(Re)Conceptualizing the Purpose of the Lesson Plan

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ABSTRACT: Although the lesson plan format has undergone numerous changes throughout the years, it is still largely a list of instructional activities. Using updated interpretations of Bloom's taxonomy as well as sociocultural learning theory and intersubjectivity, we propose a reconceptualization of lesson planning that places greater focus on students' cognitions to supplement the list of instructional activities. Reconceptualizing lesson plans supports a growing movement toward an inquiry approach to planning, instruction, and reflection that facilitates students' thinking and success.

Keywords: lesson planning, learning objectives, cognitive skills, sociocultural learning theory, intersubjectivity

RESUMÉ: Au fil des ans, de nombreux changements ont été apportés aux plans des cours mais les activités éducatives y figurent toujours en grande partie. A l'appui des interprétations mises à jour de la taxonomie de Bloom ainsi que de la théorie de l'apprentissage socioculturel et de l'intersubjectivité, nous proposons une reconceptualisation des plans de cours qui avantagent les connaissances des étudiants afin d'enrichir la liste des activités éducatives. La reconceptualisation des plans de cours s'inscrit dans un mouvement grandissant vers une démarche de recherche sur la préparation, l'enseignement et la façon d'aider les étudiants à raisonner et à réussir.

Mots-clés : préparation des cours, objectifs pédagogiques, aptitudes cognitives, théorie socioculturel de l'apprentissage, intersubjectivité

Introduction

Over the past decades, there have been numerous attempts to improve teachers' planning lessons. When Tyler (1949) proposed his view of lesson planning, education was strongly influenced by behavioral psychology. Current thinking in education emphasizes the importance of cognitive process in learning (Vygotsky, 1986;

Wittrock, 1974). Given these theoretical changes to educational research, we argue for a reconceptualization of the lesson plan. We offer a new view that redefines the purpose of learning objectives and considers how current views of human learning theory reinvigorate the form and function of the lesson plan. The goal of this paper is to highlight past views and new thinking about lesson planning and, building off those ideas, to recommend a new approach that addresses the form and function of lesson plans to meet 21st century skills. Using the revision to Bloom's taxonomy (Anderson & Krathwohl, 2001), sociocultural learning theory (Vygotsky, 1978; Wertsch, 1991), and intersubjectivity (Rommetveit, 1979; 1981), we argue for a reconceptualization of the lesson plan in three essential ways:

1) a cognitive focus to writing learning objectives,
2) a cognitive focus to designing instructional activities
3) structuring the format to facilitate designing quality learning objectives and instructional activities.

(Re)Conceptualizing Learning Objectives

What is the lesson planning process and when are learning objectives identified? Does it matter? Through the years, educators have developed a few models of lesson planning. The prevailing, dominant model is the "rational means-end" model (Clark & Yinger, 1977), where the teacher begins the planning process by identifying learning objectives, then designing associated instructional activities, and finally developing assessments at the end of the planning process (John, 2006). The naturalistic model, also known as "integrated ends-means" model (Clark & Yinger, 1977), however, begins when teachers identify instructional activities for their students. Once instructional activities have been planned, teachers identify learning objectives that are embedded in the activities and, then, develop assessments. Wiggins and McTighe (1998) evolved the integrated model into their backwards planning model, where the planning process begins with identification of assessments in order to ensure alignment with instructional activities. In this model, establishing clear assessments replace the need for learning objectives.

Whether they are identified at the advent of the lesson plan process or at the end, the main purpose of learning objectives is to state students' learning goals. They are often written as "Students will be able to…" in efforts to articulate what students will be able to accomplish by the end of the lesson. Writing clear and measurable learning objectives allows the teacher to design

assessments that measure those learning goals and instruction that facilitates students' progress toward the goals. On the surface, it seems that backwards planning (Wiggins & McTighe, 1998) diminishes the value of writing learning objectives. Why should a teacher state learning objectives if she or he begins the planning process with the assessment and worked backwards to align the assessment to the instruction? Does the learning objective serve another purpose? A reexamination of Bloom's Taxonomy, especially the revised version proposed by Anderson and Krathwohl (2001) offers another way to look at learning objectives.

