**MICRO PLAN-DO-STUDY-ACT (or mPDSA)**

Do

Study

Act

Plan

**Purpose**

mPDSA (or “micro Plan Do Study Act”) is a template to record a test of change or improvement cycle. The test of change (or a PDSA cycle) has four key steps: developing a plan to test the change (Plan), carrying out the test (Do), observing and learning from the results (Study), and determining what modifications should be made to the test (Act). Some recommendations when implementing the PDSA cycle:

* *Short duration:* Each PDSA cycle should be as brief as possible for you to identify whether an activity is working or not. Ideally, a cycle should not last more than a month.
* *Small sample size:* The first PDSA cycle should target a specific and small-sized group of people. Focusing on a small group makes the test more manageable when trying something new and will help prevent failure during implementation. When a test of change is found to be successful, the next PDSA cycle should be scaled to include a larger population.

**Key Components**

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| **Component** | **Explanation** |
| **mPDSA Title** | State a unique name to separate the mPDSA from other mPDSAs |
| What project does this mPDSA support? | State the project of which this mPDSA is a part. |
| What is the goal? | State a quantifiable and clearly articulated goal for the mPDSA.   * The goal statement may follow the format: “Improve (primary metric) from (baseline performance) to (desired future performance) by (desired date of completion).” * Objectives or goals should follow SMART criteria—Specific, Measurable, Achievable, Realistic, and Time-Bound |
| Who will lead the improvement? | * List the project lead’s name, their official position * You can also include the specific role of each team member in the mPDSA. |
| When will the implementation begin/end? | State the year/month/date that the implementation begins and ends.   * An ideal improvement cycle takes a month to complete |
| **PLAN** | *[Leave this row as it is]* |
| What are the steps that need to be completed? Who is responsible for each step? | List all agreed upon steps among the team, the deadline for each step, and the person who is in charge of each step. |
| What data will you collect in order to know if you were successful? How will you collect it? | * Specify the metrics used to quantify the results of the test of change and the method of obtaining those metrics. * Include necessary data collection tools such as a Data Collection Plan. The Data Collection Plan can also be found on the Seeding Success website. |
| What do you predict will happen? | * Share the rationale or the hypothesis in favor of the success of the mPDSA. * The predictions should also include how you expect the metrics to change. |
| **DO** | *[Leave this row as it is]* |
| What steps/actions were taken during implementation? Did things go as planned or were there unexpected events? | List the status of each action mentioned in the above PLAN section. |
| **STUDY** | *[Leave this row as it is]* |
| What did you learn? How do these results compare to past performance? Did the results match your prediction? | Show the results of the data analysis (e.g. show graphs, tables, trend lines) which show the change in metrics from pre- to post-implementation of the test of change.  In this section, you can also include a reflection of the following questions:   * What might explain the results? Any process metrics that might support this claim? * What did the team do well/What could have been done better? |
| **ACT** | *[Leave this row as it is]* |
| Adopt/Adapt/Abandon | Choose whether to Adopt, Adapt, or Abandon the mPDSA cycle.  Include any modifications to the change idea as well as plans for future cycles. |

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| ***What is the mPDSA title?*** | |
| *What project does this mPDSA support?* | |
| *What is your S.M.A.R.T. goal?* | |
| *Who will lead the improvement?* | |
| *When will implementation begin?* | *When will implementation end?* |
| **PLAN** | |
| *What are the steps that need to be completed? Who is responsible for each step? By when?*   |  |  |  | | --- | --- | --- | | **ACTION** | **WHO IS RESPONSIBLE?** | **BY WHEN?** | |  |  |  | |  |  |  | |  |  |  | |  |  |  | |  |  |  | |  |  |  | | |
| *What data will you collect in order to know if you were successful? How will you collect it? Who is responsible?*   |  |  |  |  | | --- | --- | --- | --- | | **METRIC** | **WHO COLLECTS DATA?** | **HOW WILL DATA BE COLLECTED?** | **FREQUENCY** | |  |  |  |  | |  |  |  |  | | |
| *What do you predict will happen?* | |
| **DO** | |
| *What steps/actions were taken during implementation?*  *Did things go as planned? What unexpected events, if any, occurred during implementation?* | |
| **STUDY** | |
| *What did you learn? How do these results compare to past performance? Did the results match your prediction?* | |
| **ACT** | |
| *What actions will you take next?*   * **Adapt:** Improve the change & continue testing.   *What changes will be made to this intervention?*   * **Adopt:** Ready to implement at larger scale. Develop plan for implementation and sustainability.   *What is the plan to scale (slow vs. full scale)?*   * **Abandon:** Discard & try a different intervention. | |

