

Case 19

The 'Triple Jump' Assessment in Problem Based Learning: an Evaluative Method Used in the Appraisal of both Knowledge Acquisition and Problem Solving Skills

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19.1 Context

Learning and evaluation are inextricably linked, and students who are active participants in their own learning should be active participants in the assessment of their acquired knowledge (Rangachari, 2002). The triple jump is a type of assessment that evaluates the students' ability to organize information, to formulate hypotheses, to identify individual learning issues, and to reformulate a case using newly acquired information.

The 'triple jump' (or three stage) assessment is a method of evaluation used in problem based learning (PBL) curricula. PBL encourages independent learning and gives

students practice in tackling puzzling situations and defining their own gaps in understanding. In the context of professional courses, such as, speech and language studies, relevant problems are presented to the students, which mirror 'real life' clinical situations. PBL is a way of learning which encourages a deeper understanding of the material rather than superficial coverage.

The PBL learning process is guided by the following steps:

- Terms and concepts are clarified and the problem is defined.
- Problem is analysed, hypotheses and inquiry strategies are formulated.
- Problem is summarised.
- Learning objectives or student-generated learning issues are agreed upon.
- Learning resources are sought out and self-study takes place.
- Possible resolutions of problem are determined.
- Resolution of problem is reported back to the class.
- Findings are discussed and assimilated.

19.2 Learning Outcomes being Assessed

The 'triple jump' assessment serves as a measurement tool for a number of learning outcomes. The learning outcomes that are assessed through the triple jump evaluation mirror both of the learning goals of the PBL process. As a result, the students are assessed on the knowledge gained through the process and on the method of problem solving they employed in their acquisition of that knowledge. In other words, the triple jump not only assesses what the students learned, but how they learned it. In this way, the triple jump assesses life-long learning and problem solving skills; these skills are being practiced and honed during each learning module of every course. The learning outcomes of the triple jump evaluation are as follows:

- learn to identify knowledge gaps;
- learn how to identify and use resources for retrieval of information;
- evaluate and apply new knowledge;
- learn to interact effectively with peers and faculty in the problem solving environment;
- employ effective communication skills; and
- demonstrate standards of professionalism.

19.3 Assessment Procedures/Details

The 'triple jump' assessment exercise is a comprehensive method of measuring the aims of problem based learning and, also, the specific learning objectives set forth for students in a particular problem. The 'triple jump' is a unique form of assessment because it is one of the few examination methods that measures both specific acquired knowledge and problem solving processes. The examination, if time allows, typically takes place in one day. The assessment procedures are detailed in the following sections.

19.3.1 First stage

During the first stage (problem definition), students are given a clinical problem with a minimal amount of information. The students use the information to ask their 'triple jump' facilitators a series of questions to elicit more information about the problem. The problem definition stage enables the students to bring prior knowledge to bear on a novel problem and devise an educational plan to identify the items of information needed to solve that problem.

19.3.2 Second stage

During the second stage students conduct an information search for 2–3 hours. They use the information that they have gathered to find a problem resolution and prepare a presentation of their findings.

19.3.3 Third stage

During the third stage, the synthesis and feedback stage, students return to present the resolution of the problem. A period of re-appraisal and synthesis follows.

19.4 Strengths and Limitations

19.4.1 Strengths

The 'triple jump' assessment problems aim to mimic the types of problems that the students are likely to encounter in real life clinical settings. The practice at researching an unknown topic area under a time limit and applying problem solving skills to reach an acceptable resolution to a problem are reflective of the professional competencies that are necessary for speech and language therapy practice. For this reason, the 'triple jump' is one of the most valuable methods of assessment utilized in professional education courses.

19.4.2 Limitations

There may be a tendency for students to believe that the 'triple jump' is disassociated from real life clinical practice and, therefore, the purpose of the evaluation may be

lost in the students' efforts to narrowly solve the problem at hand. It is important to continually remind students that the 'triple jump' assessment reflects the types of real life problems that they will encounter in clinical practice. The links with future potential clinical scenarios must be constantly reinforced, as must the relevancy of the 'triple jump' journey to problem resolution.

19.5 Contributor's Reflections on the Assessment

The students' retrospective reactions to the 'triple jump' have been overwhelmingly positive. However, prior to the assessment, there can often be a tone of concern among students in relation to the 'triple jump'. There is always a certain amount of apprehension before any form of assessment and, certainly in the case of the 'triple jump' assessment, the students may be somewhat worried by this novel method of evaluation. To address this concern, the 'triple jump' procedures are given to the students in advance and key points of the 'triple jump' and PBL processes are underscored so that the approach taken on the assessment day is closely aligned with accepted protocol. It is often the case that the potential breadth of the possible problem topics for the assessment daunts the students. To address this concern, the students are put at ease in relation to the unknown topic factor by being led through a process of deduction so that likely topics can be identified prior to the problem presentation. Both the students and the staff agree that the depth of knowledge about the topic focus that is gained through the 'triple jump' and the practice at applying problem solving skills are a unique and invaluable combination of learning outcomes associated with this method of assessment.

19.6 Bibliography

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