic submissions. This item was selected to explore what types of feedback modalities are preferred by teachers.

Table 11 below shows the descriptive statistics for the feedback modalities on electronic submissions.

Table 11

Descriptive Statistics for the Frequency of Modes of Feedback Used by DP teachers on Electronic Submissions

Item	N	M	SD
15B	10	4.50	0.97
15C	11	4.36	0.67
15F	7	3.42	1.71
15A	10	2.90	1.85
15D	6	1.16	0.40
15E	6	1.00	0.00

The table above includes items 15(a-f) whose means vary between 4.50 and 1.00. Among the listed feedback modes, Item 15B, which is “electronic annotation (e.g. comments in word or pdf)” had the highest mean ($M=4.50$, $SD=0.97$). Similarly, item 15C, which is “face-to-face” had a high mean of 4.36 ($SD=0.67$). Other feedback modes such as “electronic rubrics/marking sheet” had a mean of 3.42 ($SD=1.71$). In contrast, item 15D, audio recording ($M=1.16$, $SD=0.40$) and item 15E, video recording ($M=1.00$, $SD=0.00$) were reported as less commonly used feedback modes.

Timeliness, Level of Detail, and Individualization of Feedback in Teacher Feedback

As feedback turnaround time, the level of detail and individualization DP teachers use in their feedback are related to Research Question 3, items 17, 18A, and

18B are selected from the teacher survey for a descriptive analysis of teacher feedback practices. Table 12 below shows DP teachers' self-reported frequency for the average turnaround time to provide feedback to students after submission.

Table 12

Frequency Table for Item 17: DP Teachers' Feedback Turnaround Time

Feedback Turnaround Time	<i>f</i>	%
Immediately	1	8.3
Within 2 weeks	10	83.4
Within 3 weeks	0	0
Within 4 weeks	0	0
More than 4 weeks	1	8.3
Not applicable	0	0

Regarding teacher feedback turnaround time after submission, “within 2 weeks” were the most reported options, selected by ten teachers, accounting for 83.4%. Only one teacher reported delivering feedback “immediately,” whereas another teacher indicated delivering feedback after “more than 4 weeks”. None of the participants selected “within 3 weeks”, or “within 4 weeks”, or “not applicable” as a category, suggesting that the majority of participants aim to return feedback within a two-week period.

Table 13 below presents descriptive statistics for Item 18A and 18B, which respectively asked DP teachers to rate how detailed and individualized their feedback is. For these two items, DP teachers were asked to respond on a scale 0 (*not at all*) to 10 (*extremely*).

Table 13*Descriptive Statistics for Detail and Individualization of Teacher Feedback*

Item	N	M	SD
18B	12	9.16	1.19
18A	12	8.66	1.15

The table above shows relatively high mean scores for both items. Item 18A, “How detailed are the feedback comments you generally provide to students after submission?” received a mean of 8.66 ($SD=1.15$), whereas item 18B, “How individualized are the feedback comments you generally provide to students after submission?” received a slightly higher mean ($M=9.16$, $SD=1.19$).

Focus of Feedback Provided by DP Teachers

Another item selected to explore teachers’ feedback practices was 19, which asked teachers to report the focus of comments they provided to students after submission. Each sub-item describes a possible focus of post-submission feedback, such as acknowledging the strengths and weaknesses of the student work or suggesting ways to improve future tasks. This item allows teachers to select multiple options that best describe the nature of their typical feedback. Table 14 below illustrates the descriptive statistics for the focus of comments DP teachers provide for assignments.

Table 14*Frequency Table: Focus of Feedback Provided by DP Teachers*

Focus of Feedback	<i>f</i>	%
Acknowledges the strengths of student performance	11	91.7
Acknowledges the weaknesses of student performance	11	91.7
Corrects errors	11	91.7
Provides models or exemplars	9	75
Relates back to the assessment criteria/standards of work	9	75
Encourages further learning	7	58.3
Suggests how to improve in future tasks	7	58.3
Invitation to discuss comments/feedback	7	58.3
Justifies the grade awarded	6	50
Refers specifically to students or their personal attributes	4	33.3

Based on the findings displayed in Table 14, the most frequently cited items were feedback that “acknowledges the strengths of the student performance”, “the weaknesses of the work”, and “corrects errors”, each selected by 11 teachers (91.7%). This shows that participants’ comments mainly focus on more conventional ways of delivering feedback, such as identifying the gap. The other two items that yielded relatively high frequencies were feedback that “provides good exemplars or models of work” and “feedback that relates back to assessment criteria/standards of work”, each reported by 9 teachers (75%). Furthermore, 7 teachers (58.3%) selected “encourages further learning”, “suggests how to improve on further tasks, and

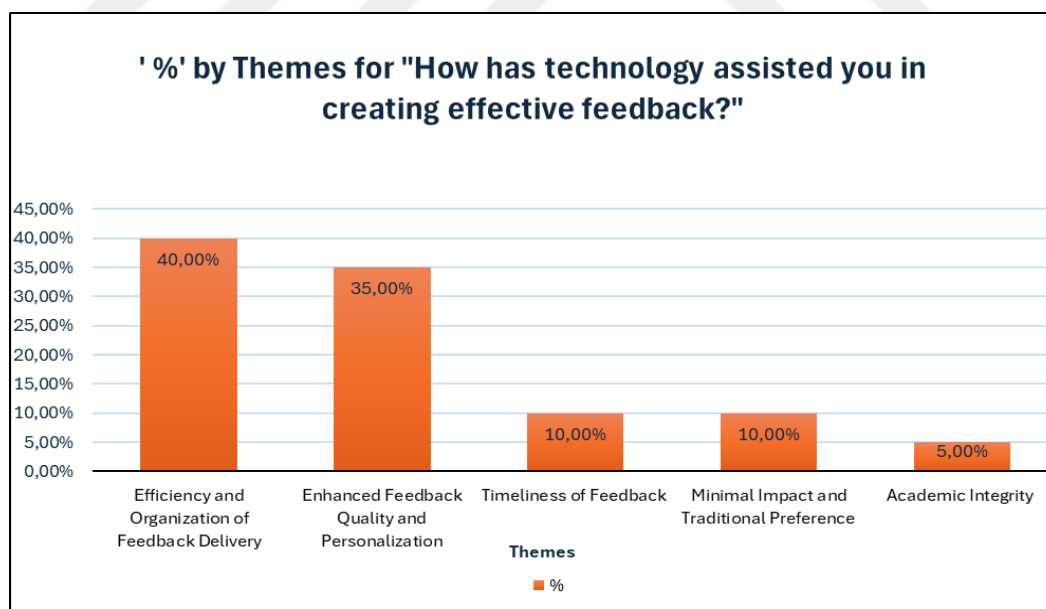
“invitations to discuss comments/work further” to describe their focus of feedback. This indicates that more than half of the participants are aware of some sustainable feedback practices, such as feedforward or dialogic conversation. The least underused item is feedback that “refers specifically to students or their personal attributes,” which was reported by 4 teachers (33.3%).

The Role of Technology in Feedback

Two survey items that are related to teachers’ feedback practices asked teachers to define in what ways technology has helped or challenged them to create effective feedback. The figure below displays the themes generated from the DP teachers’ responses regarding the usefulness of technology.

Figure 6

Emerging Themes for How Has Technology Assisted You in Creating Effective Feedback?



As the bar chart in figure 6 illustrates, “Efficiency and Organization of Feedback Delivery” was the most frequently mentioned, appearing in 40% of the responses ($f=8$). Under this theme, teachers highlighted how technology or the use of platforms such as Managebac made it easier to annotate, organize, and assess student

work. They further mentioned that it was easier to refer to assessment criteria through these technological platforms they used:

T₈: Technology has helped me streamline the feedback process by allowing me to track student progress through platforms like ManageBac. It also enables me to refer to assessment criteria easily while giving comments. In addition, I sometimes use tools such as InThinking or IB Exchange to access well-prepared rubrics, question banks, or mark schemes, which make my feedback more aligned with IB expectations. When preparing presentations or reviewing student lab reports, I use digital annotation tools or shared documents to give clear and timely feedback.

T₅: When we use Google Docs or Managebac, we can specifically highlight the related parts while giving feedback. It is easier than writing feedback on hard copy assignments. The comment part creates the necessary space to use.

“Enhanced Feedback Quality and Personalization” was the second most common theme, accounting for 35% of the responses ($f=7$). This shows that many teachers valued the benefits of technology for helping them provide detailed, specific, personalized and tailored feedback. They directly expressed this in their responses:

T₃: Technology has greatly enhanced my ability to provide timely, specific, and differentiated feedback to leave typed notes and highlight particular areas for improvement within student work.

T₁₂: Technology has significantly enhanced my ability to provide timely, personalized, and constructive feedback, particularly in subjects like philosophy and sociology.

In particular, T₁₂ emphasized that technology helped them better identify student misunderstandings and clearly address individual learning needs, “I can give

immediate feedback on their participation, pointing out sociological theories (like Bourdieu's concept of habitus) they could apply to improve their analysis.

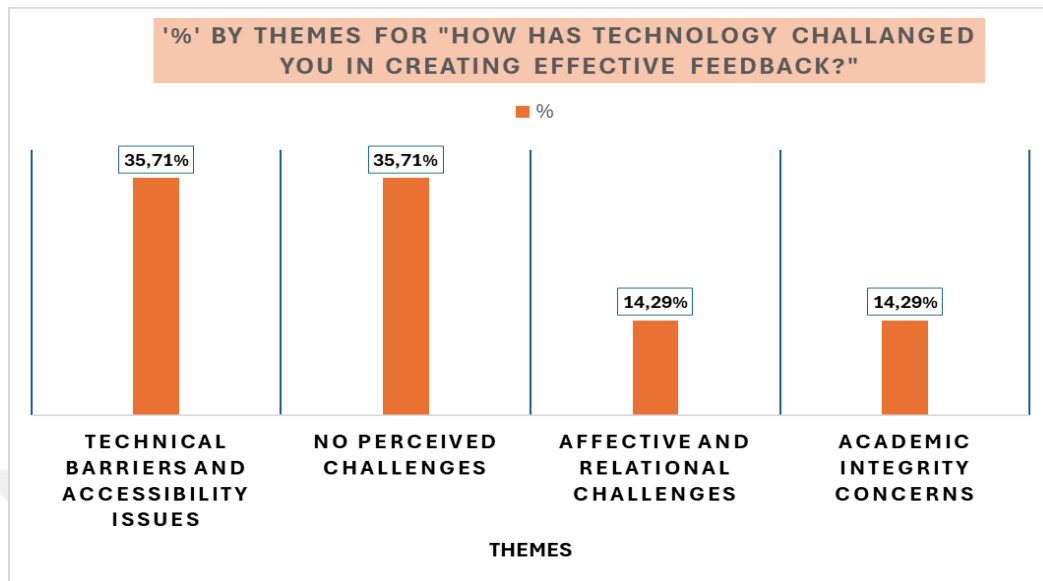
Additionally, AI-assisted tools help me detect patterns in student misunderstandings, such as confusion between correlation and causation, allowing me to address them directly in my comment.”.

The third common theme, “Timeliness of Feedback” emerged in 10% of the responses ($f=2$). This theme related to teachers' ability to give immediate feedback with the help of digital tools. A similar proportion of responses ($f=2$, 10%) fell under “Minimal Impact and Traditional Preference”, representing a small group of teachers who either prefer handwritten annotations or believe that technology does not offer significant advantages. The least mentioned theme was “Academic Integrity”, with only 5% of the responses ($f=1$). This theme underscores the role of technology in ensuring authenticity in student submissions by helping teachers detect excessive AI use or plagiarism.

As for the negative aspects of using technology, Figure 7 below reveals the themes generated from 12 responses by DP teachers.

Figure 7

Themes Emerging from Survey Item 24(B)



The distribution of the responses reveals that both “Technical Barriers and Accessibility Issues” and “No Perceived Challenges” appeared as the two equally prominent themes, each accounting for 35.71% of the responses ($f=5$). Several teachers reported technical difficulties or restrictions they experienced on the platforms, which prevented them from maximizing the depth and clarity of their feedback content and aligning it more precisely with DP assessment criteria. Furthermore, this theme covers some other issues such as feedback accessibility and engagement or the difficulty of adapting to technological tools. T_2 and T_{12} stated:

T_2 : One of the challenges is the time required to learn and effectively integrate different tools into my feedback process. Some platforms are not very user-friendly or intuitive, which can slow down the process. Also, if students do not actively check or engage with digital feedback, it can reduce the impact of the effort I put into providing it. Occasionally, technical issues or platform restrictions limit the format or richness of the feedback I would like to offer.

T₁₂: While technology has provided many advantages in delivering feedback, it also presents certain challenges — especially within the framework of the IBDP assessment criteria. One major difficulty is maintaining the depth and precision required by IB’s subject-specific rubrics when using digital platforms. For example, tools like Turnitin or online grading systems often prioritize speed and surface-level comments, which can lead to generalized or overly simplified feedback that doesn’t fully reflect the nuances of the IBDP criteria.

These responses highly contrast with those who did not consider technology as a challenge at all. In comparison, “Affective and Relational Challenges” and “Academic Integrity Concerns” appeared less frequently, each emerging in two responses (14.29%). These less common themes point to concerns such as detecting AI generated or plagiarized work and loss of personal connection in digital feedback. T₃ stated, *“digital feedback can sometimes feel impersonal or be misinterpreted without the nuance of face-to-face communication if not carefully integrated.”*

Rationale for the Feedback Practices of DP Teachers

To explore the rationale for DP teachers’ feedback practices, key influences on how they design and create feedback were analyzed with the multiple-choice options in item 20. Table 15 reveals the frequency table for the influential factors that DP teachers reported to influence their feedback design.

Table 15*Frequency Table: Influential Factors of DP Teachers' Feedback Design*

Factors	<i>f</i>	%
Your own experiences as a learner	10	83.3
A qualification in education or pedagogy (e.g., Graduate Certificate in Higher Education)	10	83.3
Learning from other staff members in your department/school	8	66.7
Informal personal development (e.g., reading books on feedback)	6	50
Formal training/workshop/module in the design of assessment and/or feedback (e.g., a professional development module or workshop)	6	50
Comments from students	5	41.7
Meetings you have attended discussing the types of comments that should be included in assessment feedback (e.g., moderation meetings)	4	33.3
Other	1	8.3

Note. N= 12 DP teachers. Multiple responses allowed.

