

The Instructional Planning Self-Reflective Tool (IPSRT): A Method for Promoting Effective Lesson Planning

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Abstract

The Instructional Planning Self-Reflective Tool (IPSRT) offers pre-service teachers a new approach to incorporate traditional instructional planning methods. Grounded in a social cognitive theoretical perspective, the IPSRT facilitates the use of self-regulatory strategies, specifically self-monitoring and self-evaluation processes, in lesson planning. Given that instructional planning is an essential foundation for educational technology, this tool has implications for enhancing the training of future teachers.

Research evidence clearly indicates that instructional planning plays a critical role in teaching and school learning (Clark & Dunn, 1991). Given that teacher-planning skills are critical for instructional effectiveness in the classroom, successfully training pre-service teachers in this area is important. Clark & Peterson (1986) conducted an extensive review on teacher planning and found that systematic planning provides novice teachers with a framework for developing a personal lesson planning style. One model of instructional planning that could be more widely-implemented is the Reiser & Dick (1994) approach that consists of the following systematic steps: 1) identifying instructional goals; 2) identifying instructional objectives; 3) planning instructional activities to employ; 4) choosing instructional media and resources; 5) developing assessment tools; 6) implementing the instruction; and, 7) revising the instruction. Effective lesson planning requires teachers to follow these steps by building on previous steps while also considering the overall lesson plan.

Like any other skill, lesson planning requires deliberate practice (Erikson, 1996); consequently, providing students with strategic tools to guide the learning during self-directed practice would be useful because practice usually occurs when an instructor is not present. This requires high levels of self-regulation, which is the degree to which an individual is metacognitively, behaviorally, and motivationally aware of his/her own learning processes (Zimmerman, 1989). It has been shown that self regulatory strategies, such as self-monitoring and self evaluation, promote effective independent learning in other related areas, such as writing (Zimmerman & Kitsantas, 1999), reading (Pressley, El-Dinary, Stein, Marks, & Brown, 1992), and math problem solving (Schunk & Ertmer, 1999). By definition, self-monitoring of performance includes observing, tracking and recording performance outcomes. Similarly, self-evaluation includes setting standards and using them for self-judgement.

The purpose of this paper is to present a tool that can be used to facilitate self-regulatory strategies (specifically, self-monitoring and self-evaluation) in instructional planning for pre-service teachers. One of the key advantages of this tool is that it facilitates implementing a traditional instructional systems design planning model, along the lines of Reiser & Dick (1996)

and Dick & Carey (1996). Given the importance of lesson planning for pre-service teachers, developing effective techniques for teacher training is necessary. Further, our future teachers must have a strong foundation in instructional planning skills in order to eventually integrate technology effectively in the classroom.

Development of IPSRT

The Instructional Planning Self-Reflective Tool (IPSRT) was developed based on Zimmerman's research in self-regulated learning (Zimmerman, 1999) together with the Reiser & Dick (1996) instructional planning model. It is designed to facilitate self-reflective thinking through the lesson planning process, and consists of a number of questions for the student to assess whether each area was covered in his/her current plan. See Figure 1 for the complete tool. According to the literature on instructional planning (e.g., Reiser & Dick, 1996), instructional planning generally consists of the six following phases: goals, objectives, instructional activities, assessment, revision, and implementation. From a micro-perspective, students have difficulties applying the necessary skills within each phase (e.g., writing objectives, formulating test items). From a macro-perspective, students do not demonstrate understanding of how the phases are interrelated and interconnected in the process of instructional development. For example, when writing test items, students do not always see the importance of checking that items reflect objectives stated in a prior phase. Or, the students see the process as so incremental (e.g., the individual phases or tasks) that they fail to see the global aspect of the overall planning model. Therefore, the purpose of IPSRT is to facilitate the use of self-regulation strategies from both the macro and micro perspective. This was implemented by sections of questions in subcategories for each component of a lesson plan. From a micro level, strategies were listed within each component of the lesson plan, while macro level strategies referred to the overall connectivity and holistic value of the lesson plan.

Instructional Implications of the IPSRT

The tool was tested with approximately 175 students, in seven sections of a course "Introduction to Educational Technology". For the implementation, the instructor presented an example lesson plan that purposely contained errors via PowerPoint slides. The instructor then used a "coping model" to demonstrate how to use the IPSRT to discriminate errors in the lesson plan. Specifically, each slide had a component of the lesson plan (e.g.,

instructional goals, objectives, materials, instructional activities, and assessment), and the instructor modeled how to evaluate each component through reflection together with the IPSRT. After each component, a PowerPoint slide reminded instructor and students to “REFLECT ” before proceeding to the next component of the lesson plan. For example, one of the objectives in the sample plan was listed as follows: “ Given an image of a landscape, the student will be able to identify whether it is a typical Greek landscape and provide one reason why or why not.” The instructor modeled the process of using the IPSRT to evaluate this objective as follows:

- *Does each objective derive directly and logically from one of the instructional goals?
 yes no

For this question, the instructor modeled going back to the instructional goals and evaluating whether the objective followed logically. If so, which was true in this example, the instructor checked off the “yes” checkbox and proceeded to the next reflection question.

