The Importance of Concept of Growth and Development for Educators of All Levels & The Science of Learning

Diagrams for Readings

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PBCT 7-1
The Child and Adolescent Learner and Learning Principles
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Jeep Pasada Principles of Development

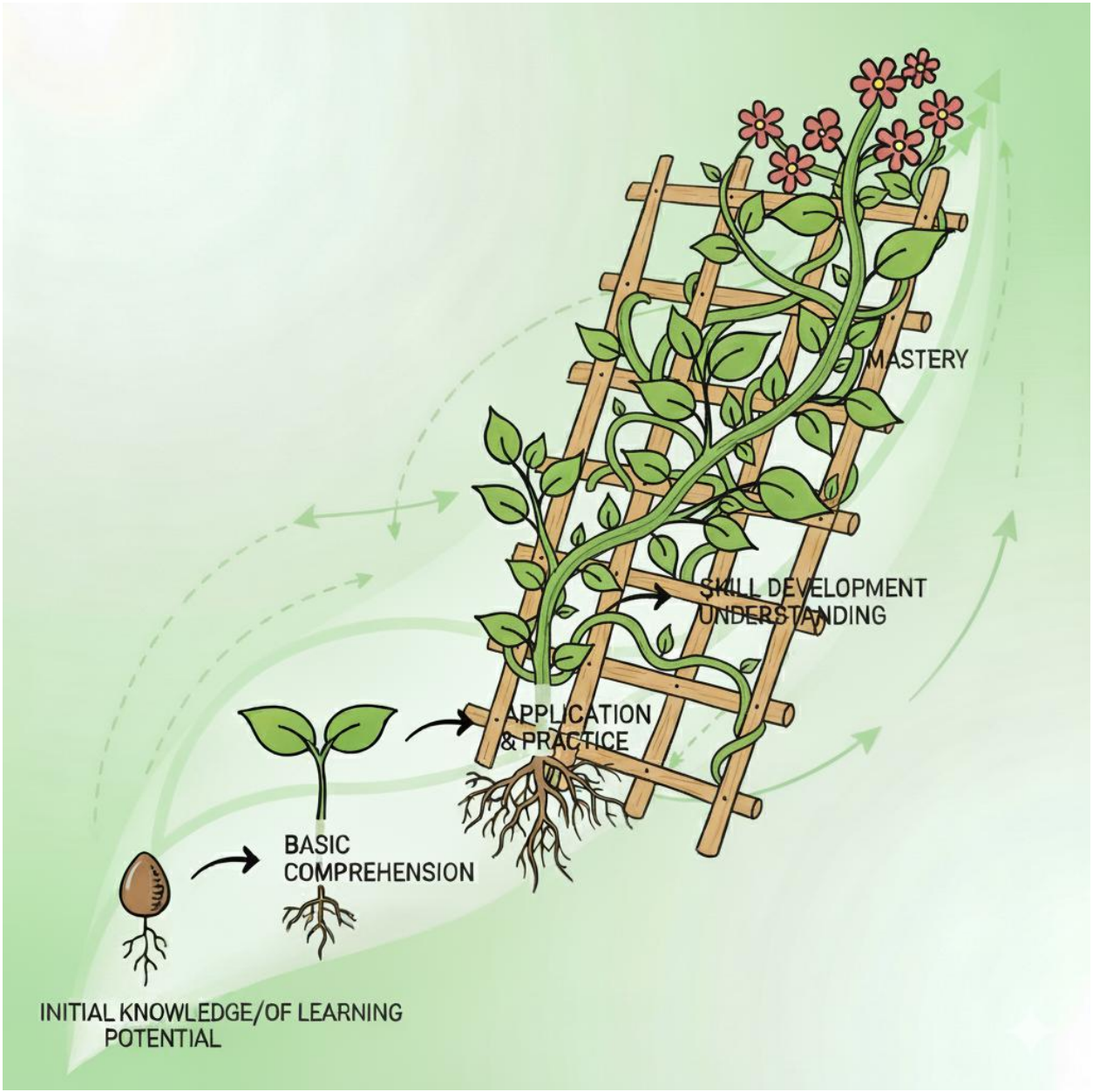
Image generated through guided, intentional prompts on Gemini

For this diagram, I only focused on the different principles of development discussed in the first reading. I will outline each of the elements of my diagram and how it fits the principles discussed in the reading:

1. Principle of Direction – jeepneys are powered from the front (the machine found in the hood), just like how development starts from head to food (as in cephalon-caudal tendency.