Based on the table above, the most frequently reported factors for teachers' feedback design are "their own experiences as learners" and "qualification in education or pedagogy (e.g., Graduate Certificate in Higher Education)", each selected by 10 teachers (83.3%). "Learning from other staff members" is selected by 8 DP teachers (66.7%), indicating that departmental or peer collaboration is an influential factor for shaping their feedback approaches. "Informal personal

development” such as reading books on feedback were selected by 6 DP teachers (50%) as were “Formal training/workshop/module in the design of assessment and/or feedback”. Less frequently selected factors were “comments from students” ($f=5$, 41.7%) and “meetings teachers have attended discussing the types of comments” ($f=4$, 33%). Only one DP teacher selected the “Other” factor and to clarify, wrote, “Comments from students are surely a part but sometimes it is less about their comments and more about their reactions.”

Research Question 5: To What Extent Do DP Graduates and Students Find Feedback Useful and Sustainable?

This research question seeks to explore the extent to which DP graduates and students find feedback useful by focusing on the descriptive analysis of the survey items 8 and 14(a-e).

Table 16

Descriptive Statistics for the Usefulness of Comments Prior to Submission

ITEM	N	M	SD
8 Usefulness of comments prior to submission	45	3.20	0.73

Item 8 in the student survey specifically asked respondents to rate the usefulness of the comments they received from school staff before submission. Item 8 was measured on a five-point Likert scale (1= not at all, 2= slightly, 3= moderately, 4= very, 5= extremely). The mean, 3.20 ($SD=0.73$) for this item suggests moderate graduate and student satisfaction with the usefulness of comments provided to students prior to the submission. To address this research question further, DP graduates and students were asked to respond to item 14(a-d) based on the DP

subjects they studied in their combinations. Sub-items of 14 address five dimensions of feedback such as understanding comments, detailedness of comments, using comments to improve further work, personalized comments, and specific statements about the assignment.

Specifically, sub-items 14C and 14D relate to the characteristics of sustainable feedback as applicability of comments to future works and providing individualized feedback are its key characteristics. The findings were grouped based on the DP subject groups. The initial findings below (see Table 17) show descriptive statistics for Group 1 *Studies in Language & Literature* and Group 2 Language Acquisition.

Table 17

Descriptive Statistics of Item 14(a-e) for Group 1 and Group 2

DP Subject	Items	N	M	SD
Turkish A Literature	14C used the comments to improve subsequent work	45	4.33	0.90
	14A understood comments	45	4.27	0.84
	14D comments were personalized	45	4.07	1.21
	14E comments included specific statements about the assignment	44	4.07	1.19
	14B comments were detailed	45	4.00	1.24
English A Language & Literature	14C used the comments to improve subsequent work	32	3.88	1.21
	14E comments included specific statements about the assignment	32	3.81	1.23
	14D comments were personalized	32	3.72	1.30

DP Subject	Items	N	M	SD
Literature & Performance	14A understood comments	32	3.69	1.15
	14B comments were detailed	32	3.59	1.34
	14E comments included specific statements about the assignment	11	4.09	0.83
	14A understood comments	12	3.83	1.19
	14C used the comments to improve subsequent work	12	3.75	1.22
	14D comments were personalized	12	3.75	1.36
	14B comments were detailed	12	3.25	1.22
	14A understood comments	5	5.00	0.00
	14E comments included specific statements about the assignment	5	5.00	0.00
	14B comments were detailed	5	4.80	0.45
German B (Group 2)	14D comments were personalized	5	4.80	0.45
	14C used the comments to improve subsequent work	5	4.00	1.73

The analysis of item 14(a-e) for Group 1 and 2 subjects indicates positive results overall, albeit notable variability across subjects. Turkish A Literature, with a robust sample of 45 respondents, shows strong agreement for item 14C “I used comments to improve subsequent work” ($M=4.33$, $SD=0.90$). Respondents reported high levels of understanding comments in German B ($M=5.00$, $SD=0.75$), Turkish A

Literature & Literature ($M=4.27$, $SD=0.84$), and Literature & Performance ($M=3.83$, $SD=1.19$). English A Language & Literature, with a considerable sample ($n=32$) rated a high score for item 14C, “I used the comments to improve subsequent work” ($M=4.33$, $SD=0.90$). However, some other ratings show moderate mean scores for other dimensions in this subject. For instance, while comments were generally understood ($M=3.25$, $SD=1.22$), there might be room for improvement in providing detailed comments ($M=3.59$, $SD=1.21$).

Literature & Performance ($n=12$) had a lower mean of 3.75 both specifically for feedback dimensions such as using comments in later works and providing detailed comments. Providing detailed comments has the lowest mean for this subject ($M=3.25$, $SD=1.22$). Despite its small sample size ($n=5$), German B stands out as respondents rated all feedback dimensions exceptionally high.

As for Group 3 subjects like Turkey in the 20th Century (TITC), and Economics, Table 18 below displays the ratings by DP graduates and students.

Table 18

Descriptive Statistics of Item 14(a-e) for DP Group 3 Subjects: TITC and Economics

DP Subjects	Items	N	M	SD
TITC	14A understood comments	44	4.50	0.66
	14E comments included specific statements about the assignment	44	4.36	0.97
	14C used the comments to improve subsequent work	43	4.33	0.92
	14D comments were personalized	44	3.95	1.14
	14B comments were detailed	43	3.93	1.20

DP Subjects	Items	N	M	SD
Economics	14A understood comments	8	3.88	1.55
	14E comments included specific statements about the assignment	8	3.75	1.58
	14B comments were detailed	8	3.62	1.51
	14C used the comments to improve subsequent work	8	3.62	1.51
	14D comments were personalized	8	3.25	1.58

Survey responses from graduates and students in TITC ($n=43-44$) showed strong agreement with the feedback dimensions, particularly for understanding feedback comments ($M=4.50$, $SD=0.66$) and specificity of comments for assignments ($M=4.35$, $SD=0.95$). As for Economics, graduates and students reported moderate agreement with feedback dimensions. Understanding feedback comments ($M=3.88$, $SD=1.55$) and specificity of comments for assignments ($M=3.74$, $SD=1.58$) were given higher means, while personalization of comments had the lowest mean, 3.25 ($SD=1.58$).

DP Group 3 subjects, TITC and Economics, offered within the researcher's school context also yielded varying results. The rating about the feedback dimension for these subjects is illustrated below (see Table 19).

Table 19*Descriptive Statistics of Item 14(a-d) for DP Group 4 Subjects*

DP Subjects	Items	N	M	SD
Biology	14A understood comments	29	4.34	0.86
	14C used the comments to	29	4.28	1.13
	improve subsequent work			
	14E comments included specific	29	4.28	1.00
	statements about the assignment			
	14D comments were	29	4.14	1.16
Chemistry	personalized			
	14B comments were detailed	28	4.07	1.21
	14C used the comments to	24	4.33	0.92
	improve subsequent work			
	14A understood comments	24	4.29	0.91
	14D comments were	24	4.17	1.05
Computer Science	personalized			
	14E comments included	24	4.04	1.23
	specific statements about the			
	assignment			
	14B comments were detailed	24	3.71	1.37
	14E comments included	4	3.75	1.89
Science	specific statements about the			
	assignment			
	14A understood comments	4	3.50	1.73
	14B comments were detailed	4	3.50	1.73

DP Subjects	Items	N	M	SD
	14D comments were personalized	4	3.00	2.31
	14C used the comments to improve subsequent work	4	2.75	2.06
Physics	14A understood comments	16	2.81	1.22
	14E comments included specific statements about the assignment	16	2.69	1.14
	14C used the comments to improve subsequent work	16	2.50	1.21
	14D comments were personalized	16	2.25	1.18
	14B comments were detailed	16	2.25	1.06

Respondents in Biology and Chemistry gave high mean scores for feedback dimensions, indicating strong satisfaction. Item 14A “understanding feedback comments” had particularly high means both in Biology ($M=4.34$) and Chemistry ($M=4.29$), followed by “using feedback comments in subsequent works” with a mean of 4.33 in Chemistry and 4.28 in Biology. In contrast, Physics and Computer Science reveal lower satisfaction levels for feedback dimensions. Notably, Physics students ($n=16$) reported the lowest mean of 2.25 for both item 14B “comments were detailed” and 14D “comments were personalized”. This shows a high level of disagreement for these feedback elements. Similarly, respondents in Computer

Science gave moderate-to-low ratings, particularly for 14C “using feedback comments to improve subsequent work” ($M=2.75$, $SD=2.06$).

The following three tables summarize how DP graduates and students in Group 5 (Mathematics), Group 6 (Visual Arts) and Core (Extended Essay and Theory of Knowledge) evaluated various aspects of feedback they received. Striking contrasts emerge between the consistently high mean scores in Visual Arts and Theory of Knowledge (TOK) and relatively average mean scores reported for Mathematics and Extended Essay.

Table 20

Descriptive Statistics of Item 14 (a-e) for IBDP Group 5 Subject Mathematics Analysis & Approaches

DP Subjects	Items	N	M	SD
Mathematics Analysis & Approaches	14E comments included specific statements about the assignment	45	3.47	1.38
	14D comments were personalized	45	3.38	1.34
	14C used the comments to improve subsequent work	45	3.36	1.30
	14A understood comments	45	3.18	1.39
	14B comments were detailed	45	3.04	1.40

Based on Table 20, Mathematics Analysis and Approaches (N=45) demonstrates moderate agreement for feedback dimensions, with means ranging from 3.04 for item 14B to 3.47 for item 14E. Respondents gave moderate means for

understanding feedback comments ($M=3.18$) and using feedback comments for further tasks ($M=3.36$). Table 21 below illustrates high means for DP Visual Arts.

Table 21

Descriptive Statistics of Item 14 (a-e) for IBDP Group 6 Subject Visual Arts

DP Subjects	Items	N	M	SD
Visual Arts	14B comments were detailed	4	5.00	0.00
	14D comments were personalized	4	5.00	0.00
	14E comments included specific statements about the assignment	4	5.00	0.00
	14A understood comments	4	4.75	0.50
	14C used the comments to improve subsequent work	4	4.75	0.50

Visual Arts ($n=4$) stands out with high means for three of the feedback dimensions ranging from 4.75 to 5.00. Visual Arts respondents unanimously agreed that feedback practices were detailed, personalized and included specific statements. Yet, considering the small sample size, these findings should be interpreted cautiously. Table 22 below shows the findings for the IBDP core: Theory of Knowledge and Extended Essay.

Table 22*Descriptive Statistics for Item 14 (a-e) for IBDP Core*

DP	Items	N	M	SD
Subjects				
TOK	14E comments included specific	45	4.33	0.95
	statements about the assignment			
	14C used the comments to improve	44	4.23	1.03
	subsequent work			
	14A understood comments	45	4.07	1.05
	14D comments were personalized	44	3.98	1.25
EE	14B comments were detailed	45	3.96	1.24
	14E comments included specific	45	3.60	1.45
	statements about the assignment			
	14D comments were personalized	44	3.45	1.53
	14C used the comments to improve	45	3.44	1.49
	subsequent work			
	14A understood comments	45	3.44	1.50
	14B comments were detailed	45	3.31	1.58

For the core DP components, TOK (N=44-45) had the highest mean of 4.33 for having specific comments about the assignments. Item 14A and 14C also had high means, 4.07 and 4.23, respectively. As for Extended Essay, relatively moderate means, ranging between 3.31 to 3.60, were reported. Compared to other DP subjects, Extended Essay has lower means for including specific statements about the assignment ($M=3.60$), providing detailed comments ($M=3.31$). Similar to some other

DP subjects like Physics and Computer Science, Extended Essay received lower means for 14A and 14C ($M=3.44$).

Research Question 6: What are the Challenges of Providing Effective Feedback in an IBDP Setting and What Can IBDP Schools Do to Support More Effective Feedback?

To explore this final sub-research question more comprehensively, item 32, “What is the greatest challenge to creating effective feedback?” from the teacher survey and item 26, “What can IBDP schools do to support more effective feedback?” from the student survey was explored through thematic analysis. By incorporating perspectives of teachers and students under this research question, the researcher had the opportunity to have a more holistic understanding of the challenges DP teachers had for delivering effective feedback as well as the expectations and recommendations voiced by DP students. Table 23 illustrates the frequencies and percentages of challenges identified by DP teachers for providing effective feedback.

Table 23

Themes Identified for Teachers’ Responses to Challenges of Creating Effective Feedback

Themes	<i>f</i>	%
Structural Constraints	9	50
Pedagogical Expectations	6	33.33
Emotional and Professional Sustainability	2	11.11
Student Dynamics	1	5.56

As illustrated in Table 23, the most reported theme considered to be a challenge for creating effective feedback was "Structural Constraints", with a frequency of 9 (50%). This theme encompasses the concerns raised by teachers such as time management, heavy workload or the number of students assigned. T₇ expressed these concerns clearly, *"Time - if we want to provide students with good feedback, we need time to sit down and give them the feedback. Not only do I go through each internal assessment (IA) and give detailed feedback, when I've timed it, it can take me from 45 min to 1 hr per IA to read everything and leave comments - and then we also have a quick oral feedback session. The greatest challenge is having enough time to do it and having a work-life balance so that giving the proper feedback doesn't take over your life."* or relying on AI due to workload.

The second most frequently reported theme was "Pedagogical Expectations" ($f=6$, 33.33%), indicating difficulties of giving detailed, multi-modal feedback and coping with personalized support demands from students. Other cited responses that fall under this theme are having difficulty with modes of feedback and lack of expertise in delivering feedback. These responses suggest that time and workload pressure as well as handling demands for personalized support and feedback design are predominant challenges for effective feedback. Minor challenges for providing effective feedback were "Emotional and Professional Sustainability", reported twice (11.11%). Challenges described under this theme are lack of experience and having difficulty balancing feedback modes. "Student Dynamics" is the least common theme ($f=1$, 5.56%) and relates to the student attitude as stated by T₆, *"Students may be stubborn."* These responses overall suggest that time and workload pressure as well as handling demands for personalized support and feedback design are predominant challenges for effective feedback.