Bloom (1956; Bloom et al, 1956) originally generated three types of objectives: cognitive, psychomotor (Simpson, 1972), and affective (Krathwohl, Bloom, & Masia, 1964). The cognitive objectives determine what should be taught within the content (e.g., students will be able to (SWBAT) summarize a story). Psychomotor objectives reflect students' movement and physical abilities (e.g, SWBAT kick the ball in a straight line for a distance of at least 20 yards). Affective objectives target the emotional states of students (e.g., SWBAT appreciate the contribution of Latino authors to American culture). The cognitive approach became the mainstay of lesson plans through the current day. Yet, Bloom's taxonomy of thinking (cognition) was presented in the 1950s, a time when behaviorism was the paradigm that guided research and instruction. Learning objectives needed to be observable: something a teacher can see and measure. Therefore, Bloom's cognitive objectives were interpreted into behavioral forms such as Mager (1962) proposed (e.g., SWBAT read the short story with 80% fluency; SWBAT identify the main characters in a story with 75% accuracy).

Since the fifties, education shifted from behaviorism to cognitive and sociocultural paradigms. Piaget (1967/1971), Vygotsky (1978; 1986), and others (e.g., Bruner, 1966/1978; Wells, 2009; Wittrock, 1974) whose theories focused on students' cognition (i.e., thinking) began to influence education and teaching methods. Teachers became interested in how students construct meaning of instructional content. Collaborative group work, project-based learning, and other constructivist teaching methods became commonplace in classrooms (Cohen, 1998; Cohen, Lotan, Scarloss, & Arellano, 1999; Palinscar & Brown, 1986). While constructivist reforms occurred in teachers' instruction, educational leaders offered no changes to writing learning objectives. Many educators still rely on versions of Mager's (1962) behavioral approach to writing learning objectives.

Anderson and Krathwohl (2001) introduced an updated version to Bloom's taxonomy. Their significant contribution to Bloom's (1956) original thinking is to distinguish knowledge from cognitive objectives by proposing that there is a difference between what students learn (knowledge) and how students learn (cognition). They identified four types of knowledge that students can learn within a lesson: factual, conceptual, procedural, and metacognitive. For the purpose of the present article, we will focus on their notion of cognition, which uses sociocultural notions to modify Bloom's taxonomy of thinking. Bloom ordered the original taxonomy from simplest to most complex: knowledge, comprehension, application, analysis, creation, and evaluation. The revised taxonomy reframes the categories into: remembering, understanding, applying, analyzing, evaluating, and creating. The first modification involves changing the cognitive labels from nouns (what is being learned) to gerunds (how is it being learned). Anderson and Krathwohl argue that thinking is an active process that needs to be represented in the cognitive objectives. The second change rearranged the last two levels of cognition. Bloom's original taxonomy suggests that there are different levels of thinking skills that can be hierarchically arranged from lower-order (knowledge, comprehension, and application) to higher-order (analysis, creation, evaluation). According to Bloom's original taxonomy, "evaluation" was considered the highest-order thinking skill. Anderson and Krathwohl proposed, instead, that *creating* is the highest level of thinking because inventing something new is what we, as humans, aspire to do. The significance of these changes highlight the path for learning objectives to gain relevance once again in the midst of backwards planning approaches to designing lessons. That is, cognitive learning objectives must reflect students' thinking or the thinking skills teachers want to develop in their students. The lesson should not be about *what* students do, but *how* students should be thinking during the lesson.

Moving away from behavioral views of learning objectives is not easily done, especially for novice teachers. The culture of teaching over the course of sixty years continues to paradigmatically pressure teachers to focus on what the students will complete by each lesson's end. The Common Core wave of educational reforms, however, demands that teachers consider how students think during each lesson more so than what they complete by the end of the lesson (Porter, Fusarelli, & Fusarelli, 2015; Porter, McMaken, Hwang, & Yang, 2011). To do this, teachers must deconstruct each assignment to identify the cognitive demands or the kinds of thinking students must do to complete the

assignment as well as identify which thinking skills students already possess and which ones students need to develop.

