

# Outcomes and Indicators

Saskatchewan School Library Association

**THE MEDIUM – FALL 2010**

Gale Russell

Education Consultant (Mathematics K-12)

Science & Technology Unit

Curriculum and E-Learning Branch



SASKATCHEWAN SCHOOL LIBRARY ASSOCIATION

# Outcomes and Indicators

---

## Saskatchewan School Library Association

*Editor's Note: Gale Russell is currently on leave from the Ministry to work on her PhD.*

### Introducing Outcomes and Indicators

I have used the following activity a number of times with different groups of teachers and school division personnel to introduce the concept of and relationship between outcomes and indicators. With each successive use of the activity, I have made refinements that have led to a stronger understanding of the two concepts. As well, I have tied in other foundations within Saskatchewan's renewed curriculum, including the role of inquiry in learning and of the goals of the different disciplines. This activity is suitable for use with teachers, students, parents, community groups, and administrators.

**Step One:** Identify a broad topic that is not a subject area within the K-12 education system, but is an area of interest or significance for your audience. I habitually use the topic of medicine, and specifically the educating of doctors as my broad topic, but others might choose a topic such as sports (becoming a professional athlete) or music (becoming a professional musician).

**Step Two:** Invite the participants in the session to talk about what it takes for someone to be that professional – what must they know, understand, and be able to do to be successful in that profession. As the participants suggest ideas, record them for everyone to see on a white board, black board, computer and data projector, or flip chart paper. There are two different ways of doing this recording. In the first way, record the ideas in a single list. As the next step, the facilitator says, “I see these ideas as being the same type” and sorts them into three unnamed groups (outcomes, indicators, and goals) without giving specific titles. Alternatively, record the ideas as they are suggested to one of three untitled lists – indicators, outcomes, and goals. In this second approach, although no titles are stated to the group, the facilitator keeps them in mind when recording the ideas. As the facilitator gains experience with the activity, the second method becomes easier. The three lists display the different types of ideas better to the group.

As an example, consider the list below:

- problem solve
- diagnose
- prescribe medications
- prescription of diet
- prescription of exercise and therapy
- ask questions
- listen
- research possibilities
- refer to specialists
- order tests
- carry out tests

- communicate effectively/bedside manner
- surgery

In this generated list of ideas, there are only examples of two of the three categories of indicators, outcomes, and goals. Note that two of the listed ideas are big, over-arching ideas that doctors need to be thinking and doing, regardless of why a patient has come to see them: problem solving and communicating effectively (including bedside manner). Within communicating effectively are also asking questions and listening. The remaining ideas in the list are things that the doctor will do on an ongoing basis and to varying levels depending on why the patient has come to see them: diagnosis, prescribing of medications, diet, exercise, and therapy, researching of possibilities, referring to specialists, surgery, and ordering and carrying out tests. Thus, sort the original list into the following two shorter lists:

- |                   |  |
|-------------------|--|
| • Communication   | • Diagnosis  |
| • Problem Solving | • Prescription of medications, diet, exercise, and therapy |
|                   | • Research   |
|                   | • Referrals  |
|                   | • Testing  |
|                   | • Surgery  |

Ask the questions “What are some of the things that the doctors are doing these things in relation to?” or “What are the contexts of these things that doctors need to be able to do? What is it that they need to know about or understand?” The answers to these questions “fill in” the third column. Here are just a few of the possible answers:

- Cancer
- Annual physicals
- Cardiology
- Respiratory system and diseases
- Diabetes
- Multiple Sclerosis
- Bacterial infections
- Viral infections

**Step Three:** Discuss the relationship between the three lists. What the participants need to understand is that the shortest list is a list of the things that overarch everything that a doctor needs to be able to do. Just knowing about cancer, or just knowing how to prescribe medications and what medications to prescribe for cancer does not mean that the doctor will be able to treat the patient successfully. Doctors are constantly problem solving – what might the symptoms and test results indicate, what is the best choice of action, what if the patient reacts to the medication? They also need to be able to communicate – with the patient, with other doctors and medical personnel, and with relatives. They do these regardless of the diagnosis of the patient or type of treatment. They are overarching *goals* for doctors that are independent of individual cases.

The second list is the different “steps” or parts that will be dependent upon the context (the third list). They, once specified for each specific context, are the *indicators* of what a doctor needs to know, understand, and be able to do with respect to particular context. These are the *indicators* of the contexts, and the contexts are the outcomes.

**Step Four:** Ask the participants if all doctors will have the same indicators for the same contexts. For example, will a family physician be expected to have the same understanding of heart related diseases and problems that a cardiologist does? The important message here is that the indicators tell us how deep and how wide the learning about the outcome is to be. In terms of school subjects and the renewed curriculum documents, two different courses may have outcomes that seem very similar because they are related to the same context (or content); however, the indicators will show a difference in depth.

**Step Five:** Ask the participants how they would react if the cancer specialist that they went to see only prescribed a treatment of radiation, but did not want to hear about any symptoms, to consider physical therapy, or anything else that would be in the Oncology set of indicators. Would the participants assess that doctor to be competent as a cancer specialist? Discuss the importance of considering all indicators within the context. No one indicator is the most important, nor should only one indicator be used when assessing the outcome. At this point, discuss outside assessments such as Assessment for Learning (AFL), which is not meant to be a comprehensive assessment of learning, but rather an indicative sample. In these cases, the assessment often will pick out a single indicator to assess. Assessment within the classroom, driven by teacher and students, should not have this singular focus, but should take advantage of the learning space and time to get an accurate reflection of learning as related to the entire breadth and depth of the outcome as described by the indicators.

**Step Six:** Ask the participants to consider how they would feel if the doctor they were seeing used the indicators as a checklist – never going back to a prior indicator (such as asking do you have any new symptoms) because they had already done it. Would the participants, as patients, have confidence in the doctor’s diagnosis and approach to treatment? The participants should realize that what is important is the interplay between the indicators within the context of the outcome. In this way, subject matter indicators should not be treated as a checklist. Instead, they should be embedded within the big picture, within the learning and assessment of the outcome.

**Step Seven:** At this point, remind the participants about how quickly indicators are identified, but it takes more thinking to uncover outcomes – the big ideas towards which we are working. This is often the case in teaching as well. Educators focus on the small class-to-class bits of learning rather than relating the indicators to the bigger picture of the outcome. It is crucial to focus on the outcomes, knowing how far to go with them by the indicators, in ways that promote student acquisition of outcomes through the goals of the subject area.

Invite participants to suggest other areas of interest or importance that they might consider using with their own colleagues and students in order to build understanding of goals, outcomes, and indicators. Point out that with some guiding questions and ideas, they have constructed their current understanding of goals, outcomes, and indicators through an inquiry approach, just as Saskatchewan’s renewed curricula ask teachers to engage their students in inquiry learning related to the specific subjects.

In conclusion, I encourage anyone wishing to use this activity to modify it so that it meets his or her specific needs. I have explained the steps I used. Do not feel that these steps are in a fixed order or that they are the only ones possible. This activity often takes 30 – 45 minutes with ample time for discussion. A great follow-up activity would

involve having the participants working with a partner or in a small group consider a particular outcome from a subject area they teach and construct indicators for that outcome. Then, have the participants compare their work to the outcome given in the curriculum document. The indicators do not need to be identical, but the outcome that they define does.