As for the graduate and student responses to item 30 “What can IBDP schools do to support more effective feedback?”, there is a wide range of suggestions mentioned in the open-ended responses. Based on the nature of the responses, the researcher generated five themes which are assessment standards and accountability, feedback content and modes, teacher quality and training, feedback process and timeliness, and social and affective dimension. Table 24 below presents the graduate and student solutions for more effective feedback in the IBDP context.

Table 24

Themes: Graduate and Student Suggestions for Supporting More Effective Feedback

Themes	<i>f</i>	%
Assessment Standards and Accountability	18	25.71
Feedback Content & Modes	17	24.29
Teacher Quality & Training	15	21.43
Feedback Process & Timeliness	12	17.14
Social & Affective Dimension	8	11.43

The most prominent theme with the highest frequency (18) and percentage (25.71%) was “Assessment Standards and Accountability”. This theme covers issues of monitoring teachers’ feedback quality, establishing a standardized interpretation of assessment criteria, reviewing negative feedback about teachers, and implementing an accountability system for feedback quality. Several graduates and students addressed issues regarding teacher quality and the need for monitoring feedback quality in their open-ended responses:

G₃₄: Hire competent people, do not tolerate instructors who appear to get along well with students while avoiding doing real work. In my experience, if an instructor does not present written feedback, it is because they do not understand how to evaluate that assessment. There has to be an external mechanism checking the quality and length of written feedback.

S₃₃: First of all, feedback giving processes should be controlled by administrators. At this point, certain informative presentations should be made to teachers. It should be mandatory for feedback to be given both electronically and verbally.”

Close behind, “Feedback Content and Modes” represents 24.29% of the suggestions ($f=17$). Encouraging multi-modal feedback practices as well as providing detailed, balanced, and personalized feedback are most frequently mentioned suggestions under this theme. S₂₉ stated, *“Feedback should be given to each written sentence and both positive and negative feedback should be given. Alternative example sentences should be included in feedback, and this process should take place both in hard copy and face to face.”* This theme covers issues such as limiting AI generated feedback and promoting more constructive, solution-oriented feedback, providing guidance on the format and expectations.

“Teacher Quality and Training” emerges as the third frequent theme, comprising 21.43% ($f=15$) of the suggestions. These suggestions underscore the perceived need for recruiting competent, committed and empathetic teachers and arranging professional development to enhance teachers’ understanding and interpretation of assessment criteria. The theme of “Feedback Process and Timeliness” appears less frequently, with 17.14% of the responses ($f=12$). There are specific issues under this theme that call for attention such as allocating specific

timeframes for feedback provision. G₉ stated that, *“I think there must be feedback sessions arranged by the coordinator as a separate lesson in the timetable. It should be determined in advance when and from which lesson students will receive feedback.”* Furthermore, responses under this theme highlighted setting realistic, providing timely feedback, increasing feedback turnaround time and ensuring teachers also abide by given deadlines.

“Social and Affective Dimension” is the least referred theme, constituting 11.43% ($f=8$) of the responses. While less prevalent, this theme shows the importance of fostering a healthy relationship between students and teachers, encouraging teachers to empathize with student perspectives, and avoiding using a demotivating tone during feedback delivery. S₄₀ stated, *“I think the relationship dynamic between the supervisor and the student is very important. If there is a sincere and trusting environment between the two, this positive environment encourages the student to get more feedback and to apply this feedback. I also think that this foundation between the student and the supervisor is reflected in the student's enthusiasm and mood about the course.”*

All things considered, teachers report time constraints as the greatest challenge for delivering effective feedback. As for the suggestions by the graduates and students, they underscore the role of teacher competency, systematized and standardized feedback practices and providing more personalized feedback to support effective feedback.

CHAPTER 5: DISCUSSION

Introduction

The purpose of this study is to explore perceptions of IBDP teachers, graduates, and students on sustainable feedback. In this chapter, the general purpose of the study is reemphasized, and the findings of the study are discussed in relation to the previous studies conducted in the literature. In addition to the discussions, implications for further practice, further research, and limitations are presented in this chapter.

Overview of the Study

This study was born out of a recognition that there was a need for research about sustainable feedback perceptions in the IBDP setting in Türkiye. Having built upon Boud's (2002) notion of sustainable assessment, practices that meet immediate assessment demands without sacrificing the goal of developing students' knowledge, skills, and dispositions to make them lifelong learners. Hounsell (2007) introduces the notion of sustainable feedback and describes its three strands as:

- “high value” feedback whose impact exceeds beyond the task
- encouraging students to engage with and interpret feedback
- aligning guidance with feedback to design teaching and learning environments for a more productive dialogue.

The IB is aware of the significant role of assessment to promote student learning and growth; thus, their approach to assessment is that “learning, teaching and assessment should effectively inform and support one another” (IB, 2021). IB asserts that the key to effective feedback starts with designing meaningful assessment (IB, 2021). Furthermore, IB's definition of feedback closely aligns with

the elements of sustainable feedback. Effective feedback is “actionable, timely, concrete, forward-looking, attending to the affective aspect of assessment, promoting student agency, relevant, and in some way personalized” (IBO, 2021, p. 10).

While there are some studies that explore feedback perceptions of staff and students in tertiary or high school contexts, there are only a few studies about feedback perceptions in the IBDP context, and the existing ones do not include the perceptions of different stakeholders. To address this gap regarding sustainable feedback in high schools implementing IBDP, the *Feedback for Learning Survey* was adapted and modified to explore teacher, graduate, and student perspectives. As the research is a single case study, the sample school selected is the school where the researcher works as Vice Principal and IBDP Coordinator. Twenty-two teachers and 45 graduates, and students filled out the *Feedback for Learning Survey*.

As presented in Chapter 3, both the teacher survey and the student survey consist of Likert-type questions that align with the characteristics of sustainable feedback. Furthermore, both surveys include open-ended questions that enable the researcher to explore the purpose of feedback, what makes feedback effective, what kind of challenges there are for providing effective feedback, and what can be done to support more effective feedback. The data collected through online surveys were used to answer the following main research question: “What are the perceptions of IBDP teachers, graduates, and students about sustainable feedback?” and sub-questions listed below:

1. What are the perceptions of IBDP teachers, graduates, and students about the purpose and role of feedback?

2. What makes effective feedback according to teachers, graduates, and students?
3. To what extent are IBDP teachers, graduates, and students aware of sustainable feedback practices?
4. How do teachers describe their feedback practices and the rationale behind them?
5. To what extent do IBDP graduates and students find feedback useful and sustainable?
6. What are the challenges of providing effective feedback in an IBDP setting and what can IBDP schools do to support more effective feedback?

The discussion of major findings is revealed in the next section.

Discussion of Major Findings

IBDP Teachers', Graduates, and Students' Perceptions Regarding the Purpose of Feedback

In this study, the perceptions of different stakeholders in the IBDP context were explored through the open-ended survey item. The findings of this open-ended question reveal a common understanding among IBDP teachers, graduates, and students since both parties define the purpose of feedback to improve the quality of the work, students' knowledge and understanding, or grades. Both groups also acknowledge the role of feedback in supporting learning and growth.

Teachers, however, primarily highlighted that feedback fosters student growth, particularly through reflection, self-regulation, and self-evaluation. Teachers' dominant view of feedback purpose is in line with Nicol and MacFarlane-Dick's (2006) model of the seven principles of good feedback, which focuses on enhancing learner autonomy. On the other hand, graduates and students think the

purpose of the feedback is to improve the quality of the work, identify and correct mistakes. This echoes Sadler's (1989) well-known definition of feedback; it closes the gap between the current and the desired performance. Graduates and students, though not primarily, put great emphasis on the formative nature of feedback, such as increasing their understanding of the assessment task and criteria, or reflection and self-regulation. One interpretation of these findings is that teachers view feedback holistically, while graduates and students value actionable and practical feedback that leads to tangible improvement in their work. This pattern of results partially aligns with Henderson et al.'s study, where the majority of teachers and students predominantly highlighted improvement as the purpose of feedback, though they also mentioned identifying strengths and weaknesses, affective purpose, and justifying a grade. In another study by Sandal et al. (2022), diverging feedback perceptions of teachers and students in secondary education can be observed. While teachers in this study demonstrated an awareness of promoting self-regulation, grade nine students mainly focused on grading and summative assessment.

Notably, emotional or motivational purposes of feedback were only mentioned by a few people in both groups, who suggested that feedback should motivate and encourage students to do better rather than frustrate them. This finding echoes the findings of Dawson et al.'s (2018) study, where a small number of staff and students similarly mentioned affective purposes of feedback. Specifically, students in this study expressed how feedback can be destructive unless a motivational attitude is embraced. According to Pitt and Norton (2017), emotional reactions play an important role in determining students' reaction to feedback received and critical feedback can have a positive or negative impact on students' self-efficacy and motivation. The finding regarding the affective dimension of

feedback in this study may indicate that boosting student confidence and motivation is an underrecognized feedback practice. Furthermore, a small number of students related the purpose of feedback to strategic purposes such as receiving higher grades, which possibly indicates that DP graduates and students view feedback not only as a learning aid but also to perform well within high-stakes programs like IBDP.

What Makes Feedback Effective? Teacher, Graduate, and Student Perspectives

Teachers know their feedback is effective when they clearly observe its impact on learning outcomes. They identified indicators such as the development of skills and progress between the first and subsequent tasks. This definition of effective feedback as visible improvement is consistent with the earlier literature, which conceptualizes effective feedback as an action taken by students to close the gap between the current performance and the expected one by the teacher (Boud, 2000; Sadler, 1989). Though less frequently, teachers also reported that they consider their feedback effective when it fosters self-regulation and develops confidence and independence in learning. According to Nicol and MacFarlane-Dick (2007), teachers can support self-regulation as they can provide effective feedback on students' work and students themselves. A study conducted to measure the relationship between feedback and the time spent on the task revealed that the more frequent and regular the feedback was, the better students could monitor and self-regulate their progress (Gibbs & Simpson, 2004). Teachers, additionally, reported that they consider feedback to be effective if they observed students applying it in further tasks, peer assessment, or if they actively engaged in the feedback process by asking questions. This emphasis on student engagement directly aligns with the idea of student involvement in the feedback process promoted in formative assessment

literature (Hounsell, 2007).

As for graduates and students, their responses heavily focus on feedback comments that are detailed, clear, focused, specific, personalized, and criterion-referenced. This finding on the nature of comments aligns with Dawson et al.'s (2018) research and Li and De Luca's (2014) systematic review, that show students desire these types of comments. Moreover, these characteristics are clearly addressed in the feedback literacy IB (2021) expects its educators to develop. In addition to this, students expect to have comments that identify strengths and weaknesses or fix mistakes. All these characteristics mentioned by students are confirmed by Voelkel et al.'s study (2020), which revealed very similar student responses regarding effective feedback.

Students' responses also touched upon feedback design that is applicable to further improvement, aims to feed forward, delivered timely, and in a multi-modal format. While feedback design is also mentioned in Dawson et al.'s (2018) research, the majority of responses on feedback design emerged from teachers rather than students. Another repetitive response from this open-ended survey addressed teachers' pedagogical approach while delivering feedback. Students not only appreciate teachers' resourcefulness during guidance but also expect teachers to adopt a positive attitude and tone while delivering feedback. These expectations about the emotional dimension of feedback are consistent with some studies in literature. According to Shields (2015), feedback can trigger some strong emotions and challenge self-esteem when students are in an academically rigorous environment. To increase feedback uptake, teachers should balance honest comments with sensitivity and deliver feedback with a constructive and supportive attitude (Xu & Carless, 2017).

While a few responses from teachers mentioned promoting learner agency as an indicator of effective feedback, it was the least reported aspect by graduates and students, suggesting an area for further development of learner agency in the school, specifically for IBDP students. This might be because IBDP students see feedback as a shortcut to increasing their grades for internally or externally assessed coursework, which will naturally influence their overall IBDP scores.

All things considered, while teachers relate effective feedback to improvement in performance or grades and more observable feedback uptake, students' effective feedback points to an immediate and actionable one. In other words, teachers' view is more retrospective and outcome-based whereas students are more process-oriented. It could be inferred from these findings that students involved in academically rigorous programs like IBDP demand more detailed, personalized, multi-modal, and actionable feedback. Therefore, IBDP educators may need to align their feedback design with the IBPD's formative feedback approach by giving insight into students' current achievement, progress, and learning processes (IBO, 2021).

Awareness of Sustainable Feedback Practices Among Teachers, Graduates, and Students

To explore whether different stakeholders are aware of sustainable feedback practices in the IBDP, respondents were asked to rate the frequency of sub-items, most of which specifically align with sustainable feedback features.

One of the major findings is that IBDP teachers reported having frequently provided feedback that identifies gaps in student work and helps them improve. Teachers also acknowledged that their feedback shaped students' future performance, and students sought feedback prior to submissions. According to

Hounsell (2007, p.104), giving students an opportunity for “recursive cycles of dialogue and feedback” can enhance the quality of the student work. In fact, some studies show that students develop learner agency and self-regulation through discussion and reflection (Feeney, 2007; Hyland & Hyland, 2006).

Additionally, moderately high response patterns for feedback practices such as dialogic feedback, arrangement of feedback design for increasing feedback uptake, and motivating students during feedback delivery stood out among findings. Similarly, there were high response patterns for three other feedback practices, which were feedforward, helping students utilize feedback, and designing formative assessment to make feedback applicable to further tasks. In fact, several studies highlight the importance of dialogic approaches to feedback, such as clarifying or modelling good examples through discussion prior to submission, having an ongoing interaction about the quality of the work, and unpacking teacher comments (Beaumont et al., 2011; Carless, 2011; Nicol, 2010). The iterative nature of feedback should not be taken for granted, as suggested by Dawson et al. (2018).

However, findings from teachers’ feedback practices also reveal that providing feedback full of encouraging and positive comments and allowing students to seek feedback from others had slightly lower means, suggesting that teachers may not have completely integrated these two elements into their daily feedback practices.

When teachers were asked to rate the frequency of the same practices across the school, the findings slightly diverged. While IBDP teachers reported that feedback that improves students’ future performance and identifies strengths and weaknesses is observed frequently across the school, they thought practices such as designing units or follow-up tasks to allow students to use feedback and allocating

time to explain the purpose of feedback and how to use feedback were not very frequent. In fact, several studies promote the idea that teachers should design curriculum and assessment sequentially and be approachable to help students engage in dialogue to increase feedback uptake and foster self-regulation (Carless & Winstone, 2020; Price et al., 2011). This interesting finding points to a discrepancy between teachers' self-reported feedback practices and those applied across the school. This suggests that while teachers believe they individually engage in sustainable feedback practices more frequently, they think these practices occur less frequently across the school.

