ABSTRACT

This paper describes storyboarding, a technique for team project planning which can be applied by students with and without disabilities in a wide variety of contexts. Introductory paragraphs describe the process and briefly review the history of storyboarding. Various roles of team members are delineated, such as sanctioner, project leader, facilitator, writer, and pinner. A list of necessary supplies follows. Major types of storyboards include: (1) the planning board (often the master control board for any project); (2) the ideas board (which adds more detail to the major topical areas of the planning board); (3) the communication board (which identifies to whom and how information will flow); and (4) the organization board (which specifies specific tasks and assigns responsibilities). The project team meets for a creative thinking session in which free-flowing ideas are written on index cards and pinned to the story board. A major advantage of the storyboarding technique is the active involvement of all students, particularly important for special education students who may be prone to passivity. Examples of storyboards developed to aid in one student's transition from high school to the adult world are attached. (DB)
STORYBOARDING
A Brief Description of the Process

by
Grace L. Denison, Ph.D.
Chair, Department of Special Education
University of Maine at Farmington
Farmington, Maine

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Storyboarding 2

What is storyboarding?
Storyboarding is a technique for project planning which requires active involvement of both hemispheres of the brain. A group of 6-8 students form a planning team which will meet for a creative thinking session. This session permits the free flow of ideas from all members of the team. This session is followed by a critical thinking session in which the creative ideas are scrutinized closely for viability and are retained or rejected by the team. The creative thinking session requires use of the right hemisphere of the brain; the critical thinking session the left hemisphere. Ideas are displayed in clear visual form on a storyboard as the planning sessions progress. The visual display enables participants to see interrelationships among the ideas, to rearrange the ideas for clarity, and to "hitchhike" on ideas already presented. A single storyboarding session generates a large number of creative ideas while stimulating the energy level and creativity of the participants.

History of Storyboarding
Storyboarding in its simplest form was used by Leonardo Da Vinci, who was known to have affixed his unfinished work to a wall in order to study it. Walt Disney is said to have remembered this technique of Da Vinci's and to have applied it to the organization of the thousands of cartoon drawings required to achieve "complete animation" in his films. Disney designed what he called "the infinite wall" on which he and other cartoonists could post their drawings in sequence and actually watch the storyline develop.

In the 1960's, a member of the Disney organization, Mike Vance; along with Jerry McNellis, a creative planning specialist in New Brighton, Pennsylvania, introduced the idea of storyboarding to the business world as a technique for organizational planning. As a planning technique, storyboarding is so effective that it has been used by hundreds of major corporations such as McDonald's, General Electric, AT&T, Timex, TWA, Mayo Clinic, Pizza Hut, Bank of America, Marriott Corporation, Anheuser-Busch, Inc., and Ford Motor Company. Mike Vance himself used it in planning Disneyworld. Hospitals and health services have used storyboarding to good advantage as well.
Storyboarding is a cooperative learning technique for teaching and learning organizational skills in the field of education, and for planning educational programs of every conceivable magnitude. It is an ideal tool for secondary students to use in developing their transition plans.

Components of the Storyboarding System

Every storyboard begins with a problem which needs to be solved or a need which must be addressed. Once a need for the storyboarding process has been determined, a project team must be assembled as follows.

The Project Team

The project team consists of no more than eight people. If there are more than eight, every member will not be able to participate actively and the purpose will be defeated. The team will include members who serve specific functions.

1. **Sanctioner**
   The sanctioner (the teacher, in this case) is the person who has the authority to "OK" the project, who is able to give the "go ahead" to the rest of the team. The sanctioner need not be an actively participating member of the team.

2. **Project Leader**
   The project leader is the person who makes sure that the team meets on time, and generally monitors the team's progress. The leader could be a student with good leadership skills, an aide, or the teacher himself/herself.

3. **Facilitator**
   The facilitator plays the most demanding role on the team. The facilitator keeps ideas flowing by asking leading questions that cause the team to view the question from many different angles. He/she also monitors the group for "killer" statements--critical (negative) comments which are NOT allowed during the creative thinking sessions. Again, the facilitator could be a student, an aide, or the teacher.
4. **Writer**

The writer has the task of jotting down suggestions made by members of the team on 3" x 5" index cards (or Post-It notes) which will then be affixed to the board. In an especially freewheeling session, each participant may jot down his or her own ideas. Having a writer is especially important if there are students on the team who have extreme difficulty with writing.

5. **Pinner**

The pinner takes the note cards from the writer and pins them to the story board in the appropriate place with push pins. The importance of this role is evident when ideas are flowing rapidly. Getting ideas onto the board quickly is important because the visual stimulus of each idea card may generate more ideas from other team members. It is reinforcing to the participants to watch the board "grow."

**Storyboarding Supplies**

The storyboarding process requires the following supplies:

1. **Bulletin boards or other boards** on which index cards (or Post-It notes) can be pinned for display. The larger the board, the better.

2. **Index Cards** or Post-It Notes

Storyboarding, as used traditionally in business applications, has used index cards. The convention for using index cards will be described, although it is now possible (and perhaps more feasible) to use Post-It notes instead.

Three sets of index cards should be available:

(a) **Topic cards** are 5" x 8" blue index cards. A few of these will suffice; they are used at the top of each story board for stating the topic (the problem to be solved).

