

Formative Instruction in Hawai‘i: Teachers’ Perspectives and Practices

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Abstract

In the aftermath of the COVID pandemic, there is value in examining the insights gained by the Hawai‘i education system through the various adaptations required to navigate the crisis. In this context, it is crucial to inquire about teachers’ perspectives on the strategies implemented in the plan to maximize the utilization of the Elementary and Secondary School Emergency Relief (ESSER) fund. This study delves into mixed-methods research. The primary goal of this study is to gain insights into teachers’ experiences with formative instruction practices. It seeks to cast light on how teachers perceive formative instruction, how it is implemented within Hawai‘i classrooms, and identify potential areas to support the teachers. Qualitative and quantitative data were collected and analyzed together so that findings from each could inform and complement the other. Teachers’ responses are representations of their lived experiences, which were used as a means to construct meanings together with the related literature. This study aimed to validate its results by seeking triangulation among different sources of information: A focused literature review, a thematic document analysis, and a survey with closed and open-ended questions. Combining the results of each of those methods, it was possible to reach conclusions that not only reflect the state of the implementation of formative assessment practices in the public schools of Hawai‘i, but are also displayed in relation to other academic efforts published about this topic, and to the guidelines that the Hawai‘i Department of Education has set in the framework of effective academic practices.

Keywords: Formative Instruction, Assessment, Teachers’ Practice, Hawai‘i, Mix Methods

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Introduction: Formative Instruction in Theory and Practice

The Elementary and Secondary School Emergency Relief (ESSER) fund, administered by the Hawai'i State Department of Education (HIDOE), was intended to address needs arising from or intensified by measures taken in response to the COVID-19 virus. One of the strategies supported by the ESSER fund was the implementation of a Framework for Accelerated Learning called Effective Academic Practices. This framework includes guidelines for out-of-school time, extended learning time, and Formative Instruction Practices (FIP), also called formative assessment or assessment for learning (Hawai'i State Department of Education, January 2022a, p. 8). This research brief focuses on exploring teachers' comprehension and implementation of FIP. The aim is to identify potential areas for reinforcement that can benefit students, especially now that the emergency is in its concluding phase. Consequently, the main objective of this study is to gain a deeper understanding of teachers' perspectives on FIP in relation to the terms as defined by the HIDOE and the broader literature about FIP, as well as to identify opportunities for improvement.

This research drew from three sources of data: a focused literature review (Paré & Kitsiou, 2017), a document analysis (Morgan, 2022), and an anonymous survey (Yusoff et al., 2021). The literature review focused on academic publications that saw the light during or after 2019. Additionally, a thematic analysis was conducted with documents shared by the HIDOE, including guidelines to apply FIP. Finally, the survey of this research was answered by 140 participants. The survey took no more than 10 minutes to be completed by participants and included questions such as: 1) "How would you define Formative Instructional Practices in your own words? 2) On a scale of 1 to 5, how confident do you feel in your understanding and implementation of formative instructional practices? 3) Please, describe one or two formative instruction practices that you have incorporated in your teaching". These questions were constructed based on the findings of the literature review and the document analysis, from which it was possible to determine that the core components of FIP are rubrics, teachings based on evidence of students' learning, feedback from teachers and peers, and self-assessment (Dudek et al., 2018).

Firstly, a need for more mixed-methods studies about FIP emerged from the literature review findings. Secondly, the document analysis revealed a correspondence between HIDOE's guidelines and the broader literature about FIP. Thirdly, in the findings from the survey, two groups of teachers emerged. One group self-reported as aligned with the expected application of FIP, and another self-reported as unclear about the concepts, components, and application of FIP. Additionally, there is a positive correlation between teachers' years of experience and the confidence level they report in the implementation of FIP. However, there seems to be a negative correlation between the number of years of experience and the level of clarity about FIP that teachers self-report. In other words, more years of experience seem to provide more confidence but not necessarily more clarity to teachers regarding FIP. In this sense, respondents recognized that formative instruction is challenging for reasons ranging from it being time consuming to lack of support from authorities. In teachers' words, ways in which the HIDOE can be more supportive would be: online or onsite professional development (PD) with experts, more resources available in the classroom, stipends offered for rural teachers to take PD training, refreshing training for veteran teachers, and follow-ups after PD. Other suggestions to better assist teachers in implementing FIP include revising policies to better adjust the demands on the shoulders of teachers to the contexts in which they work.