One way for teachers to engage is a cognitive analysis of instruction is to deconstruct assessments and assignments to identify embedded cognitive demands. Once the cognitive demands have been identified, teachers can identify which thinking skills students already possess and which ones need development. Consider for example teachers who want to teach their students to be able to write character analyses from the narrator's perspective. Writing a character analysis is *the what*: the behavioral approach to writing a learning objective. Teachers are very clear on *the what*. They know that, by the end of the lesson, students need to produce a writing assignment. Teachers, however, may be less clear on how to transform the thinking of students who may have little understanding about character analysis so that they learn how to think through the process of analyzing a character. As teachers focus on getting students to complete a task (e.g., write a paragraph), they lose sight of supporting students' development of thinking skills that are important for higher-cognitive processes (e.g., list and describe characteristics of the character, identify traits that are most important for the narrator and/or audience, provide evidence). When teachers fail to consider students' cognitions, they place their students' learning at risk. For struggling learners, this difference may be significant as they are not exposed to explicit and supportive instructional strategies that develop those cognitive skills. Students with prerequisite cognitive skills (e.g., analytical reading skills) will succeed in furthering their development, while students without such skills will work to complete a substandard version of the task without developing necessary cognitive thinking skills. Therefore, writing learning objectives identify cognitive demands of the lesson. Using Bloom's taxonomy of thinking is one way to identify those cognitive skills. There are numerous lists identifying possible cognitive verbs associated with Bloom's taxonomy. These verbs could be a source for identifying clear learning objectives.

Writing clear learning objectives, however, requires more from teachers than just identifying correct verbs. Teachers must understand what that verb means in context (i.e., thinking skills) and know how to develop those thinking skills. Let us continue thinking about the learning goal of writing a character analysis from the narrator's perspective. To complete this goal, the required thinking entails making a list of attributes from the story about a character and making an inference about what that list of attributes says about the character. The teacher, therefore, must understand

the cognitive demands of the task, which is in this example, is a multistep process. Once the teacher understands that to achieve the objective requires multiple steps, the teacher can design instructional tasks that make those steps explicit to the learner and design instructional strategies that facilitate distinct thinking skills associated with each step. Making implicit cognitive processes explicit is the foundation of socio-cultural learning theory (Vygotsky, 1978; Wertsch, 1991). Teachers' identifying cognitive demands of instructional tasks is critical to the lesson planning process and, as a result, should be clearly stated in lesson plans as learning objectives. Designing assessments through backwards planning only identifies the final task, but not the cognitive demands hidden within the task that are in need of analysis. The purpose of learning objectives becomes transformed from a statement about what students should do to how students should do it. This is the form and purpose of learning objectives that need to be adopted by teachers at all levels. Once the cognitive skills are clearly identified, teachers should design the rest of the lesson to provide opportunities for students to practice developing those cognitive skills. To facilitate students' practice of cognitive skills, we turn to the form and function of instructional activities.

(Re)Conceptualizing Instruction

Teachers and educators often view lesson planning as a prepared list of activities designed to engage students. As teachers become more experienced, the need to fully describe activities becomes less necessary because implementation of these activities becomes familiar. Experience informs teachers regarding which student behaviors to expect. Lesson planning, from this perspective, is a recipe: a list of materials (ingredients) and a description of when to use those materials (procedures). Like a recipe, once it has been used a number of times, the teacher no longer needs to refer to the plan. Educators who consider students' cognition during instruction, however, know that designing and implementing a lesson plan is more than following a recipe (Bartolome, 1994). Designing and implementing a lesson, rather, should focus on achieving a primary goal: facilitating students' success on the assessment. To achieve this goal, teachers should design student-centered instructional activities that maximize student engagement and provide opportunities for meaningful feedback.

(Re)imagining Student Centered

Cognitive learning theory argues for students to be actively engaged in making meaning. As such, educators are encouraging lesson plans to highlight students' activity and become student centered. For example, Goldston, Dantzler, Day, and Webb (2013) focus on opportunities for inquiry-based learning within science lesson plans. Ding and Carlson (2013) describe that effective mathematics lessons should provide each student with opportunities for deep thinking and abstract representations. Ruys, Keer, and Aelterman (2013) look at ways that lesson plans facilitate opportunities for students to collaborate. So what should the instructional activities look like? Should they be a bulleted list of things to do? If so, from whose perspective?

A teacher-centered lesson plan focuses on what the teacher is going to do and overlooks what each student needs to do to develop important skills. Mager (1962), Gronlund (1999), and Marzano (2000) recommend that learning objectives should be written from the perspective of what each student should be doing or thinking. The rest of the lesson plan, according to these authors, should be a list of activities that the teacher performs for or with students. For example, a teacher may write something like the following within a lesson plan:

1. Pass out worksheets for students to complete.
2. Present a mini-lecture on the difference between theme and moral.
3. Have students think-pair-share about the story.

