Design Strategies To Promote Inquiry, Collaboration and Independence In The Classroom

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DESIGN PRINCIPLES TO PROMOTE INQUIRY

- **Walls:**
  - The walls of a classroom should be useful and usable for students (Ellis & Strong-Wilson, 2007). Post pertinent information at eye level and ensure that any interactive pieces are easily reached by the students (Neuman & Roskos, 2011).
  - The walls of a classroom should be uncluttered (no borders), has clear signage (appropriate font size, consistent colour scheme) and includes pictures (2D and 3D) to entice student imagination and visualization (Neuman & Roskos, 2011; Tarr, 2004).
  - Display student work to celebrate it. Commercially produced banners and posters can suppress students' motivation to think about their own creative abilities (Tarr, 2004).
  - Make the learning process visible through documentation panels that allow students to organize, revisit and add onto their thinking (Tarr, 2004).

- **Provocation Pieces:**
  - Bring in artifacts and objects that students can interact with that entice their senses (Ellis & Strong-Wilson, 2007).
  - Strategically select and organize materials in transparent boxes to invite students to explore (Ellis & Strong-Wilson, 2007).
  - Pieces should be accessible to students (Ellis & Strong-Wilson, 2007).

DESIGN PRINCIPLES TO PROMOTE COLLABORATION

- **Seating Arrangements:**
  - To promote group work, students can be seated at tables, in clusters, in semi circles or in partners (Welty, 2013; Palmer, 2000).
  - Students should not have their backs facing the front of the room as this makes group work uncomfortable (Palmer, 2000).
  - Groups of two to three students are ideal for group work (Palmer, 2000).

- **Alternative Spaces:**
  - The classroom should provide designated spaces for large groups, small groups and partner work (Neuman & Roskos, 2011; Evanshen & Faulk, 2013). This could consist of clear floor space, different sized tables, different types of comfortable seating and nooks or areas separated by fabric to provide a more closed off feel to the space.

- **Flexibility:**
  - A flexible space allows the classroom to be quickly transformed by students and teachers into the space that they need for a specific activity. This may include moving individual desks to create clusters or pushing desks aside to create floor space. This should be a fast process otherwise too much instruction time is lost (Palmer, 2000).

DESIGN PRINCIPLES TO PROMOTE INDEPENDENCE

- **Organization of Resources:**
  - All resources should be within students' physical reach and viewing level and should be stored in areas that require their use (Neuman & Roskos, 2011).

- **Promoting Self-Management:**
  - Informational walls denoting student specific jobs, instructions and behavioural expectations can be posted to promote self-regulation (Evanshen & Faulk, 2013; Welty, 2013).
  - Create self-service areas for submitting and picking up work by establishing routine (Welty, 2013).
  - Clear physical pathways and direction need to be established (Neuman & Roskos, 2011; Welty, 2013).
  - Classroom design should also include student choice based on their needs, as this promotes self-regulation and responsibility for their learning (Palmer, 2000).

- **Independent Work Spaces:**
  - Nooks with intensity adjustable light sources and sound absorbing materials can be adapted to suit specific learner preferences (Neuman & Roskos, 2011).
  - If students are not able to self-regulate the use of these spaces, teachers can create a schedule for students to maintain (Welty, 2013).