Conceptual Framework: Formative Instruction as a Pedagogy

The goal of formative instruction is to actively engage students in their learning process, using student-centered practices through which “both the teacher and student partner to collect evidence to know where the student is, where the student needs to go with the intended learning, and how to close the gap” (Hawai‘i State Department of Education, 2022b, p. 24). Formative instruction is a pedagogy that focuses on empowering students by building knowledge with them (Wylie, 2020). A teacher who works with formative instruction is in constant dialogue with pupils, monitoring their progress, providing feedback, and adapting teaching strategies and tools to the needs of students. The core components of formative instruction are:

- **Rubrics:** an assessment instrument developed with two guiding principles, namely feedback and instructional correctives. Its aim is to measure abilities and progress in given components (Thinwiangthong et al., 2020).
- **Teachings based on learning evidence:** observable corroboration of learning that is used to provide feedback and to adjust teaching strategies (Wylie, 2020).
- **Feedback:** verbal or nonverbal statements or gestures to provide observations regarding students’ academic performance (Dudek et al., 2018).
- **Self-Assessment:** the ability to be self-critical that triggers self-reflection and comparisons (McFadden et al., 2021).

Methods

From an interpretative paradigm that seeks to “understand the complex world of lived experience from the point of view of those who live it” (Schwandt, 1994, p. 221), this embedded –also called parallel– mixed-methods research (Cresswell, 2008) employed a myriad of data collection techniques to reach triangulation, and to ensure credibility and trustworthiness (Cresswell, 2008; Morgan, 2022): focused literature review, thematic document analysis, digital survey.

Literature Review

The literature review included 35 academic publications that saw the light during or after 2019, concerned with FIP in the formal education system, in the geographical areas that surround Hawai‘i, such as the United States and Asia-Pacific. An academic database called Web of Science was used to this end, chosen over other options because of its high quality and comprehensive characteristics. The key terms used in the search were “formative instruction” [or] “formative assessment” [and] “school”. Three screening rounds were conducted in the review process, disregarding publications that did not comply with the inclusion criteria, which were: time frame between 2019 and 2024; geographic area of USA and Asia Pacific countries; English language; peer-reviewed; focus on formative instruction.

Document Analysis

A thematic analysis (Morgan, 2022) was conducted with documents and artifacts shared by representatives of the Hawai‘i Department of Education (HIDOE) in relation to the Accelerated Learning Framework and the Formative Instruction component of this framework. Most documents have online open access, as they serve as guidelines for HIDOE teachers. A total of 8 documents and/or artifacts were scrutinized in detail, namely:

- 1) ESSER Guidance Document;
- 2) Formative Instruction Guidance Document;
- 3) Formative Instruction by the Office of Curriculum and Instructional Design;

- 4) Effective Academic Practices one pager;
- 5) Formative Instruction one pager;
- 6) Assessment for Learning and of Learning PowerPoint presentation;
- 7) Accelerated Learning one pager;
- 8) Formative Instruction and Data team PowerPoint presentation.

Survey

Surveys are instruments that can contain items to obtain quantitative data and items that intend to obtain participants' perceptions (Saldaña, 2009). Following Yussoff et al. (2021), the construction process of the survey for this research included the following steps: clarifying its aim, defining its attributes, making a plan, validating and distributing the instrument. The result was an anonymous online survey with 11 close-ended and open-ended questions that took no more than 10 minutes to be completed by participants. This instrument was distributed digitally among teachers state-wide and remained open to answers for approximately 2 months.

Findings

Although the sources of information in this research are independent of each other, we configured them so that they would complement each other and be integral parts of the whole research process.

Findings From the Literature Review

The analysis of the retained articles revealed a majority of qualitative methods and three trends in the literature about FIP: a) articles focused on students' achievements, b) articles focused on teachers' professional development, and c) articles focused on digital tools (see Figures 1 and 2). Education actors predominantly included in the studies are students and teachers, but some articles also mention Principals and families' roles in the development of FIP. Finally, from the retrieved articles, three countries have an outstanding representation: China, Singapore, and the US.