As for the graduate and student ratings for sustainable feedback practices, they acknowledged that the feedback helped them improve themselves, which might indicate that they had a high level of feedback uptake. They also reported that they frequently received feedback that helped them improve future performance and identified the gaps in their work, which parallels with teachers' findings for these items. Similar to teachers, they confirmed that discussing feedback with the teacher was a frequent practice. However, some discrepancies are visible for other feedback practices. For example, while teachers tended to rate their own engagement with feedback strategies such as providing follow-up tasks or designing tasks to increase the applicability of feedback to further tasks at relatively high levels, graduates and students considered these practices to occur occasionally. Regarding the affective dimension of feedback, they reported lower means for the feedback that motivates them compared to teachers. This contrast in graduate and student perspectives might indicate that some feedback practices are not visible to students, or they are not systematically applied. Such discrepancies between stakeholders' views about different elements of feedback have also been observed in other studies as well. For

instance, Carless's (2006) research about teachers and students' perceptions of feedback revealed that teachers believed they provided more detailed and useful comments than students did.

Another interesting finding is the lower rating assigned to seeking feedback from others by both groups, especially with a stark difference in student ratings. One possible interpretation could be that peer feedback or seeking feedback from other teachers is not a common practice across the school. Studies in literature emphasize that learners should benefit from feedback cycles with a variety of sources, especially by engaging in peer feedback, to develop their sense of judgement and comprehend the assessment criteria (Henderson et al., 2019; Tai et al., 2018). Furthermore, these sources of feedback could not only be their educators and their peers, but also online communities or tutoring software. (Henderson et al., 2019).

Teachers' Feedback Practices and the Rationale Behind Them

Teachers' feedback practices were explored around four aspects of feedback: modality, turnaround time, its level of detail and individualization, and the role of technology in assisting or challenging their feedback design.

DP teachers strongly favor delivering feedback through digital annotations and face-to-face interactions. Electronic annotation was the most frequently preferred feedback modality, closely followed by face-to-face interactions, indicating that these two practices are more commonly integrated into teachers' feedback design. Marking sheets or rubrics for feedback emerged as a moderately applied practice, whereas other modalities of feedback, such as audio and video recording, were rarely used. This finding suggests that there could be more active engagement in multi-modal feedback practices in this IBDP school because it is considered to be one of the conditions that enable sustainable feedback. In fact, a

group of researchers demonstrated that students benefit from multiple modes of feedback, particularly if digital annotations are combined with audio recordings and students value this type of personalized feedback (Parkers & Fletcher, 2017; Ryan et al., 2019).

In terms of timeliness of feedback, most teachers reported delivering feedback either within one week or two weeks after submission. As for the level of detail and individualization of feedback, teachers consistently reported that their feedback includes both elements. These findings show that DP teachers prioritize providing timely and individualized feedback by frequently combining digital annotations with dialogic conversations. However, other multi-modal feedback practices, such as audio or video recordings, seem to be underused.

When asked to report on their focus of feedback, nearly all IB DP teachers noted that their feedback identifies strengths and weaknesses and corrects errors, as well as providing models or examples as well and relates feedback to the assessment criteria. Practices required for more sustainable feedback, such as encouraging further learning, suggesting improvements for further tasks, and inviting students to discuss the comments, were reported by more than half of the teachers. In contrast, feedback referring to students' personal attributes was the least common practice.

The findings on teachers' feedback focus indicate that the majority seem to utilize traditional methods of providing feedback, such as error correction and gap identification, more. However, there seems to be less emphasis on feedback strategies that foster learner agency, dialogic interaction, and application of feedback to future learning. As Henderson et al. (2019) put forward to define conditions that render feedback effective, feedback information must be actionable, meaning learners need to make sense of the comments and understand how to improve for

further assignments. Therefore, one way of enhancing the applicability of feedback to future learning could be designing interconnected tasks.

Another finding about the usefulness and challenges of technology in feedback delivery was in alignment with the earlier findings for teachers' preference for digital annotations. The majority of IBDP teachers favor using technology, specifically digital platforms like ManageBac, as it enhances feedback efficiency by allowing teachers to organize comments and refer to the assessment criteria quickly. Many teachers also felt that they provided more specific, detailed, and personalized feedback with the help of technology. Furthermore, some teachers mentioned that technology could help them detect plagiarized or AI-generated work. A few teachers identified challenges of technology, such as technical difficulties encountered while generating digital annotations and reduced personal connection with the student in comparison to face-to-face feedback.

IBDP Graduates' and Students' Perceptions on the Level of Usefulness and Sustainability of Feedback

When asked to rate the usefulness of feedback comments by teachers prior to submissions, graduates and students reported moderate agreement, indicating a further area of development for feedback design. This might be because students are not satisfied with the feedback content prior to the submissions.

Graduates and students were also asked to rate comments in terms of the level of specificity, personalization, detailedness, and improvement for subsequent tasks for each IBDP subject they studied. They generally agreed that feedback in the IBDP was understandable, specific, and beneficial for improving subsequent tasks. However, these levels of agreement considerably varied between subjects. While graduates reported high levels of agreement for understanding teacher comments and

using these comments for subsequent tasks in Group 1 and 3 subjects like Turkish A Literature and TITC, they reported moderate levels of agreement for these feedback dimensions in English A Language & Literature, Literature & Performance, and Economics. Similarly, one of the studies in literature pointed out dissatisfaction with understanding teacher comments due to ambiguous statements or poor explanation of the criteria, and a lack of justification for the grade (Ferguson, 2009). According to Gibbs and Simpson (2004, p.22), “feedback needs to be sensitive to the unsophisticated conceptions of learning that may be revealed in their work”. Therefore, students should make sense of feedback information so that they can cope with the assignments (Carless et al., 2011; Gibbs & Simpson, 2004).

While graduates and students had a high level of satisfaction for the clarity and applicability of feedback in Group 3 Science subjects like Biology and Chemistry, they reported a noticeable disagreement for all five feedback dimensions in Physics. The low level of agreement for these feedback dimensions in Physics might stem from either dissatisfaction with the teacher’s feedback delivery or the challenging aspect of the course as it is offered at a high level in this school context. Another Group 4 course, Computer Sciences, had relatively lower means for all these feedback dimensions, indicating a lower level of satisfaction compared to other Biology and Chemistry courses. As for Group 5, there was a moderate level of agreement for all feedback dimensions in Mathematics.

Despite their low sample size, German B and Visual Arts stood out with very strong agreement for almost all feedback dimensions. This strong level of satisfaction for these two subjects might stem from not only teachers’ strong feedback on literacy but also the small number of students having selected these two IBDP courses. Workload is an important factor influencing teachers’ feedback

practices (Henderson et al., 2019); having big IBDP cohorts makes it difficult to balance time allocated for effective feedback and other responsibilities.

Regarding the core, there was a striking difference between TOK and the Extended Essay. Graduates and students agreed that feedback in TOK is specific, understandable, and applicable to subsequent tasks. In contrast, they expressed moderate agreement for feedback specificity, detailedness, and applicability in the Extended Essay, showing a lack of satisfaction with these feedback dimensions.

The most interesting findings perhaps was the mid-low rating for having detailed comments across all DP subjects except for the Group 2 subject, German B, and the Group 6 subject, Visual Arts, which contradicts teachers' high ratings for giving detailed feedback. This mismatch between these stakeholders shows a different understanding of what counts as detailed feedback. Therefore, a systematic application of face-to-face feedback and transforming the role of the student from passive learner to active seeker of feedback could enhance congruence between the teacher and the student perspectives (Hounsell, 2007).

Overall, the analysis of the five feedback dimensions for each specific IBDP subject shows satisfaction with the application of these subjects, like Turkish Literature, Biology, Chemistry, and TOK, in terms of understanding feedback and applying comments to further tasks. In contrast, they moderately agreed that feedback was personalized and detailed across all DP subjects except for German B and Visual Arts. These findings, specifically using feedback to improve further assignments, align with the sustainable feedback approach that promotes personalized, detailed, and actionable feedback for fostering self-regulation and long-term learner uptake (Nicol & Macfarlane-Dick, 2006; Hounsell, 2007; Carless & Boud, 2018).

Challenges and Suggestions for More Effective Feedback in the IBDP

The biggest challenge identified by IBDP teachers for providing effective feedback was the heavy workload and time management. Some teachers pointed out feeling overwhelmed while balancing the enormity of writing detailed comments and other responsibilities. Likewise, in one of the studies conducted in higher education, workload appeared to be one of the greatest challenges for effective feedback (Paris, 2022). This challenge has been addressed in another study which suggested taking teacher workload into consideration before utilizing effective feedback mechanisms and designing multiple assessment tasks accompanied by personalized feedback (Broadbent et al., 2018). Similarly, in their comprehensive literature review, Yan et al. (2021), pointed out the importance of sufficient support provided by school leaders to facilitate teachers' formative assessment practices.

Another challenge uttered was meeting pedagogical demands to provide detailed, personalized, and multi-modal feedback, indicating that some teachers feel concerned about meeting students' expectations. A minority of teachers mentioned issues like teacher expertise and the attitude of students. Similarly, this affective dimension of feedback appeared in one of the studies in which students reported that quality feedback should also acknowledge positive aspects of students' work for motivational purposes (Ferguson, 2009).

In response to what can be done to support more effective feedback in IBDP schools, graduates and students predominantly pointed out the assessment standards and accountability. The majority of graduates and students mentioned the need for monitoring teachers' feedback, establishing a standardized interpretation of assessment criteria, paying attention to negative feedback about teachers, and implementing an accountability system for feedback quality. Other commonly

uttered responses highlighted the importance of giving detailed, balanced feedback, feedforward and using multi-modal feedback. These feedback dimensions were also mentioned in teachers' responses. Considerably, some graduates and students suggested hiring qualified teachers and training teachers on how to deliver feedback. Providing timely feedback, setting realistic deadlines and specific time slots for feedback, as well as increasing feedback turnaround time, were among the suggestions. A few touched upon social and affective issues, such as having a healthy relationship between the teachers and empathizing with students and delivering feedback with a positive tone.

One possible inference is that both teachers and students are aware of the importance of sustainable feedback dimensions such as multi-modal feedback; however, the school needs to bridge the gap between teacher and student priorities to improve feedback design. According to Carless and Winstone (2020), reinforcing feedback literacy of teachers and students depends on the investments from both parties in terms of sharing responsibilities, goals, and expectations. Similarly, institutions are also responsible for reinforcing sustainability in feedback practices by supporting teachers' professional development opportunities and enhancing pedagogic strategies through informal teacher interactions (Carless & Winstone, 2020). Therefore, all stakeholders could cooperate in establishing a sustainable assessment. The IBDP coordinator could take parents' and students' input into consideration while setting academic due dates for the submission of assignments. This could provide a more realistic calendar for arranging follow-up tasks, dialogic conversations, and increasing feedback turnaround time.

Implications for Practice

This section draws upon the major findings of the study and discusses some of the implications regarding sustainable feedback perceptions of teachers, graduates, and students in an IBDP school setting. While these implications are drawn from a single school case study, they might offer valuable insights for other IBDP schools or other high schools offering academically rigorous programs about fostering sustainable feedback and assessment.

Drawing on the insights of IBDP teachers, graduates, and students about the purpose of feedback, this study highlights the need for schools to foster a stronger feedback culture that moves beyond the perception of feedback purpose as merely error correction or gap identification. Feedback in an IBDP school should be perceived as an opportunity for reflection, self-regulation, and long-term learning. Transforming how students perceive feedback could help them to become more reflective and self-regulated learners, which is also an expected outcome of an IBDP student.

Considering that the students in academically rigorous programs like IBDP demand more detailed, actionable, personalized feedback delivered with different modalities, teachers may need to standardize their feedback practices to better align with these expectations while increasing students' capacity to seek feedback and use comments to improve their subsequent learning. Therefore, IBDP teachers could see the iterative nature of feedback as an opportunity and design interconnected follow-up tasks to increase feedback opportunities and awareness that feedback is an ongoing process.

IBDP teachers in this study expressed that they were aware of such demands, yet their biggest challenge is time constraints. To that end, school leaders could

consider teachers' workload by balancing the number of IBDP students assigned to teachers' supervision, especially in the Extended Essay. Where workload and time constraints limit teachers' ability to embrace sustainable feedback practices more consistently, senior leaders and IBDP coordinators could devise strategies for supporting teachers' efforts. For instance, IBDP coordinators could adjust assessment calendars to set more realistic due dates and feedback turnaround time for internal and external assessments with the input of all IBDP stakeholders. Alternatively, they could schedule fixed time-slots, such as study hall periods (if there are) to help teachers arrange dialogic feedback sessions.

Professional development sessions in IBDP schools could also focus on building a more standardized and systematic feedback literacy among teachers. These sessions could explicitly equip teachers with strategies for sustainable feedback design and delivery, allow them to discuss their feedback strategies, and guide them to use different digital platforms to maximize multi-modal feedback, such as audio and video recordings. Just as moderating exam papers or internal assessments, teachers could try moderating each other's feedback practices.

Another area where sustainable feedback practices could be incorporated is professional development workshops organized by IB and institutions authorized by IB to conduct workshops. Since formative feedback is one of the components of ATT, the importance of designing sustainable assessment and embracing sustainable feedback practices could be highlighted at ATT workshops.

Based on another finding from this case study, peer feedback or seeking feedback from other sources seems to be underutilized in the school's context. Considering the importance of engaging students in feedback cycles from multiple perspectives, specifically from a peer perspective, IBDP teachers could integrate

more structured peer feedback into their formative assessment more regularly. Perhaps advancing AI tools could be seen as an opportunity to train students on seeking feedback from a digital tool. This could help students develop self-evaluation skills and have a better understanding of the assessment criteria. The practice of seeking feedback from multiple sources could also shape students' perception that feedback is not solely given but also sought.