Such lessons are recipes of what the teacher should be doing rather than following through with the student-centered perspective.

Strong lesson plans should not only include learning objectives that reflect students' thinking, but also instruction that provides opportunities for students to develop and share their thinking. In order to focus on students' opportunities for active learning, a lesson plan should have the main instructional activities written from students' perspectives. How will students engage with activities? What should students be thinking during the engagement? The following are a few examples of student-centered items in a lesson plan:

1. Students will use the worksheet to identify the main points of the story.
2. After they identify the main points, students will listen to a lecture about the difference between theme and moral. During the lecture students will take notes while listening for definitions for theme and moral while paying particular

attention to the examples presented. Students will have time to process and record their notes.

3. Students will read another short story and, then, work with a partner to identify its theme and moral. Their discussion should focus on identifying the theme and the moral as well as explaining how the short story exemplifies each.

The student-centered approach considers how students are thinking at nearly every turn of the lesson. Focusing on students' thinking ensures that the teacher is supporting development of appropriate cognitive skills. In addition, when it comes to interacting with students during crucial moments of dialogue, the teacher has considered what type of thinking students should be doing and can facilitate that thinking through strategic questions. Planning from students' perspective reflects the importance of intersubjectivity (Rommetveit, 1979; 1981) when planning lessons. That is, teachers must make an effort to build shared understanding with their students about instructional activities.

Rommetveit (1979; 1981) argues for the importance of shared understanding during discourse. Classroom instruction is, in many ways, a dialogue between students and the teacher. In order to facilitate this dialogue, it is important for all stakeholders in the classroom (e.g., students and teacher) to build shared understanding. The sociocultural perspective of intersubjectivity suggests that two people engaged in conversation assume understanding when each speaker has a different experience and, therefore, a different meaning about a concept within their dialogue. In the classroom, this means that the teacher's understanding of themes comes from having many experiences with identifying themes in a variety of texts within multiple settings and, as a result, having foresight as to the importance of identifying theme on students' immediate and future tasks. Many young students, however, have little experience with identifying themes and may see the practice as a school activity without concrete relationships to their other present or future activities. Yet, the teacher and the learner must construct meaning about the lesson at hand and understand each other in the process. Planning from the student perspective forces teachers to think about students' thinking, their strengths and weaknesses, their assumptions and misconceptions, and attempt to meet students on their turf to promote intersubjectivity. Working toward intersubjectivity by considering students' cognition, teachers are better able to provide opportunities for students to share their developing conceptions as well as feedback that students can

understand and use to develop skills, thereby facilitating students' learning of the material. According to Rommetveit (1979; 1981), intersubjectivity reflects a dialogic process: both interlocutors have responsibility for seeking understanding of the other. In the classroom, therefore, the teacher must not only seek intersubjectivity with students, but also scaffold students' skills to seek intersubjectivity. By doing so, teachers, who plan lessons with students' perspectives in mind, open opportunities for students' agency and participation during instructional activities, which can lead to students' gaining access to meaning making. Providing students with meaning making opportunities requires teachers to develop activities that engage students.

(Re)imagining Opportunities for Student Engagement

Vygotsky's (1978) sociocultural learning theory encourages teachers to transform lesson planning from a list of activities to a list of opportunities for students to actively engage in instruction through language, symbols, and/or tools. Vygotsky suggests that learning takes place within a social environment. This is not to suggest that students learn best when they are being social. Vygotsky posits something quite different. He suggests that language, symbols, and tools are necessary components for higher-order thinking; these components mediate higher-order cognition (Vygotsky, 1986). If we focus on language, communication with words represents thinking and conceptualization (Wertsch, 1991). Therefore, effective collaborative instruction is not based on students' learning from each other, but rather students' engaging in communication to comprehend the learning goals. By students' discussing, explaining, debating, and arguing, they construct meaning through social discourse. According to Cohen's research (1998), students who talk more in collaborative group work, learn more because they have greater opportunities to make meaning. Thus, collaborative group work supports learning when each student has opportunities to actively make meaning through language, symbols, and/or tools. It is the teacher's responsibility to guide this meaning making toward development of relevant thinking skills. Therefore, lesson plans should indicate specific opportunities for students to make meaning with teachers' monitoring and assessing development of necessary cognitive skills.

