



WP4

School and Community Engagement Framework for STEAM Solution-Focused Projects

(Communication strategies)

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Objective: Connect individual citizens and groups with school and community officials to design and implement transdisciplinary STEAM projects that address real-world problems, fostering a united, multicultural, and dynamic collective.

Framework Components

1. **Stakeholder Engagement**
 - **Identification:** Identify key stakeholders (students, teachers, parents, local officials, community members, local businesses, NGOs).
 - **Outreach:** Conduct outreach through meetings, social media, flyers, and school/community events.
 - **Committees:** Form engagement committees consisting of representatives from each stakeholder group.
2. **Project Planning and Design**
 - **Needs Assessment:** Conduct surveys, focus groups, and town hall meetings to identify community needs and potential project ideas.
 - **Brainstorming Sessions:** Organize workshops to generate STEAM project ideas.
 - **Selection Criteria:** Develop criteria for project selection based on community impact, feasibility, sustainability, and educational value.
3. **Transdisciplinary STEAM Approach**
 - **Curriculum Integration:** Embed STEAM project components into the school curriculum.
 - **Collaborative Learning:** Facilitate interdisciplinary learning experiences where participants apply knowledge from multiple disciplines.
 - **Skill Development:** Focus on developing transversal skills such as critical thinking, problem-solving, communication, and teamwork.
4. **Project Implementation**
 - **Team Formation:** Create diverse project teams with members from various disciplines and backgrounds.
 - **Resource Allocation:** Secure necessary resources (funding, materials, expertise) through grants, sponsorships, and community contributions.
 - **Project Management:** Develop a timeline, assign roles, and use project management tools to track progress.
5. **Community Involvement**
 - **Volunteer Recruitment:** Encourage community members to participate as volunteers and mentors.
 - **Awareness Campaigns:** Use local media and events to raise awareness and support for the projects.

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- **Feedback Mechanisms:** Establish channels for community feedback and suggestions.
- 6. **Evaluation and Reflection**
 - **Assessment Tools:** Use surveys, interviews, and observation to evaluate project outcomes and impact.
 - **Reflection Sessions:** Hold debriefing sessions for participants to reflect on their experiences and learnings.
 - **Reporting:** Document and report on project outcomes, lessons learned, and best practices.
- 7. **Sustainability and Scalability**
 - **Maintenance Plans:** Develop plans to ensure the sustainability of the projects (e.g., ongoing maintenance of a community garden).
 - **Adaptability:** Identify successful projects that can be scaled up or replicated in other communities.
 - **Continuous Improvement:** Use feedback and evaluation results to refine and improve future projects.

Implementation:

1. **Initiation Phase**
 - Form engagement committees.
 - Conduct initial stakeholder meetings and outreach.
 - Identify community needs and potential project ideas.
2. **Planning Phase**
 - Organize brainstorming workshops.
 - Select STEAM projects based on established criteria.
 - Develop project plans and secure resources.
3. **Execution Phase**
 - Form project teams and assign roles.
 - Implement projects according to the developed plans.
 - Engage community volunteers and promote participation.
4. **Evaluation Phase**
 - Collect data on project outcomes and community impact.
 - Conduct reflection sessions with participants.
 - Prepare and disseminate evaluation reports.
5. **Sustainability Phase**
 - Develop and implement maintenance plans.
 - Identify opportunities for scaling successful projects.

Example STEAM Project: Dog Shelter Support

Project Title: Enhancing Animal Welfare at the Community Dog Shelter

Objective: Improve the living conditions and care of dogs at the community shelter by integrating various STEAM disciplines and engaging the local community.

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Framework Components

1. Stakeholder Engagement

- **Identification:**
 - Shelter staff and management
 - Local veterinarians
 - School teachers and students
 - Parents and community members
 - Local businesses and pet supply stores
- **Outreach:**
 - Meetings with shelter management
 - Flyers and announcements in schools
 - Social media campaigns
 - Information booths at community events
- **Committees:**
 - Form a project committee with representatives from each stakeholder group

2. Project Planning and Design

- **Needs Assessment:**
 - Survey shelter staff to identify needs (e.g., supplies, shelter improvements)
 - Visit the shelter to observe current conditions
 - Gather input from local veterinarians
- **Brainstorming Sessions:**
 - Organize workshops with students, teachers, and community members to generate ideas
- **Selection Criteria:**
 - Impact on animal welfare
 - Feasibility and resource availability
 - Educational value and interdisciplinary opportunities

3. Transdisciplinary STEAM Approach

- **Curriculum Integration:**
 - Biology: Understanding animal health and care
 - Engineering: Designing and building shelter improvements
 - Technology: Using apps to track animal health and adoption status
 - Art: Creating murals and signs to improve the shelter environment
- **Collaborative Learning:**
 - Project teams composed of students from different disciplines
 - Collaboration with local veterinarians and shelter staff
- **Skill Development:**
 - Critical thinking and problem-solving
 - Communication and teamwork
 - Technical skills in construction, technology, and art

4. Project Implementation

- **Team Formation:**
 - Diverse teams including students, teachers, community volunteers, and professionals
- **Resource Allocation:**