Given that formative assessment is a core pillar of the IBDP and feedback has to be formative as well, the findings of this case study may encourage other IBDP schools to critically review formative assessment and feedback design in their schools. This type of critical examination could help them identify strengths and weaknesses in existing practices and build more sustainable assessment systems to foster learner agency and lifelong learning.

Implications for Further Practice

The purpose of this single-school case study was to investigate IBDP teachers', graduates', and students' perceptions of sustainable feedback. Therefore, participants were asked to fill out a cross-sectional survey adapted to the IBDP context. Further research may adopt mixed-methods design by conducting different types of surveys and semi-structured interviews with both stakeholders in the IBDP program to explore sustainable feedback perceptions more objectively.

Alternatively, data triangulation could be enriched through multiple methods such as longitudinal tracking of feedback practices or analysis of feedback artifacts.

In addition, further studies should acknowledge the unique context since this research was conducted as a single case study in a private high school where international programs are compulsory and passing the IBDP is a requirement for achieving a MoNE high school diploma. Other researchers could investigate whether

the patterns emerging from this single case study hold true for different school contexts that have varied school populations and international programs. Especially comparative studies including both state and private schools implementing IBDP programs in Türkiye or in other countries could offer insight into how school culture, cohort sizes, and teacher workload influence the sustainability of assessment and feedback practices. It would be valuable to explore feedback perceptions of IBDP students in private and state schools where international programs are not compulsory but elective.

Given that this single case study was conducted with the participation of 12 teachers and 45 graduates and students, another research could work with larger number of participants in other private schools and state schools implementing different international programs such as Advanced Placement (AP), or A-level curricula, to examine whether teacher and student reports on perceptions of feedback design and delivery are unique to the IBDP context or observable in other high stakes learning environments.

Another option would be focusing on the incongruence between teacher and student priorities regarding feedback design and delivery. Longitudinal case studies or intervention studies could explore whether targeted professional development on sustainable feedback, increasing students' potential for seeking feedback or applying peer feedback, and adjustments on due dates calendar for assignments can bridge the gap between teacher and student perspectives.

Considering that multi-modal feedback and detailed feedback were emphasized by IBDP graduates and students, further research might evaluate how different multi-modal feedback, such as audio/video recording, influences students' feedback uptake, motivation, and self-regulation. Additionally, IB expects its

schools to enhance students' self-efficacy through formative assessment; thus, IBDP schools could provide workshops on formative assessment practices to increase their teachers' awareness about the impact of feedback on students' self-efficacy.

Another research could focus on the use of AI in increasing students' potential to seek feedback and self-regulation. Experimental or quasi-experimental studies could look into these areas and evaluate what type of modalities enhance sustainable feedback cycles.

Furthermore, this case study showed the necessity of school leaders to be involved in the process of designing sustainable assessment. Therefore, one avenue for research could be exploring how school policies, senior leaders', and IBDP program coordinators' guidance can support adopting sustainable feedback practices into the culture of IBDP schools.

Limitations

This study was conducted as a single-school case study in a private high school where international programs like IGCSE and IBDP are compulsory along with the national curricula; therefore, the findings cannot be generalized beyond the specific IBDP school context in which the research was carried out.

The total number of participants was relatively small, comprising 12 IBDP teachers and 45 IBDP graduates and students, which further limits the transferability of results to other educational settings. While the participants were selected through purposeful sampling to ensure representation of different stakeholders who are particularly experienced and knowledgeable in the areas of interest, this also limits the applicability of findings to a broader context.

Even though the study utilized a comprehensive survey, including both close-ended (mostly Likert-scale questions and multiple-response items) and open-

ended survey items, the absence of additional data sources such as classroom observations, document analysis, or interviews resulted in limited data triangulation. Although analysis of certain open-minded items and application of thematic analysis offered deeper qualitative insights into respondents' perspectives, the researcher did not have the opportunity to conduct semi-structured interviews or review feedback artifacts. Therefore, the qualitative strand of this study may be affected by participant biases as the IBDP teachers, graduates, and students could have overstated or underreported their experiences and perceptions of feedback practices in the school.



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Appendix A

Feedback for Learning Survey (English) (teachers*)

Welcome to the Feedback for Learning Survey.

The purpose of this survey is to better understand how assessment feedback practices influence student learning in the IB Diploma Programme. The aim is to explore teachers' perceptions and experiences with providing sustainable feedback – feedback that supports students' long-term learning and continuous improvement.

In this survey, feedback refers to information given to students that helps them reflect on and enhance their future performance in assessments and learning tasks. Your insights will help us refine feedback practices to better support student growth and development.

The survey will take approximately 30 minutes to complete, and your responses will remain anonymous.

Thank you for your valuable contribution!

* Indicates required question

Untitled Section

1. 1. What is your age group?

Mark only one oval.

- ☐ 20–24
- ☐ 25–29
- ☐ 30–34
- ☐ 35–39
- ☐ 40–44
- ☐ 50–54
- ☐ 55–59
- ☐ 60 or over

2. **2. Which of the following best describes your current role at the IBDP school where you work?** *

(Please select all that apply)

Check all that apply.

- ☐ Academic staff with teaching and assessment responsibilities (e.g., lecturer, tutor,
☐ Professional staff member who supports academic teaching staff (e.g., instructional designer, educational designer, academic developer)
☐ Assessor/marker of student work (e.g., a sessional/casual employed person who marks and provides comments on assignments
☐ Other: _____

3. **3. Which of the following are you involved in for IBDP 2024–2025 Academic Year?** *

(Please select all that apply)

Check all that apply.

- ☐ Teaching units
☐ Assessing / marking assessment tasks
☐ Designing assessment tasks
☐ None of the above

4. **These questions are to find out about DP subjects you are involved with in 2024-2025 Academic Year.** *

- 4. How many DP classes are you teaching/did you teach in 2024-2025 Academic Year?**

Mark only one oval.

- ☐ One
☐ Two
☐ Three
☐ Four
☐ Five
☐ Six or more

5. **5.** How many DP units are you designing/did you design assessment tasks for in 2024-2025 Academic Year? *

Mark only one oval.

- ☐ One
☐ Two
☐ Three
☐ Four
☐ Five
☐ Six or more

6. **6.** In total, approximately how many students are/were you involved in assessing in 2024-2025 Academic Year? *

Mark only one oval.

- ☐ Less than 10
☐ 10–50
☐ 50–100
☐ 100–200
☐ Not sure

7. **7.** How many years have you been teaching (or marking) in IBDP setting? *

Mark only one oval.

- ☐ Less than 1 year
☐ 1–5 years
☐ 6–10 years
☐ 11–15 years
☐ 16–20 years
☐ More than 20 years

8. **8. How many years have you been designing assessment tasks in IBDP setting?** *

Mark only one oval.

- ☐ Less than 1 year
- ☐ 1–5 years
- ☐ 6–10 years
- ☐ 11–15 years
- ☐ 16–20
- ☐ More than 20 years

9. **9. Which level of IBDP students are you working/did you work with in 2024–2025 Academic Year?** *

Mark only one oval.

- ☐ First year IB DP students (1st and 2nd quarters)
- ☐ Second year IB DP students (3rd and 4th quarters)

10. **The next few questions relate to assessment tasks used in DP subjects you are involved with in 2024–2025 Academic Year.** *

10.(a) Which types of **internal** assessment tasks were the students assigned in 2024–2025 Academic Year?

(Please select all that apply)

Check all that apply.

- ☐ Written essays
- ☐ Oral/presentation
- ☐ Portfolio/project
- ☐ Journal/blog/reflective piece
- ☐ Laboratory work based reports
- ☐ Research based papers
- ☐ Not applicable

11. **10.(b)** Which types of **external** assessment tasks were the students assigned in 2024-2025 Academic Year? *

(Please select all that apply)

Check all that apply.

- ☐ Written essay
- ☐ Oral/presentation
- ☐ Exam
- ☐ Portfolio/project
- ☐ Journal/blog/reflective piece
- ☐ Not applicable
- ☐ Other: _____

12. **11.** Which of the following are used for group assessments? *

(Please select all that apply)

Check all that apply.

- ☐ Written essay
- ☐ Oral/presentation
- ☐ Exam
- ☐ Portfolio/project
- ☐ Journal/blog/reflective piece
- ☐ Laboratory/practical or other skills-based tests (e.g. work-based assessment)
- ☐ Group assessments are not used
- ☐ Not applicable
- ☐ Other: _____

13. **12.(a)** In 2024-2025 Academic Year, which type of performance-related information is ^{*} provided to students on **internal** assessment tasks after submission?

Mark only one oval per row.

	Grades only	Comments only	Grades and comments	Not applicable
a. Turkish A Literature/English A LAL/German B Individual Oral	☐	☐	☐	☐
b. Group 3 TITC Individual Investigation	☐	☐	☐	☐
c. Group 3 Economics Commentary	☐	☐	☐	☐
d. Group 4 Scientific Investigation	☐	☐	☐	☐
e. Group 5 Mathematical Exploration	☐	☐	☐	☐
f. Visual Arts Exhibition/TOK exhibition	☐	☐	☐	☐

14. **12.(b)** In 2024-2025 Academic Year, which type of performance-related information is ^{*} provided to students on **external** assessment tasks after submission?

Mark only one oval per row.

	Grades only	Comments only	Grades and comments	Not applicable
a. Language A HL essays	☐	☐	☐	☐
b. Literature and Performance Written Task	☐	☐	☐	☐
c. DP Exam papers	☐	☐	☐	☐
d. TOK essay	☐	☐	☐	☐
e. Extended Essay	☐	☐	☐	☐

16. **13.(b)** How often do students submit their **external** assessment tasks in the following ways? *

Mark only one oval per row.

	Never or almost never	Sometimes	About half the time	Most of the time	Always or almost always	Not applicable
a. Hard copy	☐	☐	☐	☐	☐	☐
b. Email	☐	☐	☐	☐	☐	☐
c. Managebac	☐	☐	☐	☐	☐	☐
d. Plagiarism software (e.g., Turnitin)	☐	☐	☐	☐	☐	☐
e. Other digital	☐	☐	☐	☐	☐	☐
f. Other non-digital (e.g., in class presentation)	☐	☐	☐	☐	☐	☐

17. **14.** How do you generally return comments to students when they submit hard copies of their assessment tasks? *

(Please select all that apply)

Please take both internal and external assessments into account while answering.

Check all that apply.

- ☐ Hand written comments on original assessment task
- ☐ Hand written comments on a scanned document
- ☐ Electronic annotations on a scanned document
- ☐ Digital recording (e.g., video, audio)
- ☐ An online rubric or marking sheet
- ☐ Face-to face oral feedback
- ☐ Not applicable

19. **16.** How often is each of the following involved in the generation of comments after submission? *

Mark only one oval per row.

	Never or almost never	Sometimes	About half the time	Most of the time	Always or almost always	Not applicable
a. Teaching staff	☐	☐	☐	☐	☐	☐
b. Staff employed for marking	☐	☐	☐	☐	☐	☐
c. Peers / other students	☐	☐	☐	☐	☐	☐
d. Automated systems	☐	☐	☐	☐	☐	☐

20. **17.** What is the average turnaround time for you to provide comments to students after submission? *

Mark only one oval.

- ☐ Immediately
☐ Within 1 week
☐ Within 2 weeks
☐ Within 3 weeks
☐ Within 4 weeks
☐ More than 4 weeks
☐ Not applicable

21. For the next two questions please answer using the slider scale, where 0 = 'Not at all' and 10 = 'Extremely'.

18.(a) How detailed are the feedback comments you generally provide to students after submission?

Mark only one oval.

	0	1	2	3	4	5	6	7	8	9	10	
Not	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	Extremely

22. **18.(b)** How individualised are the feedback comments you generally provide to students after submission?

Mark only one oval.

	0	1	2	3	4	5	6	7	8	9	10	
Not	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	Extremely

23. **19.** Which of the following align with the focus of the comments you provide to students after submission? *
(Please select all that apply)

Check all that apply.

- ☐ Acknowledges the strengths of the work
- ☐ Acknowledges the weaknesses of the work
- ☐ Corrects errors
- ☐ Encourages further learning
- ☐ Provides models or exemplars of good work
- ☐ Relates back to assessment criteria/standards of work
- ☐ Suggests how to improve in future tasks
- ☐ Justifies the grade awarded
- ☐ Refers specifically to students or their personal attributes
- ☐ Invitation to discuss comments/work further
- ☐ Not applicable
- ☐ Other: _____

24. **20.** What have been the key influences on how you design or create feedback? *
(Please select all that apply)

Check all that apply.

- ☐ Your own experiences as a learner
- ☐ Learning from other staff members in your department/school
- ☐ Informal personal development (e.g., reading books on feedback)
- ☐ A qualification in Education or Pedagogy (e.g., Graduate Certificate in Higher Education)
- ☐ Formal training/workshop/module in the design of assessment and/or feedback (e.g., a professional development module or workshop)
- ☐ Meetings you have attended discussing the types of comments that should be included in assessment feedback (e.g., moderation meetings)
- ☐ Comments from students
- ☐ Other: _____

25. **21.** Please rate how the following factors influence the quality of feedback you provide *
to individual students.

Mark only one oval per row.

[illegible]

26. The following statements relate to comments that you provide to students on their assessment tasks. For each item, please rate how often the following occur.

Mark only one oval per row.

[illegible]

reactions.

e. Students
as students
as students I
provide on
their
assessment
tasks to
improve
their
subsequent
work
work.

☐ ☐ ☐ ☐ ☐ ☐

27. **The next two questions relate to the role of technology in assessment feedback.** *

23.(a) How has technology assisted you in creating effective feedback? [open response]

28. **23.(b)** How has technology challenged you in creating effective feedback? [open response] *

29. **24.** What is the purpose of feedback? *
- [open response]

30. **25.** How do you know whether your feedback is effective? *
- [open response]

31. **26.** Thinking of assessment feedback you generally provide to students, please rate how often the following occur. *

Mark only one oval per row.

[illegible]

j. You spend time to help students understand the purpose of feedback, including how they should use it.

☐☐☐☐☐☐

k. Units/assignments are designed so that students are able to use the feedback they receive in their next piece of assessed work.

☐☐☐☐☐☐

l. Students seek feedback from you prior to submission of their work.

☐☐☐☐☐☐

m. You provide students with follow up tasks to enable them to apply what they have learned from an initial task.

☐☐☐☐☐☐

n. You encourage students to seek feedback from other people.