- Are all four of the following components present for each objective? yes no

Here, the objective was dissected to ascertain whether it contains all four components (audience, behavior, condition, and degree). Next, each component was considered, as listed in detail in Figure 1. In the case of this example, the sample objective had two active verbs, which was found to be problematic through use of the IPSRT. Consequently, the instructor modeled checking the “no” checkbox, indicating a stopping point in the reflection process and the need to stop and correct the objective before continuing.

Following the in-class demonstration, the students were presented with a lesson plan scenario and instructed to develop a lesson plan for this scenario on their own, and use the IPSRT as part of the process. Students were also given a take-home example to practice independently at home. The next week, as a preliminary measure to assess the value of the IPSRT, students were asked what, if anything, was helpful for them about using the tool for instructional planning. Answers were coded in terms of whether the student answer indicated value due to self-evaluation (yes or no), organization (yes or no), and/or monitoring strategies (yes or no). Eighty-percent of participants reported that the IPSRT was useful for monitoring, 75% reported it was useful for self-evaluation, and 25% reported that it was useful for organization. Given that the IPSRT was developed specifically for self-monitoring and evaluation, the results supported its value as a cognitive tool in these two areas.

Conclusion

Teacher planning skills are critical for instructional effectiveness in the classroom. Self-regulatory strategies can guide students’ learning during self-directed practice and enhance their skills in developing effective lesson plans. The IPSRT may be valuable for educational technology instructors to prepare their students to practice writing lesson plans effectively on their own. In addition to prompting the students to self-monitor and self-evaluate their performance, the IPSRT also assisted them in organizing the material better and thereby

improved the quality of their lesson plans. We developed this IPSRT tool to promote the adaptation of traditional instructional planning methods (e.g., Reiser & Dick, 1996; Dick & Carey, 1996) in introductory courses for pre-service teachers. To employ a similar method for non-traditional teaching models (e.g., constructivism), the tool would need to be designed and developed differently given that the planning process may not decompose as logically. Further research is necessary to validate the tool in terms of traditional reliability and validity measures.

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Figure 1. The Instructional Planning Self-Reflective Tool (IPSRT)

Instructions:

After you write a section of your lesson plan, review each question in the appropriate section below. Check either the "yes" or "no" box as you reflect on your lesson plan. If you answer "no" for any statement, that is an indication that you should modify your lesson plan accordingly.

INSTRUCTIONAL GOAL:

- Is the statement relatively general and broad stating what the learner should achieve?
 yes no
- Does it state WHAT you want the learner to achieve, not HOW you are going to do it?
 yes no

OBJECTIVE(s):

- *Does each objective derive directly and logically from one of the instructional goals?
 yes no
- Are all four of the following components present for each objective? yes no
 1. Audience
 - Does this component state who will be doing the performance? yes no
 - Is it stated from the LEARNER's perspective, NOT the INSTRUCTOR's perspective? yes no
 2. Behavior
 - Is the behavior specific and explicit? yes no
 - Is the behavior measurable and observable? yes no
 - Does the behavior state what the learner will do at the END of instruction, not DURING instruction? yes no
 - Is there one active verb? yes no
 3. Condition
 - Is the context for the behavior specified? yes no
 - Does this component clarify the conditions under which the performance will be done? yes no
 4. Degree
 - Does this component clarify how well/to what extent the performance must be done? yes no
 - Is it specific and measurable? yes no

MATERIALS / PREPARATION:

- Is everything included here that is needed for the instructional activities (in the procedure section)?
 yes no

LEVEL AND LEARNER CHARACTERISTICS:

- Are all relevant characteristics of the students included (e.g., general characteristics, ethnicity, gender, grade level, preferences or learning styles, perceptual preferences, group size)? yes no
- Are your objectives appropriate for these **particular** learners?
 yes no

PROCEDURE:**Motivating students:**

- Does this activity motivate these **particular** learners? yes no
- Do you gain the learners' attention? yes no

Informing students of objectives:

- Do you inform the students of what it is that they are going to be able to do when they finish the instructional process? yes no

Helping students recall prerequisites:

- Have you reminded students of any relevant prior knowledge that is related to this new topic? yes no

Presenting Info and Examples:

- Have you provided all necessary information about the subject in order for students to eventually perform the objectives? yes no
- Have you provided examples so that the students can see how they can use the information? yes no

Provide Practice and Feedback:

- Have you provided practice opportunities that are directly related to the skills, knowledge, and attitudes reflected in the objectives? yes no
- Have you provided feedback to the students? yes no

Summarizing the lesson:

- Have you summarized the lesson to bring closure and help reinforce the skills and knowledge that the students have just acquired? yes no

ASSESSMENT:

- Does your assessment clearly align with your objectives?
 yes no
- Do the active verbs of the test items MATCH the active verbs of the objectives?
 yes no

OVERALL:

- *Is each objective effectively taught and assessed? yes no
- Does the lesson flow logically and easily through each section from goals to assessment?
 yes no
- Is there an instructional purpose for each activity (in procedure section) ?
 yes no
- Are the materials appropriate for the learners? yes no
- Have you included all the materials necessary for the activities (in procedure section)?
 yes no
- Is the instructional media that you chose appropriate for each activity (in procedure section)?
 yes no
- Do you think your assessment items reflect what you think students should have learned?
 yes no