- Fundraising campaigns (e.g., bake sales, car washes)
- Donations from local businesses (e.g., pet supplies, construction materials)
- **Project Management:**
 - Develop a timeline with milestones and deadlines
 - Assign roles and responsibilities
 - Use project management tools to track progress
- 5. **Community Involvement**
 - **Volunteer Recruitment:**
 - Engage students and community members as volunteers
 - Encourage local businesses to sponsor and participate
 - **Awareness Campaigns:**
 - Use local media, social media, and school newsletters to raise awareness
 - Organize events such as adoption drives and shelter open houses
 - **Feedback Mechanisms:**
 - Set up suggestion boxes at the shelter
 - Conduct follow-up surveys with shelter staff and volunteers
- 6. **Evaluation and Reflection**
 - **Assessment Tools:**
 - Surveys and interviews with shelter staff and volunteers
 - Observation and documentation of shelter improvements
 - **Reflection Sessions:**
 - Debriefing sessions with project participants
 - Discussion on what worked well and areas for improvement
 - **Reporting:**
 - Prepare a final report on project outcomes and impact
 - Share findings with the community and stakeholders
- 7. **Sustainability and Scalability**
 - **Maintenance Plans:**
 - Develop plans for ongoing care and maintenance of shelter improvements
 - **Scalability:**
 - Identify aspects of the project that can be replicated in other shelters or communities
 - **Continuous Improvement:**
 - Use feedback and evaluation results to refine future projects

Communication Strategies

1. Socratic Seminar:

- **Explanation:**
 - A Socratic Seminar is a method of discussion where participants engage in dialogue by asking and answering questions to stimulate critical thinking and illuminate ideas. It encourages participants to think deeply and articulate their thoughts clearly.



- **Application:**
 - Use Socratic Seminars to explore project ideas, discuss community needs, and reflect on project outcomes. This method helps develop communication skills and fosters a deeper understanding of the issues being addressed.
- 2. **Six Thinking Hats:**
 - **Explanation:**
 - Developed by Edward de Bono, the Six Thinking Hats method involves looking at a problem from six different perspectives, represented by different colored hats:
 - White Hat: Focus on data and facts.
 - Red Hat: Focus on emotions and feelings.
 - Black Hat: Focus on potential problems and risks.
 - Yellow Hat: Focus on benefits and positives.
 - Green Hat: Focus on creativity and new ideas.
 - Blue Hat: Focus on process and organization.
 - **Application:**
 - Use the Six Thinking Hats method during brainstorming sessions and project planning meetings. This approach encourages comprehensive thinking and ensures that all aspects of a project are considered, leading to more balanced and effective solutions.

Example STEAM Project: Dog Shelter Support

Project Title: Enhancing Animal Welfare at the Community Dog Shelter

Objective: Improve the living conditions and care of dogs at the community shelter by integrating various STEAM disciplines and engaging the local community.

Framework Components Applied

1. **Stakeholder Engagement**
 - **Identification:**
 - Shelter staff and management, local veterinarians, school teachers and students, parents and community members, local businesses and pet supply stores.
 - **Outreach:**
 - Meetings with shelter management, flyers and announcements in schools, social media campaigns, information booths at community events.
 - **Committees:**
 - Form a project committee with representatives from each stakeholder group.
2. **Project Planning and Design**
 - **Needs Assessment:**



- Survey shelter staff, visit the shelter to observe conditions, gather input from local veterinarians.
- **Brainstorming Sessions:**
 - Organize workshops with students, teachers, and community members.
- **Selection Criteria:**
 - Impact on animal welfare, feasibility, resource availability, educational value.
- 3. **Transdisciplinary STEAM Approach**
 - **Curriculum Integration:**
 - Biology (animal health and care), Engineering (shelter improvements), Technology (apps to track health and adoption), Art (murals and signs).
 - **Collaborative Learning:**
 - Project teams with students from different disciplines, collaboration with veterinarians and shelter staff.
 - **Skill Development:**
 - Critical thinking, problem-solving, communication, teamwork, technical skills.
- 4. **Project Implementation**
 - **Team Formation:**
 - Diverse teams including students, teachers, community volunteers, professionals.
 - **Resource Allocation:**
 - Fundraising campaigns, donations from local businesses.
 - **Project Management:**
 - Develop a timeline, assign roles, use project management tools.
- 5. **Community Involvement**
 - **Volunteer Recruitment:**
 - Engage students and community members, encourage local businesses to sponsor and participate.
 - **Awareness Campaigns:**
 - Local media, social media, school newsletters, community events.
 - **Feedback Mechanisms:**
 - Suggestion boxes at the shelter, follow-up surveys.
- 6. **Evaluation and Reflection**
 - **Assessment Tools:**
 - Surveys, interviews, observation.
 - **Reflection Sessions:**
 - Debriefing sessions with participants.
 - **Reporting:**
 - Prepare and share reports on project outcomes and impact.
- 7. **Sustainability and Expandability**
 - **Maintenance Plans:**
 - Develop ongoing care and maintenance plans.
 - **Scalability:**
 - Identify aspects that can be replicated.
 - **Continuous Improvement:**
 - Refine future projects based on feedback and evaluation.



Communication Strategies Applied

1. Socratic Seminar:

○ Application:

- Use Socratic Seminars to discuss community needs, explore project ideas, and reflect on the project's success and areas for improvement. Facilitate seminars with participants including students, teachers, community members, and shelter staff.

2. Six Thinking Hats:

○ Application:

- Use the Six Thinking Hats method during brainstorming and planning sessions. Assign different hats to participants to ensure diverse perspectives are considered. For example, use the White Hat to focus on shelter statistics, the Red Hat to discuss emotional responses to shelter conditions, the Black Hat to identify potential risks, the Yellow Hat to highlight benefits, the Green Hat to generate creative solutions, and the Blue Hat to organize the process.