☐☐☐☐☐☐

32. **27.** Thinking of assessment feedback that is generally provided to students at your IBDP school, please rate how often the following occur. *

Mark only one oval per row.

[illegible]

j. Teachers spend time to help students understand the purpose of feedback, including how they should use it.

☐ ☐ ☐ ☐ ☐ ☐

k. Units/assignments are designed so that students are able to use the feedback they receive in their next piece of assessed work.

☐ ☐ ☐ ☐ ☐ ☐

l. Students seek feedback from teaching staff prior to submission of their work.

☐ ☐ ☐ ☐ ☐ ☐

m. Teachers provide follow up tasks to enable students to apply what they have learned from an initial task.

☐ ☐ ☐ ☐ ☐ ☐

n. Teachers encourage students to seek feedback from other people

☐ ☐ ☐ ☐ ☐ ☐

33. **For the next few questions, please think of a situation in which you were part of, or observed, a particularly effective feedback process at your IBDP school.**

28.(a) What was the course name and –if you can remember– what DP Subject/s was the feedback related to?

[open response]

34. **28.(b)** What was the size of the unit?

[open response]

35. **28.(c)** How much time has passed since this feedback process occur?

36. **29.** What type of assessment task was it?
(Please select all that apply)

Check all that apply.

- ☐ Written essay
☐ Oral/presentation
☐ Exam
☐ Portfolio/project
☐ Journal/blog/reflective piece
☐ Laboratory/practical or other skills based-tests (e.g. work-based assessment)
☐ Other: _____

37. **30.** What was it about the feedback that was so effective? *(Please use as much detail as possible)*
 [open response]

38. **31.** How do you know it worked?
 [open response]

39. **32.** What do you consider to be the greatest challenge to creating effective feedback, and why?
 [open response]

40. The remaining questions are to find out a little more about you.

33. What is your gender?

41. 34. In which country were you born?

Mark only one oval.

☐ Türkiye

☐ Other: _____

42. 35. In which country did you complete your undergraduate degree (or if no tertiary qualification, then the majority of your secondary schooling)?

Mark only one oval.

☐ Türkiye

☐ Other: _____

43. 36. How long have you lived in your current country of residence?

Mark only one oval.

☐ Less than 1 year

☐ 1–2 years

☐ 2–5 years

☐ 6–10 years

☐ 11–15 years

☐ 16–20 years

☐ More than 20 years

44. **37.(a)** Is English your first language?

Mark only one oval.

- ☐ Yes
☐ No

45. **Answer if your answer was 'Yes' for question 36.(a)***

37.(b) Do you speak a language other than English at home? *(If you speak more than one language at home, please indicate the one that is spoken most often)*

Mark only one oval.

- ☐ No, English only
☐ Other: _____

46. **Answer if your answer was 'No' for question 36.(a)***

37.(c) How would you rate your English-language proficiency?

Mark only one oval.

- ☐ Excellent
☐ Very good
☐ Good
☐ Average
☐ Below average
☐ Prefer not to say

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Appendix B

FEEDBACK FOR LEARNING SURVEY (English)(*students& graduates)

Welcome to the Feedback for Learning Survey.

The purpose of this survey is to better understand how feedback practices impact learning in the IB Diploma Programme. The aim is to explore the perceptions of DP students, graduates, and teachers regarding sustainable feedback – feedback that supports ongoing learning and improvement.

In this survey, feedback refers to information that helps learners reflect on and enhance their future performance in assessments and learning tasks.

The survey will take approximately 40 minutes to complete, and your responses will remain anonymous. Your insights are invaluable for shaping more effective and meaningful feedback practices within our school community.

Thank you for your participation!

* Indicates required question

1. 1. What is your age group? *

Mark only one oval.

☐ 17-19

☐ 20-24

2. 2. Which of the following qualifications are you currently enrolled in? *

Mark only one oval.

☐ 11th grade

☐ 12th grade

☐ Graduate/former IBDP student

11. **6.(a)** Considering all of your marked **internal** assessments so far — or all your **internal** assessment marks if you are a former IBDP student — please select the option that best describes the grade you received.

(Only respond for the courses you have taken)

Mark only one oval per row.

	Lower than expected	Same as expected	Higher than expected
TITC (Turkey in Twentieth Century)	☐	☐	☐
Physics	☐	☐	☐
Mathematics AA	☐	☐	☐
Biology	☐	☐	☐
Chemistry	☐	☐	☐
Economics	☐	☐	☐
Computer Science	☐	☐	☐
Turkish A Literature	☐	☐	☐
English A Language and Literature/Literature and Performance	☐	☐	☐
German B	☐	☐	☐
TOK (Exhibition)	☐	☐	☐

12. **6.(b)** Considering all of your marked **external** assessments (any DP paper, HL essays, or DP Core) so far — or all your **external** assessment marks if you are a former IBDP student — please select the option that best describes the grade you received.
(Only respond for the courses you have taken)

Mark only one oval per row.

	Lower than expected	Same as expected	Higher than expected
TITC (Turkey in Twentieth Century)	☐	☐	☐
Physics	☐	☐	☐
Mathematics AA	☐	☐	☐
Biology	☐	☐	☐
Chemistry	☐	☐	☐
Economics	☐	☐	☐
Computer Science	☐	☐	☐
Turkish A Literature	☐	☐	☐
English A Language and Literature	☐	☐	☐
Literature and Performance (written task)	☐	☐	☐
German B	☐	☐	☐
TOK (Essay)	☐	☐	☐
Extended Essay	☐	☐	☐

13. **7.(a)** Who provided you with comments on your **internal** assessments before and after submission?

(Please select all that apply, if not applicable please leave boxes blank)

*If you are a graduate, answer this question considering yourself in your IBDP years**

Check all that apply.

	Before submission	After submission
a. School staff (e.g., lecturer, tutor, demonstrator, sessional marker)	☐	☐
b. Family members	☐	☐
c. Friends	☐	☐
d. Other people online (e.g. comments from a blog or discussion board)	☐	☐
f. Automatic sources (e.g., MCQ comments, Grammarly, compiler, computer simulation,etc.)	☐	☐
g. Private tutor	☐	☐
h. Peers/other students	☐	☐
i. Former IBDP students	☐	☐
j. Other	☐	☐

14. **7.(b)** Who provided you with comments on your **external** assessments before and after submission?

(Please select all that apply, if not applicable please leave boxes blank)

*If you are a graduate, answer this question considering yourself in your IBDP years**

Check all that apply.

	Before submission	After submission
a. School staff (e.g., lecturer, tutor, demonstrator, sessional marker)	☐	☐
b. Family members	☐	☐
c. Friends	☐	☐
d. Other people online (e.g. comments from a blog or discussion board)	☐	☐
f. Automatic sources (e.g., MCQ comments, Grammarly, compiler, computer simulation,etc.)	☐	☐
g. Private tutor	☐	☐
h. Peers/other students	☐	☐
i. Former IBDP students	☐	☐
j. Other	☐	☐

15. **8.** Considering the feedback you received (for either internal assessments, or external assessments, or both) how useful were the comments you received from school staff (e.g., lecturer, tutor, demonstrator, sessional marker) before submission? *

Mark only one oval.

- ☐ Not at all
☐ Slightly
☐ Moderately
☐ Very
☐ Extremely

16. **9.(a)** How did you submit your **internal** assessments? *
(Please select all that apply)

Check all that apply.

- ☐ Hard copy (e.g., printed document)
☐ Email
☐ ManageBac
☐ Plagiarism software (e.g., Turnitin)
☐ Other

17. **9.(b)** How did you submit your **external** assessments? *
(Please select all that apply)

Check all that apply.

- ☐ Hard copy (e.g., printed document)
☐ Email
☐ ManageBac
☐ Plagiarism software (e.g., Turnitin)
☐ Other

18. **10.(a)** What was the turnaround time for the comments to be returned after the submission of your **internal** assessments?
(If unsure, your best guess is fine)

Mark only one oval per row.

[illegible]

20. 11. Who assessed the final draft of your internal assessment?(Only respond for the courses you have taken)

Mark only one oval per row.

	My teacher (e.g., lecturer / tutor / demonstrator)	Not my teacher (e.g., someone who teaches another class in the unit)	I don't know who assessed my work	Other
TITC (Turkey in Twentieth Century)	☐	☐	☐	☐
Physics	☐	☐	☐	☐
Mathematics AA	☐	☐	☐	☐
Biology	☐	☐	☐	☐
Chemistry	☐	☐	☐	☐
Economics	☐	☐	☐	☐
Computer Science	☐	☐	☐	☐
Turkish A Literature	☐	☐	☐	☐
English A Language and Literature	☐	☐	☐	☐
Literature and Performance	☐	☐	☐	☐
German B	☐	☐	☐	☐
Visual Arts (Exhibition)	☐	☐	☐	☐
TOK (Exhibition)	☐	☐	☐	☐

21. 12. Which of the following statements best represents your experience with the assessor before you submitted your internal assessment? *(Only respond for the courses you have taken)*

Mark only one oval per row.

	They had commented on my work	They had never commented on my work	Not able to judge
TITC (Turkey in Twentieth Century)	☐	☐	☐
Physics	☐	☐	☐
Mathematics AA	☐	☐	☐
Biology	☐	☐	☐
Chemistry	☐	☐	☐
Economics	☐	☐	☐
Computer Science	☐	☐	☐
Turkish A Literature	☐	☐	☐
English A Language and Literature	☐	☐	☐
Literature and Performance	☐	☐	☐
German B	☐	☐	☐
Visual Arts (Exhibition)	☐	☐	☐
TOK (Exhibition)	☐	☐	☐

22. **13.** What types of comments did you receive from the assessor after the submission of your internal assessment?

(Please select all that apply)

Check all that apply.

[illegible]

23. **14.(a)** Thinking of the comments you received from your assessor after the submission of **TITC(Turkey in Twentieth Century)** internal assessment, please rate your agreement with the following statements.

Answer if you had internal assessment from the course in question*

Mark only one oval per row.

[illegible]

24. **14.(b)** Thinking of the comments you received from your assessor after the submission of **Physics** internal assessment, please rate your agreement with the following statements.

Answer if you had internal assessment from the course in question*

Mark only one oval per row.

[illegible]

30. **14.(h)** Thinking of the comments you received from your assessor after the submission of **Turkish A Literature** internal assessment, please rate your agreement with the following statements. *

*Answer if you had internal assessment from the course in question**

Mark only one oval per row.

[illegible]

33. **14.(k)** Thinking of the comments you received from your assessor after the submission of **German B** internal assessment, please rate your agreement with the following statements.

Answer if you had internal assessment from the course in question*

Mark only one oval per row.

[illegible]

35. **14.(m)** Thinking of the comments you received from your assessor after the submission of TOK exhibition and essay assignments, please rate your agreement with the following statements.

Mark only one oval per row.

[illegible]

36. **14.(n)** Thinking of the comments you received from your assessor after the submission of **Extended Essay** assignment, please rate your agreement with the following statements.

Mark only one oval per row.

[illegible]

37. 15. Now, please rate your agreement with the statement below.

The feedback for **internal and external** assessments helped me achieve the learning outcomes for the IB Learner Profile.

Mark only one oval per row.

[illegible]

39. **16.(b)** Now thinking of your **Physics** assessor, please rate your agreement with the following statements (if applicable).

Mark only one oval per row.

[illegible]

40. **16.(c)** Now thinking of your **Mathematics** assessor, please rate your agreement with the following statements. *

Mark only one oval per row.

[illegible]

41. **16.(d)** Now thinking of your **Biology** assessor, please rate your agreement with the following statements (if applicable).

Mark only one oval per row.

[illegible]

42. **16.(e)** Now thinking of your **Chemistry** assessor, please rate your agreement with the following statements (if applicable).

Mark only one oval per row.

[illegible]

43. **16.(f)** Now thinking of your **Economics** assessor, please rate your agreement with the following statements (if applicable).

Mark only one oval per row.

[illegible]

44. **16.(g)** Now thinking of your **Computer Science** assessor, please rate your agreement with the following statements (if applicable).

Mark only one oval per row.

[illegible]

46. **16.(i)** Now thinking of your **English A Language and Literature** assessor, please rate our agreement with the following statements (if applicable).

Mark only one oval per row.

[illegible]

49. **16.(I)** Now thinking of your **Visual Arts** assessor, please rate our agreement with the following statements (if applicable).

Mark only one oval per row.

[illegible]

50. **16.(m)** Now thinking of your **TOK** assessor, please rate our agreement with the following statements (if applicable).

Mark only one oval per row.

[illegible]

52. **For the next set of items, please indicate how you felt after reading the assessor's * comments.**

(Through 17.(a-m), consider your **internal assessments** (individual orals, exhibitions, investigations or explorations) while answering. Please answer for the courses you had internal assessments from.)

(**Throughout this set of items you are waited to **fill in the blanks within the elements on each row** [i.e., "*sad or happy*", "*angry or content*"], and answer for each separately.)

(**Think of the numbers on the columns as a slider scale, meaning that "**1**" is the representative of very [*sad, angry, ashamed, discouraged*], while "**5**" is the representative for very [*happy, content, proud, motivated*].)

17.(a) How _____ did the comments for your **TITC (Turkey in Twentieth Century)** assessment make you feel?

Mark only one oval per row.

	1	2	3	4	5
a. sad or happy	☐	☐	☐	☐	☐
b. angry or content	☐	☐	☐	☐	☐
c. ashamed or proud	☐	☐	☐	☐	☐
d. discouraged or motivated	☐	☐	☐	☐	☐

53. 17.(b) How _____ did the comments for your **Physics** assessment make you feel?

Mark only one oval per row.

	1	2	3	4	5
a. sad or happy	☐	☐	☐	☐	☐
b. angry or content	☐	☐	☐	☐	☐
c. ashamed or proud	☐	☐	☐	☐	☐
d. discouraged or motivated	☐	☐	☐	☐	☐

54. 17.(c) How _____ did the comments for your **Mathematics** assessment make you feel? *

Mark only one oval per row.

	1	2	3	4	5
a. sad or happy	☐	☐	☐	☐	☐
b. angry or content	☐	☐	☐	☐	☐
c. ashamed or proud	☐	☐	☐	☐	☐
d. discouraged or motivated	☐	☐	☐	☐	☐

55. 17.(d) How _____ did the comments for your **Biology** assessment make you feel?