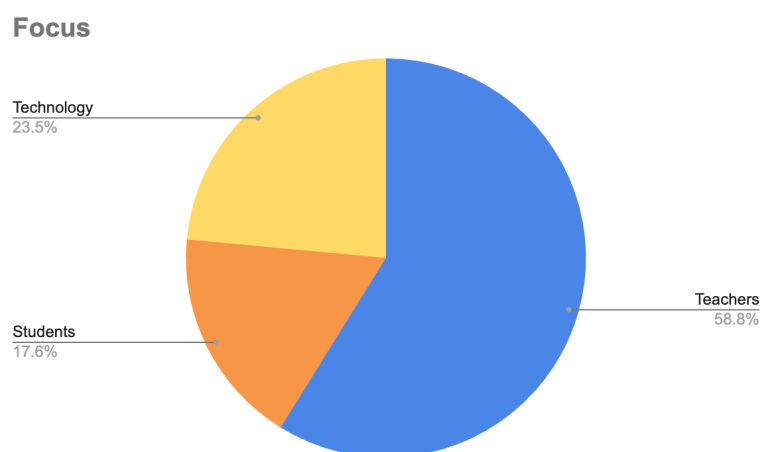


Figure 1. Focus of the included studies

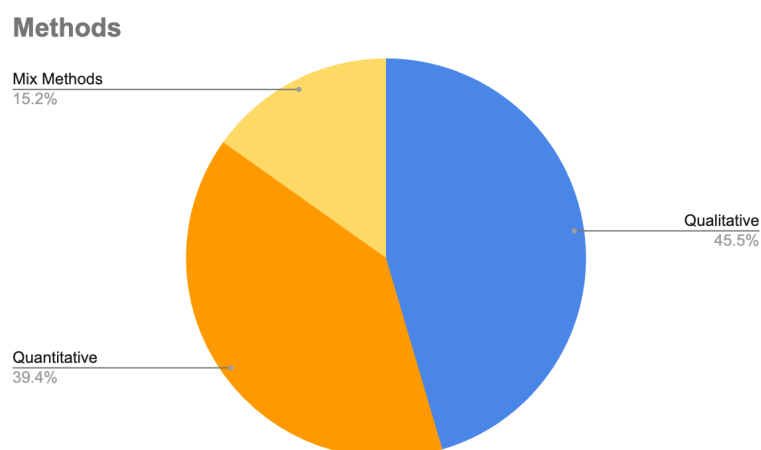


Figure 2. Methods of the included studies

Document Analysis Results

A synthesis of the official documents provided by HIDOE showed that the concepts of ‘formative instruction’ and ‘formative assessment’ appear interchangeably throughout. Furthermore, the HIDOE has clearly assigned key components and characteristics to formative practices, with the expectation that teachers would incorporate them. In this sense, the ESSER Guidance Document explains that “formative instruction practices are student-centered instructional strategies that drive the teaching and learning process” (Hawai‘i State Department of Education, 2022b, p. 24). To better understand what HIDOE means when the official documents mention the terms ‘formative instruction’, or ‘formative assessment’, or ‘assessment for learning’, it was crucial to find the ‘core components of formative instruction’. According to the Formative Instruction Guidance Document (Hawai‘i State Department of Education, 2022a), the components are:

- Clarifying the intended **learning objectives**, with examples and rubrics.
- Generating **evidence of learning**, by keeping records of learning that students can use to articulate, analyze or share with others in relation to their lives and skills.
- Providing **effective feedback**, from teacher to student and from student to student, including self-assessment.
- Fostering **ownership** of student learning, with strategies that students develop to take control of their own learning.