By adding active meaning-making opportunities for all students into lessons, teachers will need to reimagine how they and their students spend class time. The teacher's role is no longer that of a "cook" who dispenses one activity after another. The new role

involves engaging students in active meaning-making and monitoring development of thinking skills. With 30 to 40 students in a class, this requires a sophisticated approach to guided instruction. When students work in groups or with partners, the role of the teacher should not be to monitor that students are doing the work, but rather to listen and hear to what extent each student is communicating meaning as the work is being completed. Teachers should plan to engage in specific dialogue with students (e.g., *Tell me what you are thinking. Why? What is your partner thinking? Why is that a good way to think about it?*) By asking thinking questions, the teacher promotes opportunities for students to make meaning. These teaching moves also provide teachers opportunities to scaffold and provide feedback to students as they develop conceptions around necessary cognitive demands. The teacher must be prepared to use multiple strategies to engage all students and these strategies should be explicitly stated in the lesson plan. The following are a few examples of strategies teachers can use:

1. Prepare a variety of questions that are designed to review content, connect students to the content in personal ways, scaffold understanding, and encourage curiosity and deeper thinking.
2. Target quiet students to share their thinking and receive feedback.
3. Use non-graded short writing activities that provide students with opportunities to develop conceptual understanding of learning goals. Use these activities to assess students' thinking and provide feedback.
4. After opportunities for students to think privately about the content, structure whole-class activities to provide opportunities for students to voice their thinking to others and to hear how other students think about the content.
5. Call on multiple students to answer the same open-ended question. Often, when teachers receive the "right" answer to a discussion question, they move on to the next question. Instead, give the opportunity for other students to answer the same question with original explanations. This way, more than one student has an opportunity to engage in the content.

In short, instruction should focus on increasing student-teacher interactions. With the advent of flip education and online courses (Carpenter & Pease, 2012), teachers have more opportunities to move away from teaching as transmitting knowledge. The purpose of face-to-face education can be transformed into opportunities for

students to construct meaning and develop thinking skills while receiving beneficial and immediate feedback.

(Re)imagining the Place for Feedback

Thus far, we have argued for a reconceptualization of the lesson plan to focus on thinking skills by identifying learning objectives, situating instruction from a student-centered approach, and ensuring that instructional activities provide opportunities for student engagement in the lesson. Students, however, are not just to be managed by the lesson plan. Teachers should interact with students and, because of that, we argue for lesson plans' including opportunities for teachers to provide feedback to students. Unfortunately, planning for feedback is often omitted from lesson plans. This omission in planning means that careful thinking about feedback is, literally an afterthought and, as such, can be ineffective.

Consider, for example, a teacher who has planned a mathematics lesson that includes several warm-up problems to solve. After students have attempted to solve each problem, the teacher has students share their answers, one-by-one. The first two students share correct answers to the first two problems. The teacher says, "Good job." The third student gives an incorrect answer to his problem. The teacher calls on another student for the answer to the same problem, who offers the correct answer. The teacher praised that student and moves on to the fifth student's answer to a subsequent problem. This process, as written in the lesson plan, continues until all warm-up questions have yielded correct responses.

Vygotsky's (1978; 1986) sociocultural learning theory suggests that the abovementioned process ignores an essential feature of learning and development: feedback from teachers. Vygotsky posits that people learn during cultural activities where cultural tools and knowledgeable members of the community who know how to wield those tools expand students' zones of proximal development. In other words, when working with an advanced member of the learning community, such as a teacher, students can learn to successfully complete tasks. This interaction with a teacher is necessary because it is where students learn to adjust their thinking based on received feedback. The zone of proximal development is more than the presence of teacher's support, it is the teacher's providing feedback that the student internalizes for future activities. In most classrooms, however, feedback is an afterthought and may be viewed from a behavioristic perspective where right answers are praised and wrong answers are ignored

with the hope of reinforcing correct answers (Fazio et al., 2010; Pashler et al., 2005). A more constructivist view encourages teachers to find opportunities to provide meaningful feedback to their students. We argue that teachers can plan for such opportunities.

