**Enhancing NAPLAN Results from Early Education Onwards – Introduction to Seven Learning Zones.**

The latest NAPLAN results indicate that one-third of Australian students lack literacy and maths knowledge. The Grattan Institute has provided a detailed commentary on the 2024 NAPLAN results, describing them as a “wake-up call” for Australia’s education system1. Points from the analysis indicate:

* Proficiency Benchmarks: About one in three students did not meet the proficiency benchmarks in literacy and numeracy, translating to approximately 450,000 students nationwide.
* Persistent Issues: The results are consistent with previous years, indicating ongoing challenges in achieving excellence and equity in education.
* Stark Inequities: Indigenous students and those in remote areas are significantly more likely to fall short of proficiency benchmarks. For example, nearly 60% of students in remote schools did not meet the benchmark.
* Achievement Gaps: There is a widening gap in achievement as students progress through school. By Year 9, the gap between students whose parents did not finish school and those whose parents hold a bachelor’s degree or higher is more than five years of learning.

The Grattan Institute emphasises the need for urgent reforms, including setting a long-term goal of 90% student proficiency and implementing earlier and better screening of student progress.

Recent studies underscore the significant impact that early childhood education has on NAPLAN outcomes. Research commissioned by The Front Project and conducted by PwC reveals that children engaged in quality early learning programs are more likely to achieve higher scores in Year 3 NAPLAN assessments and maintain strong academic performance throughout their schooling. This early advantage highlights the critical role of foundational learning experiences in shaping long-term academic success.

In the early years learning framework (EYLF), there is a strong emphasis on play-based learning and following children’s interests. There is strong evidence that children learn through play. However, if we only focus on free play, the structured understanding of the necessary concepts for later academic success may not be consolidated. This is not to say the concepts only need to be explicitly taught. Rather than having this binary view between play and explicit teaching, other ways exist to address this situation.

Providing children with opportunities to play does not automatically translate into deep, conceptual understanding. While play is crucial, it must be structured to build and clarify concepts effectively. This is where a play-based curriculum, enriched with intentional teaching strategies, becomes essential. This approach ensures that children enjoy their learning experiences and thoroughly grasp critical concepts. Children need to move beyond experiential learning to conceptual learning. This occurs when children acquire the labels, vocabulary and concepts to remember and articulate their learning. When children have ideas, they develop abstract thinking. This means the knowledge and information are not situation-bound but always available in any setting. It also means that new language and information can be added to current knowledge to extend the conceptual understanding of the relationships between pieces of information. That is, children’s conceptual landscape increases through conceptual language development.

The way from experiential learning to conceptual learning is not automatic and requires a combination of exploration and explicit teaching.

Faced with this dilemma, Lili-Ann Kriegler developed an Agility Wheel with seven learning zones. The agility wheel suggests a continuum of learning zones educators can use to enhance concept learning, explicit learning, open-ended learning and creativity. The Agility Wheel honours the agency of both students and educators and aims to ensure children continually break through Lev Vygotsky’s zones of proximal development. A learning zone has a floor and a ceiling. Children go through the ceilings of progressive learning zones by implementing different zones.

Lili-Ann Kriegler's continuum of the seven learning zones offers a comprehensive framework for achieving this balance. These zones—free Play, Mediated Play, Embedded Concepts, Concept Clarity, Closed-ended Mobilization, Open-ended Mobilization, and Auto-generative Creativity—provide a structured yet flexible approach to early childhood education. Each zone uniquely guides children from hands-on experiences to abstract thinking, effectively integrating playful and explicit teaching methods.

**The Seven Learning Zones**

1. **Free Play**: This unstructured play allows children to explore and experiment with various materials and ideas at their own pace. It encourages creativity and self-directed learning, forming the initial basis for concept exploration.
2. **Mediated Play**: In this zone, educators interact with children during play, guiding their exploration and introducing new vocabulary and concepts. This interaction helps bridge the gap between playful exploration and deeper understanding.
3. **Embedded Concepts**: Educational concepts are integrated into play activities, making learning more seamless. For example, materials with latent concepts like number blocks, magnets, water play, and alphabet puzzles are embedded in play areas, subtly reinforcing learning through engagement.
4. **Concept Clarity**: This zone explicitly teaches concepts. Visual aids and direct instruction help clarify and solidify understanding of critical ideas, such as spatial concepts, word comprehension, letter recognition or basic arithmetic.
5. **Closed-ended Mobilisation**: Structured activities with specific outcomes, such as matching shapes or solving puzzles, reinforce particular skills and concepts through targeted practice.
6. **Open-ended Mobilisation**: This zone encourages creative and critical thinking. Children use materials to create something unique, such as a story or a model, applying their knowledge innovatively.
7. **Auto-generative Creativity**: This zone supports independent projects, allowing children to work on self-directed tasks like inventing a new game, a song, a dance, a story or designing a model. It nurtures their ability to innovate and solve problems independently. In the auto-generative children have gone through an interactive process, and they are once again free playing, but at a much higher level because their skills, peer learning, knowledge and information have spiralled upwards and outwards by engaging with an idea of the area of learning in many ways across time.

