Indigenous Knowledge Application in Environmental Education Processes: A Case of Cultural Plants in the Eastern Cape

Soul Shava
Rhodes University
Environmental Education & Sustainability Unit
Grahamstown
South Africa

What is IK?

NB: IK = Indigenous Knowledge Systems (IKS), Traditional Knowledge (TK), Traditional Ecological/Environmental Knowledge (TEK), Endogenous Knowledge.

What is IK?: Some Key Aspects

1. **Indigeneity (I) =** people, context (place & time), culture, language, practices & dynamism:

- People are creators of knowledge which is *embedded in their **culture**, embodied in their **practices*** and *transmitted through their **language**.* This knowledge is *generated in a specific **locale** (**place** or **context*** of origin) over ***time***, implying that this *knowledge is not static but **dynamic**.*

What is IK?: Some Key Aspects (Cont)

2. **Knowledge (K)** = derived from interaction between people (the knowers) and their environment (the known). IK comprises:

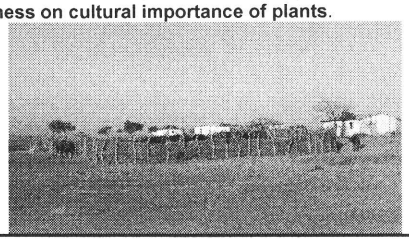
- *Propositional knowledge* – **factual**, e.g. a plant is poisonous or edible
- *Practical knowledge* – **know-how**, e.g. how to make beer, food, an arrow
- *Contextual knowledge* – **familiarisation** or **naturalisation**, e.g. where a certain plant can be found, what season certain fruits occur
- *Intuitive knowledge* – non-mediated knowledge from **direct acquaintance**, e.g. knowledge that its going to rain
- *Tacit knowledge* – from **direct engagement**, e.g. recognising plants or how to ride a bike that cannot be easily described
- *Knowledge from dreams* – **spiritually derived**, e.g. healing knowledge of traditional health practitioners

Why IK?

- Locally derived & contextually relevant
- (re)establishes school-community links (embeds school within community)
- brings local epistemologies into formal education contexts enabling schools to be platforms for sharing plural/diverse epistemologies (decentres the hegemony of western epistemologies)
- Re-establishes the role of community elders as educators

Cultural Plants Case Study

- Origins of the research: The Cultural Plants research evolved from a university study on natural resource use patterns in the Eastern Cape. The researchers realised that **a significant proportion of plants used by local communities were for cultural rather than utilitarian purposes**.
- Educational outcome: A poster was developed to **raise awareness on cultural importance of plants**.



Application of Cultural Plants Poster in EE Processes

The cultural plants poster was taken up by MEd(EE) students and applied in formal education contexts in the Eastern Cape:

- **Case 1**: One educator used the poster within the Life Orientation skills subject area to introduce the use of indigenous plants as food, with a focus on **wild leafy vegetables** (imifino in isiXhosa) as a community livelihood sustenance strategy. As an activity she sent the learners to research these wild leafy vegetables within the community. Subsequent to this the students developed a poster using the collected material as a classroom activity. The educator also invited some elderly women to assist students to identify imifino in the veld and to demonstrate how to prepare imifino dishes.

- **Case 2**: Another educator used the poster to develop lesson plans to broaden learners' knowledge on **local plant uses** within the Life Orientation subject area. Learners were assigned to go out and research within their community what plants were used in the community and for what purposes and to bring this information into class together with photographs taken by the students for the creation of a chart on plant uses. In the chart the plants were grouped according to use (medicinal, edible, etc.). The educator then invited local community elders to identify these plants in the school garden and to discuss their uses. The identified local plants in the garden and their uses when then developed into laminated labels which were used for interpreting the garden and making it accessible to other students and teachers for use as a living classroom.

- **Case 3**: The 3rd educator used the poster to develop lesson plans to teach biodiversity in the Natural Science subject area. Learners were asked to research within the community all information about a local plant of their own choice. This information was then used in class to show the diversity in plant species, their names, growth habits, uses, distribution and adaptation. The educator used this as a demonstration lesson for other educators. Following this the educators then brainstormed possible lesson that could be developed around biodiversity using the poster. The educators then developed their own independent lesson plans. The lesson plans were compiled into a booklet that could be used in the school for biodiversity education.

Conclusion

- It is possible to use indigenous knowledge in formal environmental education processes.
- Indigenous knowledge application in formal education contexts can foster school-community interrelationships.
- One IK narrative can be used to encourage learners to participate by bringing in their own narrative into the learning context.