Preparation for feedback can be included in a lesson plan. A teacher can anticipate possible responses from students and prepare feedback and scaffolding tools that can be dispensed as needed. Teachers can prepare to facilitate a growth mindset (Dweck, 2006; Yeager & Dweck, 2012) with their feedback as well as provide much needed guidance to students. In short, a lesson plan is not just about identifying activities for students to do, but anticipating how students might respond to these activities. For a math example, if the lesson includes students' completing mathematical warm-up problems, the teacher can anticipate typical misconceptions and explanations (for correct or incorrect answers) that students might have. For each answer and explanation, the teacher can prepare appropriate feedback to offer, including supporting students' ability to self-evaluate. Preparing for feedback is an important aspect of developing intersubjectivity with students. That is, the activities seek to engage students where teachers can use their performance as opportunities to provide relevant guiding statements and tools that develop students' thinking.

Providing meaningful feedback may be effective, but is it practical? Listing instructional activities is one thing, but what should a lesson plan look like that facilitates students' thinking through student-centered activities and meaningful and relevant feedback?

(Re)imagining the Form of the Lesson Plan

We argue that lesson-plan format should not matter. The lesson plan should serve as a tool for the teacher to prepare, engage, and provide necessary feedback and support for students' learning. In that regard, lesson plans can be personal tools that can take the form that best mediates each teacher's thinking. Regardless of the format, we argue that a lesson plan should contain the following:

1. Learning objectives. A cognitive learning objective states (from students' perspectives) what each student should be able to think by the end of the planned learning period. It needs to reflect an action cognitive verb and help the teacher be aware of the thinking that students need to develop.

2. Instructional activities. These activities should be aligned with the learning objectives and assessment. These activities should be more than mere bulleted lists. Instead, they should facilitate teachers ability to
   a. consider students' perspectives by anticipating how students may be thinking during the learning activities.
   b. provide opportunities for student engagement through small group activities, partner talk, and/or whole class discussions.
   c. prepare for ways to provide meaningful feedback so that students have scaffolds and tools that facilitate learning in a personalized way.

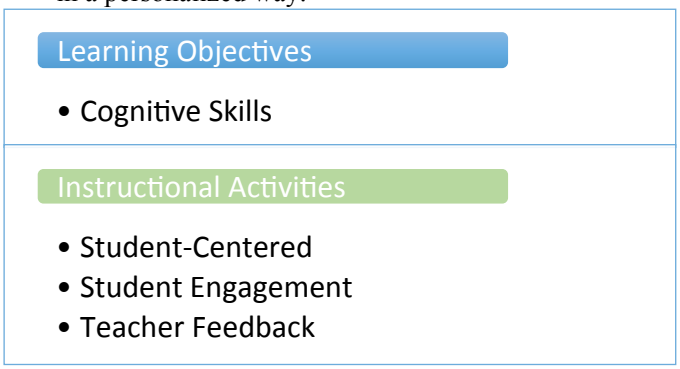

Figure 1: Essential Components of a Lesson Plan

The abovementioned foci are all based on shifting the lesson plan away from teachers' actions toward students' thinking. Students' thinking (cognition) seems to be an obvious element to lesson planning, yet it is consistently missing from lesson plans (Rath, 2002, Zahorik, 1975). Advantages to teachers' planning lessons with a student-centered focus are greater awareness regarding cognitive demands of the task, opportunities to provide students time to think and talk through the content, and opportunities for students to receive direct feedback from their teachers.

To facilitate these changes, we recommend that teacher credential programs prepare teachers to plan lessons with these foci in mind. Future teachers should become aware of students' learning needs at the planning stage. To gain awareness, teachers should use assessment data as an instructional tool. Educators such as Popham (2011) have for many years advocated the use of assessment data as a means to shape future lessons. In so doing, the assessment, instructional activities, and learning objectives play an interdependent role in the planning process. Each one informs the other; none are distinct.

Conclusions: (Re)Conceptualizing Lesson Planning

We wrote this paper to encourage current teachers and teacher educators of future teachers to reconceptualize the form, purpose, and function of the lesson plan. School reforms designed to foster students' academic success often focus on changes to instructional strategies, curricula, or assessments. Changes to lesson planning over the years have been afterthoughts to other large-scale reforms. We argue that reconceptualizing how teachers plan can have an important influence on students' success. In this paper, we argue that teachers' planning should focus on identifying and developing students' cognitive skills, providing ample opportunities for students to talk and be actively engaged, and preparing for opportunities to provide meaningful feedback that fosters students' efficacy in their learning.

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