Mark only one oval per row.

	1	2	3	4	5
a. sad or happy	☐	☐	☐	☐	☐
b. angry or content	☐	☐	☐	☐	☐
c. ashamed or proud	☐	☐	☐	☐	☐
d. discouraged or motivated	☐	☐	☐	☐	☐

56. 17.(e) How _____ did the comments for your **Chemistry** assessment make you feel?

Mark only one oval per row.

	1	2	3	4	5
a. sad or happy	☐	☐	☐	☐	☐
b. angry or content	☐	☐	☐	☐	☐
c. ashamed or proud	☐	☐	☐	☐	☐
d. discouraged or motivated	☐	☐	☐	☐	☐

57. 17.(f) How _____ did the comments for your **Economics** assessment make you feel?

Mark only one oval per row.

	1	2	3	4	5
a. sad or happy	☐	☐	☐	☐	☐
b. angry or content	☐	☐	☐	☐	☐
c. ashamed or proud	☐	☐	☐	☐	☐
d. discouraged or motivated	☐	☐	☐	☐	☐

58. 17.(g) How _____ did the comments for your **Computer Science** assessment make you feel?

Mark only one oval per row.

	1	2	3	4	5
a. sad or happy	☐	☐	☐	☐	☐
b. angry or content	☐	☐	☐	☐	☐
c. ashamed or proud	☐	☐	☐	☐	☐
d. discouraged or motivated	☐	☐	☐	☐	☐

59. 17.(h) How _____ did the comments for your **Turkish A Literature** assessment make you feel? *

Mark only one oval per row.

	1	2	3	4	5
a. sad or happy	☐	☐	☐	☐	☐
b. angry or content	☐	☐	☐	☐	☐
c. ashamed or proud	☐	☐	☐	☐	☐
d. discouraged or motivated	☐	☐	☐	☐	☐

60. 17.(i) How _____ did the comments for your **English A Language and Literature** assessment make you feel?

Mark only one oval per row.

	1	2	3	4	5
a. sad or happy	☐	☐	☐	☐	☐
b. angry or content	☐	☐	☐	☐	☐
c. ashamed or proud	☐	☐	☐	☐	☐
d. discouraged or motivated	☐	☐	☐	☐	☐

61. 17.(j) How _____ did the comments for your **Literature and Performance** assessment make you feel?

Mark only one oval per row.

	1	2	3	4	5
a. sad or happy	☐	☐	☐	☐	☐
b. angry or content	☐	☐	☐	☐	☐
c. ashamed or proud	☐	☐	☐	☐	☐
d. discouraged or motivated	☐	☐	☐	☐	☐

62. 17.(k) How _____ did the comments for your **German B** assessment make you feel?

Mark only one oval per row.

	1	2	3	4	5
a. sad or happy	☐	☐	☐	☐	☐
b. angry or content	☐	☐	☐	☐	☐
c. ashamed or proud	☐	☐	☐	☐	☐
d. discouraged or motivated	☐	☐	☐	☐	☐

63. 17.(l) How _____ did the comments for your **Visual Arts** assessment make you feel?

Mark only one oval per row.

	1	2	3	4	5
a. sad or happy	☐	☐	☐	☐	☐
b. angry or content	☐	☐	☐	☐	☐
c. ashamed or proud	☐	☐	☐	☐	☐
d. discouraged or motivated	☐	☐	☐	☐	☐

64. 17.(m) How _____ did the comments for your **TOK** assessment make you feel? *

Mark only one oval per row.

	1	2	3	4	5
a. sad or happy	☐	☐	☐	☐	☐
b. angry or content	☐	☐	☐	☐	☐
c. ashamed or proud	☐	☐	☐	☐	☐
d. discouraged or motivated	☐	☐	☐	☐	☐

65. **For the next set of items, please indicate how you felt after reading the assessor's * comments.**

(Through 18.(a-m), consider your **external (paper 1, paper 2, paper 3, HL essays, or core)** assessments while answering. Please answer for the courses you had external assessments from.)

(**Throughout this set of items you are waited to **fill in the blanks within the elements on each row** [i.e., "*sad or happy*", "*angry or content*"], and answer for each separately.)

(**Think of the numbers on the columns as a slider scale, meaning that "**1**" is the representative of very [*sad, angry, ashamed, discouraged*], while "**5**" is the representative for very [*happy, content, proud, motivated*].)

18.(a) How _____ did the comments for your **TITC (Turkey in Twentieth Century)** assessment make you feel?

Mark only one oval per row.

	1	2	3	4	5
a. sad or happy	☐	☐	☐	☐	☐
b. angry or content	☐	☐	☐	☐	☐
c. ashamed or proud	☐	☐	☐	☐	☐
d. discouraged or motivated	☐	☐	☐	☐	☐

66. 18.(b) How _____ did the comments for your **Physics** assessment make you feel?

Mark only one oval per row.

	1	2	3	4	5
a. sad or happy	☐	☐	☐	☐	☐
b. angry or content	☐	☐	☐	☐	☐
c. ashamed or proud	☐	☐	☐	☐	☐
d. discouraged or motivated	☐	☐	☐	☐	☐

67. 18.(c) How _____ did the comments for your **Mathematics** assessment make you feel? *

Mark only one oval per row.

	1	2	3	4	5
a. sad or happy	☐	☐	☐	☐	☐
b. angry or content	☐	☐	☐	☐	☐
c. ashamed or proud	☐	☐	☐	☐	☐
d. discouraged or motivated	☐	☐	☐	☐	☐

68. 18.(d) How _____ did the comments for your **Biology** assessment make you feel?

Mark only one oval per row.

	1	2	3	4	5
a. sad or happy	☐	☐	☐	☐	☐
b. angry or content	☐	☐	☐	☐	☐
c. ashamed or proud	☐	☐	☐	☐	☐
d. discouraged or motivated	☐	☐	☐	☐	☐

69. 18.(e) How _____ did the comments for your **Chemistry** assessment make you feel?

Mark only one oval per row.

	1	2	3	4	5
a. sad or happy	☐	☐	☐	☐	☐
b. angry or content	☐	☐	☐	☐	☐
c. ashamed or proud	☐	☐	☐	☐	☐
d. discouraged or motivated	☐	☐	☐	☐	☐

70. **18.(f)** How _____ did the comments for your **Economics** assessment make you feel?

Mark only one oval per row.

	1	2	3	4	5
a. sad or happy	☐	☐	☐	☐	☐
b. angry or content	☐	☐	☐	☐	☐
c. ashamed or proud	☐	☐	☐	☐	☐
d. discouraged or motivated	☐	☐	☐	☐	☐

71. **18.(g)** How _____ did the comments for your **Computer Science** assessment make you feel?

Mark only one oval per row.

	1	2	3	4	5
a. sad or happy	☐	☐	☐	☐	☐
b. angry or content	☐	☐	☐	☐	☐
c. ashamed or proud	☐	☐	☐	☐	☐
d. discouraged or motivated	☐	☐	☐	☐	☐

72. 18.(h) How _____ did the comments for your **Turkish Language A** assessment make you feel? *

Mark only one oval per row.

	1	2	3	4	5
a. sad or happy	☐	☐	☐	☐	☐
b. angry or content	☐	☐	☐	☐	☐
c. ashamed or proud	☐	☐	☐	☐	☐
d. discouraged or motivated	☐	☐	☐	☐	☐

73. 18.(i) How _____ did the comments for your **English A Language and Literature** assessment make you feel?

Mark only one oval per row.

	1	2	3	4	5
a. sad or happy	☐	☐	☐	☐	☐
b. angry or content	☐	☐	☐	☐	☐
c. ashamed or proud	☐	☐	☐	☐	☐
d. discouraged or motivated	☐	☐	☐	☐	☐

74. **18.(j)** How _____ did the comments for your **Literature and Performance** (written task and papers) assessment make you feel?

Mark only one oval per row.

	1	2	3	4	5
a. sad or happy	☐	☐	☐	☐	☐
b. angry or content	☐	☐	☐	☐	☐
c. ashamed or proud	☐	☐	☐	☐	☐
d. discouraged or motivated	☐	☐	☐	☐	☐

75. **18.(k)** How _____ did the comments for your **German B** assessment make you feel?

Mark only one oval per row.

	1	2	3	4	5
a. sad or happy	☐	☐	☐	☐	☐
b. angry or content	☐	☐	☐	☐	☐
c. ashamed or proud	☐	☐	☐	☐	☐
d. discouraged or motivated	☐	☐	☐	☐	☐

76. **18.(l)** How _____ did the comments for your **TOK** (essay) assessment make you feel? *

Mark only one oval per row.

	1	2	3	4	5
a. sad or happy	☐	☐	☐	☐	☐
b. angry or content	☐	☐	☐	☐	☐
c. ashamed or proud	☐	☐	☐	☐	☐
d. discouraged or motivated	☐	☐	☐	☐	☐

77. **18.(m)** How _____ did the comments for your **Extended Essay** assessment make you feel? *

Mark only one oval per row.

	1	2	3	4	5
a. sad or happy	☐	☐	☐	☐	☐
b. angry or content	☐	☐	☐	☐	☐
c. ashamed or proud	☐	☐	☐	☐	☐
d. discouraged or motivated	☐	☐	☐	☐	☐

79. **20.** How would you generally prefer to receive comments on assessment tasks?
(Please select all that apply)

Check all that apply.

[illegible]

82. **23. Now, please rate your agreement with the following statements. ***

Mark only one oval per row.

	Strongly disagree	Disagree	Neither disagree nor agree	Agree	Strongly agree	Not able to judge
a. I typically avoid paying attention to feedback	☐	☐	☐	☐	☐	☐
b. I often find feedback to be too critical	☐	☐	☐	☐	☐	☐
c. I often find feedback to be upsetting	☐	☐	☐	☐	☐	☐

83. **For the next few questions, please think of a situation in which you received particularly effective feedback related to your external or internal assessments. ***

24.(a) What was the course name and –if you can remember– what unit/s was the feedback related to?

[open response]

84. **24.(b)** How much time has passed since you received this feedback? *

85. **24.(c)** What was it about the feedback that was so effective? *(Please use as much detail as possible)* *
[open response]

86. **24. (d)** How do you know it worked? *
[open response]

87. **25.** Now, please think of a time when you received feedback that was not effective. Please explain why the feedback was not effective. *(Please use as much detail as possible, but avoid identifying individuals)* *
[open response]

88. **26.** What do you think IBDP schools can do to support more effective feedback? *
[open response]

89. **The remaining questions are to find out a little more about you. ***

27. What is your gender?

90. **28.** In which country were you born? *

Mark only one oval.

☐ Türkiye

☐ Other: _____

91. **29.** In which country did you complete the majority of your secondary schooling? *

Mark only one oval.

☐ Türkiye

☐ Other: _____

92. **30.** In which country do you currently live? *

Mark only one oval.

☐ Türkiye

☐ Other: _____

93. **31.** How long have you lived in your current country of residence? *

Mark only one oval.

- ☐ Less than 1 year
☐ 1–2 years
☐ 2–5 years
☐ 6–10 years
☐ 11–15 years
☐ 16–20 years
☐ More than 20 years

94. **32.(a)** Is English your first language? *

Mark only one oval.

- ☐ Yes
☐ No

95. **Answer if your answer was 'Yes' for question 32.(a)***

32.(b) Do you speak a language other than English at home? *(If you speak more than one language at home, please indicate the one that is spoken most often)*

Mark only one oval.

- ☐ No, English only
☐ Other: _____

10. **5.(b).(ii)** How many **external** assessment tasks (paper 1, paper 2, any HL essays or CORE) have you received comments back from the assessor on throughout your IBDP. *(Only respond for the courses you have taken)*

*Answer if you are a graduate/former IBDP student**

Mark only one oval per row.

	None	One	Two	Three	Four	Five	More than five
Physics	☐	☐	☐	☐	☐	☐	☐
Mathematics AA	☐	☐	☐	☐	☐	☐	☐
Biology	☐	☐	☐	☐	☐	☐	☐
Chemistry	☐	☐	☐	☐	☐	☐	☐
Economics	☐	☐	☐	☐	☐	☐	☐
Computer Science	☐	☐	☐	☐	☐	☐	☐
Turkish A Literature	☐	☐	☐	☐	☐	☐	☐
English A Language and Literature/Literature and Performance	☐	☐	☐	☐	☐	☐	☐
Literature and Performance	☐	☐	☐	☐	☐	☐	☐
German B	☐	☐	☐	☐	☐	☐	☐
Theory of Knowledge	☐	☐	☐	☐	☐	☐	☐
Extended Essay	☐	☐	☐	☐	☐	☐	☐
Visual Arts(Comparative Study&Process Portfolio)	☐	☐	☐	☐	☐	☐	☐
and Performance	☐	☐	☐	☐	☐	☐	☐
German B	☐	☐	☐	☐	☐	☐	☐
Visual Arts	☐	☐	☐	☐	☐	☐	☐

j. Your teachers spend/spent time to help students understand the purpose of feedback.

☐ ☐ ☐ ☐ ☐ ☐

96. **Answer if your answer was 'No' for question 32.(a)***

32.(c) How would you rate your English-language proficiency?

Mark only one oval.

- ☐ Excellent
- ☐ Very good
- ☐ Good
- ☐ Average
- ☐ Below average

Appendix C

Feedback for Learning
Closing the assessment loop



Feedback for Learning Survey

About this survey

This survey was developed as part of the Feedback for Learning: Closing the Assessment Loop research project, which was a collaboration between Monash University, Deakin University, and Melbourne University. The aim of the survey was to determine the state of current assessment feedback practices in universities, and identify which feedback practices lead to improved student performance. The survey is designed to be completed by university staff and students, and the items measure:

- University context (staff and students)
- General experiences with feedback (students only)
- Context of assessment tasks (students only)
- Role profiling (staff only)
- Current state of feedback practices (staff only)
- Understanding the nature of comments relating to students work (staff only)
- Design of feedback (staff only)
- General frequency of feedback practices (staff and students)
- Effective feedback practices (staff and students)
- Demographics (staff and students)

The steps involved in development were:

- Literature searches to identify existing questionnaires relating to educator and student experiences and perceptions with assessment feedback.
- Obtaining permission to use and modify items from the following existing questionnaires:
 - 15-item Feedback Questionnaire (Adcroft 2011)
 - Teachers' Conceptions of Feedback Inventory (Harris & Brown, 2008)
 - Student Conceptions of Feedback Inventory (Version 3) (Irving & Peterson, 2007)
 - Assignment Feedback Questionnaire (Lizzio and Wilson 2008)
 - Feedback Practices survey (Pereira *et al.* 2016)
 - Y1Feedback Staff Survey (Y1Feedback 2016)
- Pooling and sharing items from the above instruments with members of the research team for further refinement, including several iterations of modification and adding additional items where necessary
- Sharing the final draft of the questionnaire with local and international feedback experts and incorporating their ideas
- Testing an online version of the survey for content validity using a pilot group of six academic staff and five students.