2. Principle of Individual Differences – some jeepneys are illustrated blurred, meaning that it is running fast compared to the other jeepneys illustrated as still (not blurred). Some jeepneys barely have passengers, while others are packed with passengers. Some jeepney drivers force to fill the maximum capacity of their vehicle, while others barely care. This highlights how human development needs differ from each other.
3. Principle of General to Specific – unexperienced jeepney drivers might maneuver unexpected turns that can be classified as unrefined, general movements. But as they gain experience, they start to become efficient and effective in their movements, as if they movements are specific.
4. Principle of Inter-relationship – there are some waiting sheds positioned adjacently to each other (meaning within the same block). Some stopovers done by jeep (just like different aspects of development) are interdependent and interrelated.
5. Principle of Spiral vs. Linear Advancement – as you have seen in the model, the path of the jeeps is never presented as one straight line. There is a circular junction at some point, as you also have some sharp turns; it is never only on one linear road.
6. Principle of Predictability – by observing the orientation of the jeep, you can judge where will the next shed they will likely stop for, just like how there are sets of established ways on how the learner development unfolds.
7. Principle of Uniform Pattern – jeeps always follow the same routine of activities: leave the terminal, make stops, and arrive at the last destination. This is still evident even when the jeep is fast or slow, fully packed or not that loaded.
8. Principle of Non-unform Pattern – jeeps never travel on a constant rate. They always travel based on certain factors like the driver's temperaments, if they have to make a stop, if they have to turn left or right, and so on, just like how development unfolds.
9. Principle of Continuity and Cumulativity – the roads of the model doesn't have a start or a finish: it is continuous process as if non-ending. But the jeep uses the stopovers to load or unload passengers that is essential to their work as a transportation provider, just like how development uses previous experience to serve as a launching stage for the next skills they ought to learn.
10. Principle of Heredity and Environment – the jeeps' design is manufactured by different jeep companies, implying that we are all born with unique hereditary and genetic traits. The road conditions, drivers, passengers, and situations offer how the jeep navigates through the world around it, implying the concept of environment in the development of a person.
11. Principle of Integration – the driver, jeepney, as well as all the passengers helps make that community or society run and work for their benefit. It is an ecosystem of its own, where different elements interact to produce a form of livable whole.

Vineyard of Student Learning and Information Retention



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As shown in the diagram, the paper discussed how learning unfolds on a given learner and how new information is retained. I have categorized each of the "cognitive principles" outlined in the paper into several stages.

Stage 1: Initial Knowledge/Learning Potential (planted seed) – as discussed in the 1st cognitive principle, "students learn new ideas by reference to ideas they already know". A seed will not start its process on becoming a plant or a full-blown vine if it is not placed under

required conditions such as water, soil, sunlight, carbon dioxide and air. These required conditions also serves as the teacher's effort in using "worked examples" to help student digest complex ideas as stated on the 2nd cognitive principle of transferring from working memory to learning memory. You can also add some "scaffolds" or vine in preparation for its future learning, just like in using multiple modalities and a carefully paced explanation as stated on the 2nd cognitive principle, but this is still unpredictable, as to how the sprout will crawl through the "scaffold" as explained in the 3rd cognitive principle

Stage 2: Basic Comprehension (sprout) – as discussed int 4th principle, students might not still be able to remember the information they took in, so they are still "sprouts" that haven't developed its reaches yet (hence, not yet a vine) and the teacher can only guide students by imposing meaning and to help them organize materials related to the content.

Stage 3: Application & Practice (simple main vine) - the 5th cognitive principle is illustrated through more than a sprout (now a vine) that now requires the scaffold for the vineyard. If back then, the scaffold is just being prepared in anticipation to sprout further stretching its reach, now it is important through practice. 6th cognitive principle is further pronounced that the vine has a volition of its own, that teachers (scaffolds) are starting to be wider and more accommodating to the different paces of the students (main vine) in relation to the differing subject matters they encounter. As discussed in the 7th cognitive principle, feedback is essential, and this is further shown as to how rapid the vine stretches through the scaffold but still with limitations

Stage 4: Skill Development & Understanding (thick, luscious vine) – as discussed through 8th (transfer of knowledge and skills to a novel problem), 9th (understand new ideas via examples), and 10th (beliefs about intelligence as predictors of school performance) cognitive principle, the learner further demonstrate how students grew from a simple main vine into a thick luscious vine. They can now do such things but with limited awareness or struggle still, but the main vine has already branched out into several branches of its own that it is hard for them to find unifying concepts for their efforts

Stage 5: Mastery (flowering vine) – the remaining cognitive principle has already signified its peak and that they are already self-sufficient in imposing motivation (10th cognitive principle), self-regulation (11th), and if they feel accepted within their environments (12th). They wouldn't flower or bear fruit if they do not self-regulate, if they lack motivation, or if they feel unaccepted.