It is important to note that formative assessment should not be minimized to its core components. The HIDOE explains that teachers should “use tools, strategies, and resources to determine what students know, identify possible gaps in understanding, modify instruction, and actively engage students in their learning” (2022a, p. 22). Additionally, the HIDOE proposes a cycle that teachers should incorporate into their practices (see Figure 3):

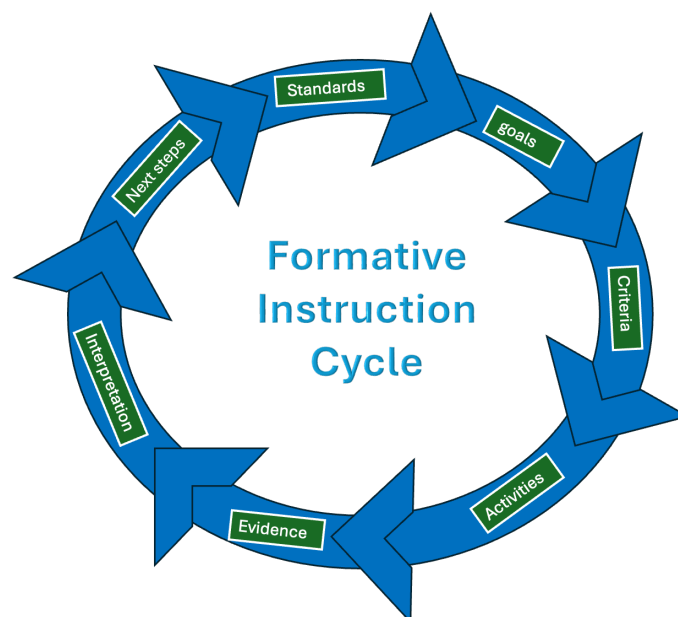


Figure 3. Formative Instruction Cycle, based on the analysis of the HIDOE's documents

Contrasting the results of the document analysis and the literature review, this research corroborated that the concepts and guidelines found in HIDOE's official documents relate to those found in academic literature. There are important coincidences between both corpora, including the importance of feedback and the students' centeredness in their own learning process.

Survey Results

The survey was answered by a random sample of 140 teachers from the Hawai'i Department of Education (HIDOE) located in urban as well as in rural areas. The majority of respondents have over 20 years of experience (43.6%) and teach elementary level (55.7%) (see Figures 4 and 5). Of the teachers who work in middle and high schools (44.3%), 80.7% teach core subjects, such as Math, Social Science, English, etc., and the rest teach elective subjects, such as Theater, Music, Spanish, etc. (see Figure 6). The answers have three clear trends: more than 20 years of experience, elementary school teachers, and core subjects. Out of the mentioned trends, there was a representation of teachers with more or less years of experience from both middle and high school and of subjects such as arts, chemistry, biology, Hawaiian studies, digital media, statistics, calculus, computer science, etc. Therefore, it can be said the sample is illustrative of a wide range of characteristics found in HIDOE teachers.