Details for use

This survey is licensed under the Creative Commons Attribution-ShareAlike 4.0 International License. You are free to modify and reuse this survey.



Please cite in any published work as: Henderson, M., Boud, D., Molloy, E., Dawson, P., Phillips, M., Ryan, T. (2016). *Feedback for Learning Survey* [Measurement instrument]. Retrieved from feedbackforlearning.org/publicationsresources. We'd also like to hear how you are using the survey – please email michael.henderson@monash.edu to let us know.

feedbackforlearning.org

1

Support for this project has been provided by the Australian Government Department of Education and Training. The views expressed in this project do not necessarily reflect the views of the Australian Government Department of Education and Training.

Appendix D



T.C.

MİLLÎ EĞİTİM BAKANLIĞI



İHSAN DOĞRAMACI VAKFI ÖZEL BİLKENT LABORATUAR LİSESİ Müdürlüğüne

Başvuru No: MEB.TT.2025.026436

Uygulama Yapılacak MEB Teşkilatının Kurum Kodu: 99913087

T.C. Kimlik No: 30*****64

Adı Soyadı: SELİN SETHİ

Araştırmanın Adı: ULUSLARARASI BAKALORYA DİPLOMA PROGRAMI UYGULAYAN BİR LİSEDE ÖĞRETMENLERİN, 12. SINIF ÖĞRENCİLERİNİN VE 2024 YILI MEZUNLARININ SÜRDÜRÜLEBİLİR GERİ BİLDİRİME İLİŞKİN ALGILARI: ULUSLARARASI BAKALORYA DÜNYA OKULUNDA KARMA YÖNTEMLE YÜRÜTÜLEN BİR VAKA ÇALIŞMASI

Araştırmanın Niteliği: Yüksek Lisans Tezi

Araştırmanın Örneklem / Çalışma Grubu: Öğretmen, Öğrenci

Uygulama Yapılacak MEB Teşkilatı: İHSAN DOĞRAMACI VAKFI ÖZEL BİLKENT LABORATUAR LİSESİ

Uygulama Yapılacak Birim: Özel Laboratuvar Lisesi

Uygulama Yapılacak İl: ERZURUM

Veri Toplama Aracının Başlığı: Öğrenme İçin Geri Bildirim Anketi

Araştırma Uygulama İzninin Kabul Tarihi: 20.05.2025

Araştırma Uygulama İzninin Bitiş Tarihi: 20.05.2026

Yukarıda kimliği yazılı araştırmacı "Araştırma Uygulama İzinleri Genelgesine (2024/41)" göre belirtilen kapsamda araştırmasını yapmayı taahhüt etmiştir. Araştırmacının bilgi ve belgelerinin uygunluğu kontrol edilmiş olup araştırma uygulama izni ERZURUM İl Millî Eğitim Müdürlüğü tarafından onaylanmıştır.

Not: Okul/kurum yöneticileri tarafından "Araştırma Uygulama İzni" belgesinin ve veri toplama araçlarının (araçlardaki maddelerinin) modülde yer alan belge ve araçlarla aynı olduğu kontrol edilmelidir. Belgeler aynı olmadığı durumda araştırma uygulama izni verilmeyecektir.

Doğrulama Kodu: 734aea960d95bb91d3bb9f98a581c639e6c6a3a4a6f236095f2e5212718fc905
Doğrulama Adresi: arastirmaizinleri.meb.gov.tr/belge-dogrula
Serhat Mah. 1290. Sokak No.8/B 06374 Yenimahalle/Ankara TÜRKİYE
Telefon No: (0312) 413 43 00, Belgegeçer No: (0312) 413 45 12
e-posta: ttkb_arastirmaizinleri@meb.gov.tr, internet adresi: ttkb.meb.gov.tr

Sayfa 1/1



Appendix E



Bilkent Üniversitesi



Sayı : E-19220902-600.605-71103
Konu : 678 no.lu Etik Onay Başvurusu

21/04/2025

Sayın Doç. Dr. Armağan ATEŞKAN

Danışmanı olduğunuz Bilkent Üniversitesi, Eğitim Bilimleri Enstitüsü, Eğitim Programları ve Öğretim Yüksek Lisans öğrencisi Selin Sethi ile 678 no.lu "Perceptions of International Baccalaureate Diploma Program (IBDP) Teachers, Students and Graduates on Sustainable Feedback: A Mixed-Methods Case Study in an IB World School." adlı çalışma kapsamında yapmayı önerdiğiniz etkinlik için yaptığımız başvuru Bilkent Üniversitesi, İnsan Araştırmaları Etik Kurulu'nun 10/04/2025 tarih ve İAEK_2025_04_10_01 sayılı toplantısında görüşülmüş olup etkinliğin genel bilim etiği açısından uygun olduğuna karar verilmiştir.

Bu karar, yapmayı önerdiğiniz çalışmanın genel bilim etiği açısından bir değerlendirmesi olup, çalışmanızda, kurumumuzun değerlendirmesi dışında kalabilen özel etik ve yasal sınırlamalara uymakla ayrıca yükümlü olduğunuzu bildiririz.

Kurul kararı ekte sunulmaktadır.
Bilgilerinizi rica ederim.

Prof. Dr. Halil Altay GÜVENİR
Bilkent Üniversitesi İnsan Araştırmaları Etik Kurul Başkanı

Ek: Karar

Bu belge, güvenli elektronik imza ile imzalanmıştır.

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Tel: (0 312)290 40 00 Faks: (0 312)266 41 27 www.bilkent.edu.tr
ebys@bilkent.edu.tr - bilkentuni@hs01.kep.tr

Bilgi için: Birgül BULUT
Yönetici Sekreter
Telefon No: 0 312 29012 14





Bilkent Üniversitesi



AKADEMİK İŞLER REKTÖR YARDIMCILIĞI

İNSAN ARAŞTIRMALARI ETİK KURULU KARARLARI

Toplantı Tarihi : 10/04/2025
Toplantı No : İAEK_2025_04_10_01
Saat : 17:00

Üyeler: Prof. Dr. Halil Altay Güvenir (Başkan), Bilgisayar Mühendisliği
Doç. Dr. Işık Yuluğ, Moleküler Biyoloji ve Genetik
Dr. Öğr. Üyesi Burcu Ayşen Ürgen, Psikoloji
Dr. Öğr. Üyesi Şemsi Barış Özçelik, Hukuk
Uzman Öğretim Görevlisi Dr. Emine Öncüler Yayalar, Siyaset Bilimi ve Kamu Yönetimi
Prof. Dr. Özgür Ulusoy (Yedek Üye), Bilgisayar Mühendisliği
Dr. Öğr. Üyesi Pınar Altınok Ormancı (Yedek Üye), Hukuk

Gündem: 678 no.lu "Perceptions of ..." adlı çalışma için etik kurul onay başvurusu.

Karar: Üniversitemiz Eğitim Fakültesi öğretim üyesi Doçent Dr. Armağan Ateşkan danışmanlığında, Eğitim Bilimleri Enstitüsü, Eğitim Programları ve Öğretim Yüksek Lisans öğrencisi Selin Sethi'nin 678 no.lu "Perceptions of International Baccalaureate Diploma Program (IBDP) Teachers, Students and Graduates on Sustainable Feedback: A Mixed-Methods Case Study in an IB World School." adlı çalışma kapsamında yapmayı önerdikleri etkinliğin genel bilim etiği açısından uygun olduğuna, uygunluk verilen çalışma önerisinin karar ekinde yer alan çalışma önerisi, çalışma yürütücüleri ve bilgilendirme formu için geçerli olduğuna, toplantıya katılan üyelerin oy birliği ile karar verildi.

Prof. Dr. Halil Altay GÜVENİR
Başkan
Katıldı

Doç. Dr. Işık YULUĞ
Üye
Katıldı

Dr. Öğr. Üyesi Burcu Ayşen ÜRGEN
Üye
Katıldı

Dr. Öğr. Üyesi Şemsi Barış ÖZÇELİK
Üye
Katıldı

Dr. Emine ÖNCÜLER YAYALAR
Üye
Katıldı

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Tel: (0 312)290 40 00 Faks: (0 312)266 41 27 www.bilkent.edu.tr
ebys@bilkent.edu.tr - bilkentuni@hs01.kep.tr

Bilgi için: Birgül BULUT
Yönetici Sekreter
Telefon No: 0 312 29012 14



Appendix F

PARENT CONSENT FORM

Dear Parent;

We invite your child to participate in a research study conducted by Selin Sethi, Vice Principal and IBDP Coordinator at Bilkent Erzurum Laboratory School in May/June 2025. The study and your rights as a participant are described below.

Purpose of the research: This research aims to explore the perceptions of IB Diploma Programme teachers, graduates, and students regarding sustainable feedback. The findings may contribute to the effective feedback practices within the IB Diploma Programme.

Research Procedure: The study consists of an online survey titled, "Feedback For Learning" and focus group interviews. Your child will be asked to complete **an online survey** including closed-ended and open-ended questions that evaluate their experiences with feedback throughout their IB Diploma Programme education. This survey will take approximately **40 minutes**. Some participants will be invited to **semi-structured focus group interviews**. Your child's interview will be voice-recorded. The voice recording of your child will be destroyed after it has been transcribed. The interview will last about **60 minutes**.

This research will be conducted with the permission of the Turkish Ministry of National Education and the school administration. Participation in this study is entirely voluntary. Your child is free to choose whether to participate. The study poses no risk or adverse effects for your child. Your child's participation is entirely at your discretion, and you may refuse or withdraw at any stage of the study. Choosing not to participate or withdrawing from the study at any stage will not affect your child's academic performance, or relationships with the school, or their teachers.

No personally identifiable information will be requested from the students in the study. Responses will be kept strictly confidential and evaluated only by the researcher. The procedures do not include questions or situations that may cause personal discomfort. However, if your child feels uncomfortable at any point due to the questions or any other reason, they are free to stop responding and exit the study. In such cases, necessary support will be provided to alleviate any discomfort. Your child may withdraw from the study at any time after participating. Simply informing the researchers conducting the survey and semi-structured focus group interviews will be sufficient. Choosing not to participate or to withdraw after the beginning of the survey or focus group interviews will not impose any obligations or responsibilities on your child.

If you have any questions before giving consent, please feel free to ask. After the study, you can contact the researcher via phone or email to ask questions or request information about the results.

Kind regards,

Principal Researcher: Selin Sethi

Contact Information:

Signature:

I hereby give my permission to my child who is a student in class

with the student number to participate in the research described

above. I understand the audio recordings will only be used for research (e.g. analysis of responses, transcriptions of responses, etc.) and will not be available to anyone aside from the researcher. I understand that my child's right to withdraw from participating or refuse to participate will be respected and that his/her responses and identity will be kept confidential. I give this consent voluntarily.

(*Please return the signed form to the school through your child.)

Date:..../...../.....

1st Parent/Guardian Name-Surname:

Signature:

Address:

Date:..../...../.....

2nd Parent/Guardian Name-Surname:

Phone Number:

Signature: Address:

Appendix G

PARTICIPANT CONSENT FORM

Dear Participant,

We invite you to participate in a research study conducted by Selin Sethi, a Vice Principal and IBDP Coordinator at Bilkent Erzurum Laboratory School in May/June 2025. The study and your rights as a participant are described below.

Purpose of the research: This research aims to explore the perceptions of IB Diploma Programme teachers, graduates, and students regarding sustainable feedback. The findings may contribute to the effective feedback practices within the IB Diploma Programme.

Reason For the Research: Thesis research

Location(s) of the Research: İDV Bilkent Erzurum Laboratory High-school

Research Procedure: The study consists of an online survey titled, “Feedback for Learning” and focus group interviews. You will be asked to complete **an online survey** consisting of closed-ended and open-ended questions that evaluate your experiences with feedback throughout your IB Diploma Programme education. The survey will take approximately **40 minutes**. Some participants will be invited to **semi-structured focus group interviews** following the survey. The interviews will be voice-recorded. The voice recordings will be destroyed after they have been transcribed. The interview will last about **60 minutes**.

This research will be conducted with the permission of the Turkish Ministry of National Education and the school administration. Participation in this study is entirely voluntary. You are free to choose whether or not to participate. The study poses no risk or adverse effects for you. Your participation is entirely at your discretion, and you may refuse or withdraw at any stage.

No personally identifiable information will be requested from the participants in the study. Responses will be kept strictly confidential and evaluated only by the researcher. The procedures do not include questions or situations that may cause personal discomfort. However, if you feel uncomfortable at any point due to the questions or any other reason, you are free to stop responding and exit the study. In such cases, necessary support will be provided to alleviate any discomfort. You may withdraw from the study at any time after participating. Simply informing the researchers conducting the survey and semi-structured focus group interviews will be sufficient. Choosing not to participate or to withdraw after the beginning of the survey or focus group interviews will not impose any obligations or responsibilities on you.

If you have any questions before giving consent, please feel free to ask. After the study, you can contact the researcher via phone or email to ask questions or request information about the results.

Kind regards,

Researcher: Selin Sethi

Contact Info:

Signature:

I agree to participate in the research with the above information: I confirm that I am at least 18 years old and voluntarily agree to participate in this research study. I understand the audio recordings will only be used for the purposes of research (e.g. analysis of responses, transcriptions of responses, etc.) and will not be available to anyone aside from the researcher. I understand that my right to withdraw from participation or refuse to participate will be respected and that my responses and identity will be kept confidential. I give this consent voluntarily.

(*Please return the signed form to student affairs. Graduates could scan and email the signed form to the researcher.)

...../...../.....

Participant Name-Surname:

Signature:

Phone Number:

Address: