Let Students Engage in Real Learning: An Evaluation of Protocol-guided Learning

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Abstract: *Both a student-centered instruction approach and a classroom management technique based on the learning protocol are known as protocol-guided learning. This paper describes the protocol-guided learning model's implications for classroom practice and its impacts on classroom reconstruction with the aim of ensuring that learning actually occurs on students. Its definition, advantages, and practical roles are described.*

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THE protocol-guided learning model is derived from critical reviews of the two prevalent classroom instruction modalities in China: one is teacher-dominated, which is typical of traditional classroom teaching, and the other is laissez-faire, which permits an unstructured learning process. The former is opposed to the notion that education should be student-centered, while the latter disregards the guiding function of instructors. Both are estranged from the core of classroom learning (Xia & Zhou, 2021). Student-centered and teacher-led classroom learning can be realized with the assistance of protocol-based instruction.

Protocol-guided learning transitions from teacher control in the classroom to teacher-student collaboration; from a focus on student learning outcomes to an emphasis on the learning process; and from teachers' unilateral knowledge transmission to teacher-student bidirectional communication (Zhang, 2006). In the framework of curriculum reform, implementing student-centered classroom instruction and providing students with the opportunity to develop practical approaches through experiential learning are sensible steps to popularize scientific educational principles and improve the overall quality of education.

The Definition of Protocol-Guided Learning

The protocol-guided learning model was created in response to curricular reform. Traditional classroom education emphasizes teachers' lecturing, disregards the internalization of student information, and fails to account for student-specific learning conditions in lesson planning, resulting in a vague teaching design and a gap between teaching and learning. In contrast, protocol-guided learning requires teachers to investigate student learning status in advance and address the difficulty of the lesson with a step-by-step approach to ensure that students can keep up with class progress and have a complete understanding of the key points highlighted by the learning protocols; teachers reserve sufficient time for free discussion to facilitate student interaction. Huang (2009) contended that protocol-guided learning necessitates a rigorous design of class activities, which may encourage students to arrange each step of the learning process independently and foster students' capacity for self-directed learning and independent thought. Therefore, protocol-guided learning refers to a teaching paradigm in which teachers construct student learning protocols that comprise learning objectives, materials, methods, and procedures prior to the session and utilize them to guide students to engage in more autonomous learning. In this form of instruction, teachers do not explicitly impart knowledge to students but rather direct them to investigate and practice independently; the goal of instruction is to build students' abilities and skills, not to impart knowledge.

The Benefits of Protocol-Guided Learning

In protocol-guided learning, teachers create overall lesson plans based on student learning conditions, which can enhance classroom outcomes, optimize student learning effi-

ciency, and increase student learning interest as well as teacher and student classroom satisfaction.

Enhancing Student Classroom Engagement

Students become more proactive in their learning as a result of the transition in the classroom from a teaching-oriented to a learning-oriented environment. When designing a learning protocol, teachers take into account the academic position and interests of their pupils. The classroom process is permeated with flexible, problem-based activities that enable students to discuss, visualize, and evaluate. As a result of the shift from passive to active learning, students become more interested and motivated to participate in the lesson through independent research and learning (Zhou & Xia, 2020).

Improving Teacher-Student Relationships

In contrast to their traditional function as knowledge transmitters, teachers in protocol-guided learning more often act as learning facilitators, providing assistance and guidance to students as needed. With the help of well-crafted learning protocols, teachers can help students prepare for class, talk in groups during class, conduct independent research, and form their own thoughts and opinions. Teachers and students can work harmoniously together in this environment.

Increasing Classroom Learning Efficiency

The three main components of protocol-guided learning are pre-class preparation, enhanced in-class learning, and post-class extension. Self-directed learning by students based on the procedure can help them become well-prepared for class and fully aware of the challenges they must face there; teachers can increase classroom productivity by responding to students' queries discriminately in accordance with their level of difficulty. Additionally, group discussions in class give teachers a chance to learn more about the level of student learning. Teachers can further elaborate on those frequent issues and skepticisms in response to the outcomes of the group discussion, take appropriate steps during the preparation of upcoming lessons, and modify the teaching process (Dong, 2017).