1. How many years of experience do you have in education?

140 responses

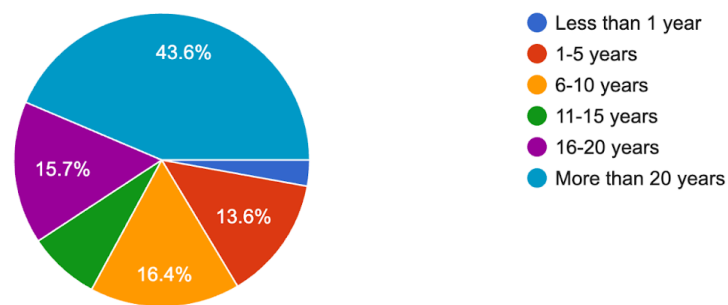


Figure 4. Teachers' years of experience

2. What grade level do you teach?

140 responses

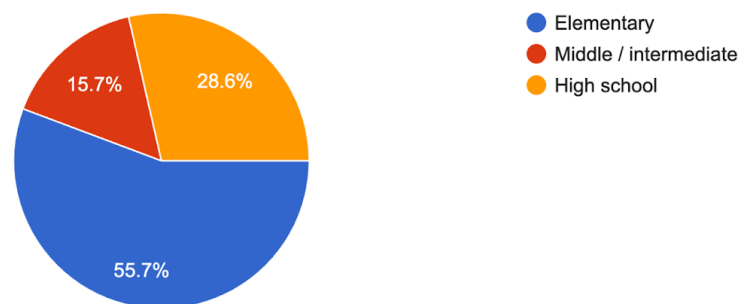


Figure 5. Levels taught by teachers

Courses

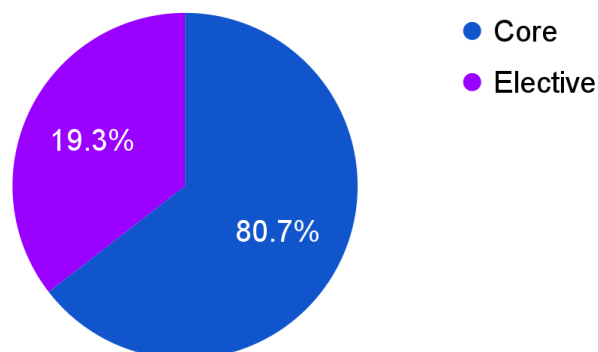


Figure 6. Types of courses

Analysis of Teachers' Words

The survey revealed different levels of consistency between teachers' practices and what the HIDEOE requires in terms of FIP. There is a group of teachers who self-reported as aligned with the expected application of FIP and a group of teachers who self-reported with unclear understandings of concepts and vague applications of Formative Instructional core components. Additionally, there is a positive correlation between the year of experience and the confidence level that teachers report in implementing Formative Instruction, as seen in Figure 7, where 1 (blue) represents unconfident teachers and 5 (orange) represents very confident teachers. However, I contrast with the qualitative data collected, teachers with who reported more years of experience also reported less clarity in their understandings and applications of FIP.