**Project-Based Learning (PBL) and the Connectivity of Knowledge**

Kriegler's seven learning zones can be seamlessly integrated into project-based learning (PBL) and Maker Learning approaches, both of which are renowned for connecting academic concepts with real-world applications. PBL, in particular, engages students in exploring real-world problems, fostering a deeper understanding of subject matter and essential skills like collaboration and critical thinking.

**The Reggio Emilia Approach and the 100 Languages**

The Reggio Emilia approach used project-based learning to integrate skills into knowledge. One of its strengths in early education is the innovative idea that children have "100 languages" to express their understanding. This philosophy recognises that children use multiple forms of expression—such as drawing, writing, speaking, and movement—to make sense of their experiences and communicate their ideas. By incorporating the seven learning zones, educators can support these diverse modes of expression and ensure that each child's unique understanding and interaction with the world is valued and nurtured.

**Integration with Maker Education and Play-based Curricula**

The seven learning zones are particularly well-suited to Maker Education and play-based curricula, applicable from kindergarten through primary settings. Maker education emphasises hands-on, project-based learning, where students create tangible products. The seven zones support this approach by providing a structured framework that allows children to explore concepts through guided and independent activities.

**Example: Sustainability Project**

Consider a project on sustainability to illustrate the application of these zones. This project can navigate all seven learning zones, offering a comprehensive and engaging learning experience.

1. **Free Play**: Start by setting up a free play area with various recycled materials, such as cardboard boxes, plastic bottles, and fabric scraps. Children explore these materials and create whatever they imagine, sparking curiosity about reusing materials and the broader concept of sustainability. These materials provide provocations for children. Depending on what they do with the materials and their commentaries, a new stage of learning can begin.
2. **Mediated Play**: Teachers guide discussions about recycling and environmental care during play. For instance, while children build with recycled materials, teachers might provide specific context-rich vocabulary and language. They might ask open-ended questions like, “What can we make with these old boxes?”, “Who or what are we helping when we recycle?” or “Why is recycling important?” This interaction helps deepen their understanding of sustainability.
3. **Embedded Concepts**: Every material contains latent concepts. A wooden block can reveal information about weight, size, shape, symmetry or multiple other ideas. What we provide for children has the potential to offer insights into sustainability practices. An example might be play activities, such as setting up a pretend recycling centre where children sort materials into paper, plastic, and metal bins. This reinforces their understanding of recycling categories and the importance of waste sorting.
4. **Concept Clarity**: Not all children develop concepts intuitively. Many do, but if they don’t, as educators, we can facilitate the learning to ensure concepts land. Examples are using visual aids to explicitly teach sustainability principles, such as the three Rs: Reduce, Reuse, and Recycle. Children can engage in discussions and activities that apply these principles at home and school, ensuring clear understanding.
5. **Closed-ended Mobilisation**: Provide structured activities like worksheets where children match items to the correct recycling bin or complete puzzles illustrating the recycling process. These activities help solidify their understanding through practice.
6. **Open-ended Mobilisation**: Encourage creative projects where children use recycled materials to create new items, such as a bird feeder from a plastic bottle or a planter from a tin can. This allows them to apply their knowledge in innovative ways and think critically about repurposing materials.
7. **Auto-generative Creativity**: Support independent projects where children innovate and explore sustainability further. For example, they might create a poster campaign about water conservation or design a model of a sustainable city using recycled materials. This zone promotes ownership of their learning and unique solutions to environmental issues.

By incorporating these learning zones into a sustainability project, educators create a dynamic and rich learning environment that supports early concept development and encourages creativity and a sense of responsibility towards the environment. This comprehensive approach enhances children's learning experiences and improves academic outcomes, including better NAPLAN results.

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