**EXAMPLE mPDSA – Baking a Custom Cake**

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| **Baking a cake** | |
| ***What project does this mPDSA support?***   * Baking custom cakes | |
| ***What is your S.M.A.R.T. goal?***   * Improve customer ratings for custom cake orders from an average of 4/5 stars to 5/5 stars by April 10, 2020 | |
| ***Who will lead the improvement?***   * Head baker | |
| ***When will implementation begin?***  Apr. 1, 2020 | ***When will implementation end?***  Apr. 10 2020 |
| **PLAN** | |
| *What are the steps that need to be completed? Who is responsible for each step?*   |  |  |  | | --- | --- | --- | | **ACTION** | **WHO IS RESPONSIBLE?** | **BY WHEN?** | | Collect customer feedback | Baker | Between Apr 1-3 | | Revise the recipe so that cakes are not so dry, as requested by customers | Baker | Apr 5 | | * Implement the new recipe as below.   + Preheat oven to 350 degrees. **Baker’s assistant**   + Mix together flour, sugar, cocoa, baking soda, baking powder, and salt in a stand mixer using a low speed until combined. **Baker**   + Add eggs, buttermilk, warm water, oil, and vanilla. Beat on a medium speed until smooth. This should take just a couple of minutes. **Baker**   + Add ½ cup of hot water into the mix. This is the new step to make the cake moister. **Baker**   + Divide batter among the three cake pans. **Baker**   + Bake for 30-35 minutes until a toothpick inserted into the center comes out clean. **Baker’s assistant**   + Cool on wire racks for 15 minutes and then turn out the cakes onto the racks and allow to cool completely. **Baker’s assistant**   + Frost and decorate the cake. **Baker** | See notes by action | Apr 8 | | Start selling new recipe cakes over 3 days and collect ratings from each customer | Baker’s assistant | Apr 8-10 | | |
| *What data will you collect in order to know if you were successful? How will you collect it? Who is responsible?*   |  |  |  |  | | --- | --- | --- | --- | | **METRIC** | **WHO COLLECTS DATA?** | **HOW WILL DATA BE COLLECTED?** | **FREQUENCY** | | Rating feedback | Baker’s assistant | Call customer to ask for rating feedback for cake | Call every customer who buys cake during April 8-10, a week after delivery | |  |  |  |  | | |
| *What do you predict will happen?*   * With a higher liquid:dry ingredient ratio, the cake will be more moist, leading to more satisfied customers and a 5/5 star average rating | |
| **DO** | |
| *What steps/actions were taken during implementation?*   * All tasks were completed as planned.   *Did things go as planned? What unexpected events, if any, occurred during implementation?*   * All tasks were completed as planned. | |
| **STUDY** | |
| *What did you learn? How do these results compare to past performance? Did the results match your prediction?*   * Customer rating improved from an average of 4/5 to 5/5 as predicted (below figure).     Customer rating  *New recipe* | |
| **ACT** | |
| *What actions will you take next?*   * Adapt: Improve the change & continue testing.   *What changes will be made to this intervention?*  ☑ **Adopt: Ready to implement at larger scale. Develop a plan for implementation and sustainability.**  *What is the plan to scale (slow vs. full scale)?*   * Share the new recipe to other locations, Apr. 15 * Start selling the new cakes, Apr. 17 * Abandon: Discard & try a different intervention. | |