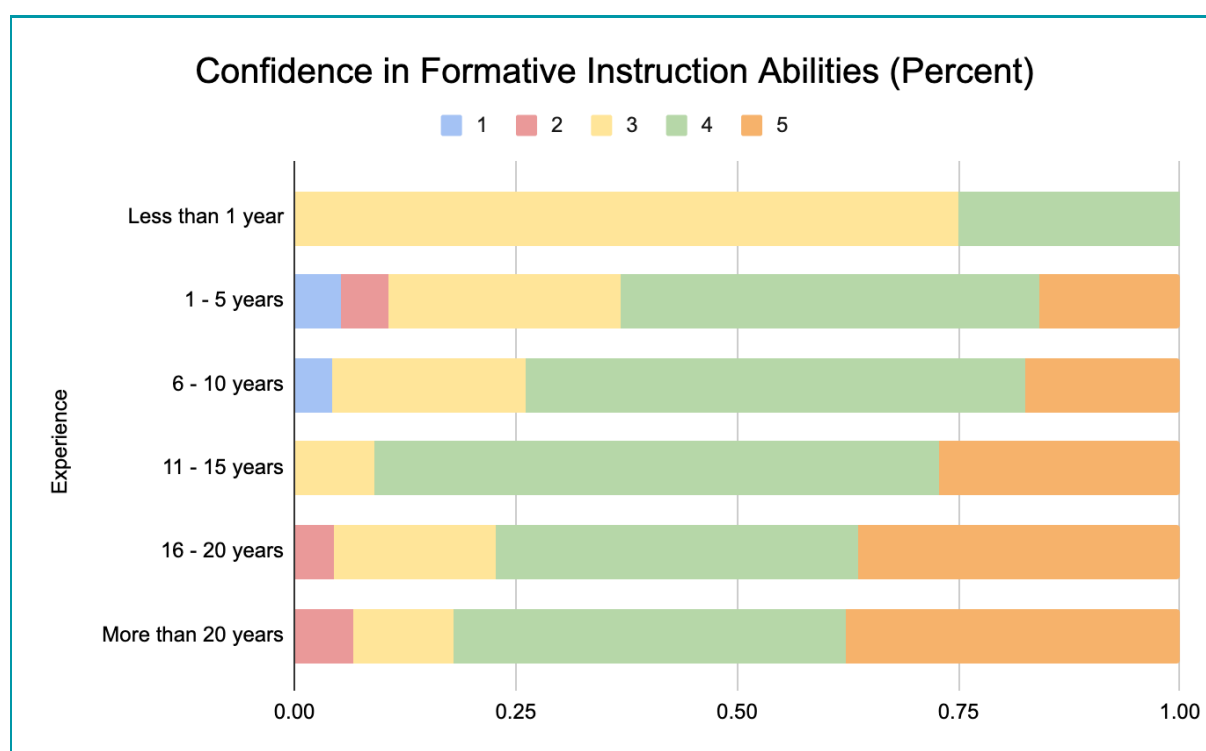


Figure 7. Correlation of teachers' experience and confidence

Clear Practices

A group of teachers defined formative instruction as a processual and collaborative practice constructed between students and teachers, including elements such as evaluation or assessment whose results can be used to provide feedback and inform or plan teaching practices. The fundamental engagement of students in their own learning process seems to be clear for this group of teachers, who highlighted the importance of constant collaboration between students and teachers, encouraging students to apply gained knowledge. This group of teachers also reported being attentive to providing feedback for improvement when needed. Coherently, this group of teachers incorporates assessing activities during different moments of the lessons. Additionally, teachers integrate a variety of instruments and activities in their FIP, such as rubrics, scaffolding, worksheets, games, exit tickets, and more. In this sense, this group of teachers seems to align with HIDEOE's expectations and with the concepts and guidelines found in the literature about FIP in terms of assessment, learning evidence, and feedback.

Unclear Practices

It is important to acknowledge that some of the responses received in the survey exposed a lack of clarity on both the concept and the strategies of FIP on the side of some teachers. There is a group of teachers that leans towards quizzes, tests, and summative evaluations without taking sufficiently into account other important elements such as rubrics, evidence of learning to inform teaching, students' self-assessment, and feedback. At the same time, some teachers seem to prioritize standards of learning outcomes rather than striving to find a balance between the established standards and students' characteristics. Such lack of balance could create a mismatch between class content and what is relevant in students' lives, which would hinder pupils' engagement and empowerment with the education they receive. Moreover, it should be noted that many of the unclear conceptualizations and examples of formative instruction come from teachers who have more than 20 years of experience. As can be seen in Figure 8, there is an imbalance that favors the application of two components and neglects the importance of the other two of FIP. Teachers tend to use much more frequently evidence of learning to inform teachings and feedback, and some teachers never use rubrics and students' self-assessment.

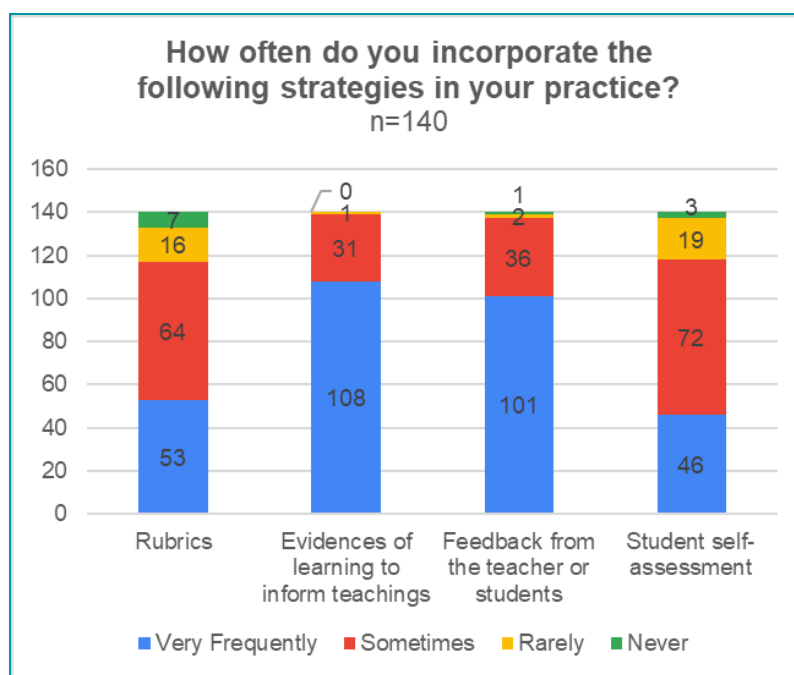


Figure 8. Application of FIP's core components

Challenges and Opportunities

Respondents recognized that formative instruction is challenging for reasons ranging from it being time consuming to lack of support from authorities. At the same time, teachers expressed that they would like to receive support to develop collaborative schemes that can make their work more efficient. They also emphasized that the requirement to learn and use FIP should not come as a burden on top of their already various daily teaching responsibilities. In teachers' words, ways in which the HIDOE can be more supportive would be online or onsite professional development with experts, more resources available in the classroom, stipends offered for rural teachers to take professional development training, and refreshing training for veteran teachers. Other suggestions to better assist teachers in the implementation of formative instruction include the provision of resources for classrooms