The Roles of Protocol-Guided Learning in Instructional Practice

Currently, the conventional picture of Chinese classroom instruction is of a teacher lecturing with a textbook. In such a monotonous environment, student thought is inert and inactive, which is adverse to the development of their academic competence. In this context, the protocol-guided learning model, which was designed to promote student autonomy, pro-active participation, and cooperative exploration, has reorganized the curriculum on the premise of "learning before teaching" and has become an impressive

paradigm for classroom quality and efficiency improvement, garnering widespread attention from peers.

The Role of Protocol-guided Learning in Before-Class Preparation

Protocol-guided learning is the practice of encouraging students to develop effective thinking through the use of questions, activities, and tasks. The pre-class learning protocol might include a range of pre-class learning activities for students. It facilitates student integration into learning contexts by introducing familiar concepts and allowing the progression of pertinent knowledge. Teachers might arrange students to study in groups for cooperative learning so that students can learn from each other through exchange and presentation, once they have completed their independent studies. This not only heightens students' awareness of self-reflection but also boosts their self-confidence and enables them to sense the pleasure of teamwork. Pre-class preparation establishes the groundwork for the successful application of protocol-guided learning in the classroom. Teachers should employ a heuristic approach while constructing learning protocols to enable students to think actively and acquire a deep understanding of content through individual investigation (Li, 2014).

The Role of Protocol-Guided Learning in Classroom Activities

Activity-based learning can encourage classroom involvement and foster analytical and problem-solving skills in students. Discussion and group study are the two most popular forms of interactive classroom activities. Nonetheless, group activities in the classroom can be disorderly and ineffective; students are not always well-informed about the topic of discussion and often converse about irrelevant topics. Such group activities waste class time and prevent students from achieving the goal of cooperative learning. In the protocol-guided learning paradigm, comprehensive plans for class activities are created to address the issue of classroom order. Topics for classroom inquiry are included in the protocol, and teachers and students use dialogues and discussions to conduct cooperative exploration according to the "question chain." Students can also learn problem-solving strategies through communication, reflection, and teachers' guidance, thereby enhancing their skills in autonomous study and independent thought. In addition, students are asked to write down the findings of their group discussions, which will be reviewed by professors. Therefore, protocol-guided learning can considerably enhance the efficacy of classroom inquiry and support teachers in attaining the objectives of class activities in accordance with their plans (Gao, 2006).

The Role of Protocol-guided Learning in After-Class Extension

A review of course material after class is essential for student knowledge retention. As a means of reinforcing what has been taught in class, the vast majority of Chinese professors assign pupils a substantial amount of repeated homework. This technique drastically diminishes students' enthusiasm for learning and hinders their knowledge breadth and depth of thought. To reduce student academic burden and achieve effective after-class extension, the protocol-guided learning model replaces endless exercises with innovative after-class activities that integrate theoretical knowledge with life experience of students to improve the transferability of course content and promote students' all-around development (Xia & Zhou, 2020).

The Role of Protocol-guided Learning in Instructional Evaluation

The instructional evaluation is a crucial educational instrument that guides, regulates, and motivates student learning. In protocol-guided learning, instructional evaluation is interwoven into every aspect of student learning, including evaluations of pre-class independent student learning, problem-solving, mastery of learning skills and procedures, and consolidation of information after class. Effective instructional assessment can offer teachers with feedback on their work and reflect students' learning status, so encouraging teachers to enhance their teaching level and motivating students to make up for learning inadequacies. The major indicators utilized by the protocol-guided learning model to evaluate the efficacy of student learning activities are the following: identification of learning objectives, attention and participation, time for self-directed study and reflection, comprehension of the knowledge acquisition process, and application methods. Through these evaluations, the development of students' academic competency is included into every learning process, and students are encouraged to go beyond the textbooks.

Conclusion

Protocol-guided learning can produce optimal instructional outcomes. Utilizing this model in learning activities is not only advantageous for student self-directed learning, but also for classroom efficiency and effectiveness. Notably, the design and authoring of learning protocols necessitate considerable work, and they must be continuously analyzed and modified in order to be utilized as effective tools throughout student learning processes.

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