and the revision of policies in order to better contextualize demands on the shoulders of teachers in accordance with their working conditions. Table 1 shows teachers' direct quotations when they express challenges and opportunities in relation to their implementation of FIP.

Table 1. Challenges, opportunities and goals in the implementation of Formative Practices in Hawai'i classrooms

Challenges: unclear concepts and practices	Opportunities	Goal: Teachers and HIDOE aligned
"Another word that educators throw around that I ignore" "All professional development is done on the teacher's time and expense"	"Looking at the needs of the school or schools in the complex and offering PD's aligned to the schools/complex needs"	"Formative instruction is based on monitoring students' learning to inform which teaching strategies a teacher should use next"
"Rubrics are the worst" "Often it feels like the DOE doesn't trust teachers to teach or ask us what is important or what we actually do in our classrooms"	"HIDOE can support teachers by offering refresher training for veteran teachers and also new or updated strategies for all teachers."	"The many ways I monitor my students' progress and make changes and improve their understanding of the subject and how it relates to them and their lives."

Despite its rigorous characteristics and different sources of data, the scope of this research is limited, given that it mostly relies only on participants' self-reporting of their practices. For a deeper exploration, it is suggested that follow-up research be carried out, including observations and interviews based on the results of this survey research.

Conclusion, Implications & Recommendations

The implementation and strengthening of Formative Instruction Practices were part of the coping strategies that the Hawai'i Department of Education used to face the Covid-19 emergency, according to the 8 official documents that were analyzed in this research. The guidelines and documents that the HIDOE issued to support teachers in this regard relate to broader literature about FIP, reflecting key characteristics, such as its core components – rubrics, evidences of learning to guide teaching, feedback, self-assessment (Thinwiangthong et al., 2020; Wylie, 2020; Dudek et al., 2018; McFadden et al., 2021) –, as corroborated with 35 publications that were reviewed for this research. Findings from the survey indicate that a group of teachers in Hawai'i reports complying with the expected implementation of FIP, but other group reports having difficulties with it, in terms of what it means and of how to put it into practice, similar to the literature about FIP that focuses on teachers (Beck & Jones, 2023). Differentiated perceptions and implementations of FIP among Hawai'i teachers implicates that some students receive more opportunities than others to actively engage with their learning process. To close the gaps, the participants of this research expressed that it would be beneficial to provide them with equitable resources, incentives and relevant training, as well as opportunities for collaboration among themselves, just as other teachers who participated in the studies that were taken into account for the literature review of this

research expressed (Popham, 2022). Policies that consider teachers' voices could potentially palliate some of the obstacles the teachers in Hawai'i and elsewhere face when they are required to incorporate FIP in terms of time consumption, overload of work, and lack of support.

This study sought to shed light on the experiences of educators in their engagement with formative instruction practices. In a world profoundly affected by the COVID-19 pandemic, understanding teachers' perceptions, the factors shaping their ideas and practices regarding formative instruction, and the actual implementation of these strategies within HIDOE classrooms is not only pertinent, but also pivotal. Perhaps most crucially, the study highlights the alignment or divergence between teachers' comprehension of formative instruction and the expectations set forth by the HIDOE. The impact of this research extends beyond mere academic curiosity; it has the potential to catalyze positive change in educational policy and professional development practices. By illuminating the gaps and commonalities in teachers' perspectives and HIDOE's expectations, we aim to inform the creation of more successful and targeted support systems for educators. Ultimately, our study contributes to the ongoing efforts to enhance the quality of education in Hawai'i and beyond, ensuring that teachers have the resources and guidance needed to provide the best possible educational experience for all students.

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