(b) **Header cards** are 4" x 6" salmon index cards which are used to head up each major subdivision of the lists of ideas.

(c) **Subber cards** are 3" x 5" yellow index cards used for listing each creative idea generated during the brainstorming session. Many subber cards are needed—at least 20 for each member of the team.
(Note: The colors suggested for the cards are conventions—any three colors may be used. The use of different colors and sizes reflects the fact that storyboarding is a visual display. The users distinguish at a glance the three levels of ideas.)

3. **Pushpins**

Many pushpins are needed—at least two boxes of 100 are suggested for each planning team. Of course, if Post-It notes are used instead of index cards, pushpins will not be necessary.

**Major Types of Story Boards and Basic Steps in Using Them**

The Planning Board

The Planning Story Board is the master control board for the project so it is necessary to start with this board. The project director assembles the project team, and the facilitator ensures that the problem to be solved is stated clearly and understood by the entire team. A clear statement of the problem is written on a blue 5" x 8" index card, which is then pinned at the top of the story board. The topic card serves to keep the team focused upon the problem throughout the session.

Next the purpose for solving the problem must be stated. A header card (a 4" x 6" salmon index card) is labeled "Purpose" and is pinned underneath the topic card and to the far left, at the beginning of what will become a row of header cards. Each header card contains a clear statement of one of the major subdivisions of the problem to be solved. For example, if the problem were "to plan a trip," possible header cards might be "where to go," "how to fund," "what to do on trip," and "what to wear." Two header cards are required for all Planning Boards: Purpose and Miscellaneous. The purpose will influence greatly the way in which the board develops, and especially will influence the other headers and the ideas that will be generated under each header. Always in planning there must be a "miscellaneous" category to use as a catch-all for ideas which don't seem to fit anywhere else. The actual number of header cards beyond the purpose and miscellaneous cards is limited only by the imagination of the project team.
Some ideas which will be generated will be possible answers to questions raised by the header cards. For example, under the "destination" header for planning a trip, there could be a tremendous number of ideas, each of which would be jotted down on a 3" x 5" yellow subber card and pinned on the board under the appropriate header. Ideas for the possible destination for the trip will, of course, be guided by the purpose(s) for which the trip is being taken.

During the development of the Planning Board, as creative ideas are being called out, jotted down, and pinned to the board, it is important that all ideas mentioned should be included. There are to be NO negative (killer) statements!! The facilitator must ensure that all ideas, however bizarre they may be, are included and pinned on the board.

Team members are urged to hitchhike on the ideas of other members by adding to and developing an idea already on the board.

Following this freewheeling creative thinking session, the project team should take a break, usually until the next school day. In the meanwhile, the planning board should remain in place and on display for the possible addition of new ideas.

Upon returning from the break, the critical thinking session begins. During this session, under the leadership of the facilitator, each idea on the board should be examined critically. Objections should be raised at this point. Any ideas that seem too "weird" to be usable should be discarded. In general, this is the best time to decide which of the ideas on the board will work best. After the rejected ideas are discarded, the final planning board which results will be used to guide the remainder of the planning processes to solve the problem.

The Ideas Board

Development of the Ideas boards begins a new round of activity, and actually, there are likely to be a number of Ideas boards resulting from a single planning board. For the Ideas boards, each header card from the planning board becomes a topic card and the subbers under each planning board header become headers for their respective topic cards. It is often possible to
combine several headers from the planning board into one topic. In this case, there will be as many ideas boards as there are combined topics. If the headers cannot be combined, there will be as many ideas boards as there are headers on the planning board.

For each ideas board the process of developing the planning board is repeated. First there is a creative thinking session, then a critical thinking session follows. By the time all of the ideas boards are completed, a very clear plan for solving the initial problem will exist.

While the process described above may seem very time consuming, the results justify the time. Students are amazed at how much they really need to learn and to accomplish in order to effect a successful transition. They surprise themselves with the breadth and depth of ideas they as a team have developed.

The Communication Story Board

In the event that the final problem-solving (transition) plan requires the involvement of a number of other people outside the project team, and especially if publicity is required to implement the plan, it may be necessary to develop a communication story board. The communication board is set up to answer the following questions: Who needs to know? What do they need to know? When do they need the information? How will the information be conveyed to them? (i.e., by letter, by memo, by phone call, by TV commercial, etc.).

While large companies may use the communication board to plan an advertising campaign, students who has developed a transition plan will find it useful in sending for information on college or trade school, filing an application on time, or sending out resumes and cover letters.

The Organization Board

The final step in the total storyboarding process is the development of the organization board. In developing this board, the project team studies the previous boards and answers these questions: What tasks need to be done in
implementing this plan? Who is to implement them? When must the various steps be implemented?

The organization board is a very practical tool for ensuring that the various steps in implementing the plan are done in a timely manner, and for spelling out specific responsibilities for bringing about the solution to the original problem.

**Some General Comments about Storyboarding**

Although the process described above may sound complicated, once a group becomes proficient in storyboarding skills, they will discover how useful a toll the story board is for efficient and effective planning and problem solving. In the future, the proficient student can use the process to plan a job search, a career change, a wedding, a wardrobe, a vacation, a party. There are a seemingly infinite number of uses for storyboarding.

Storyboarding is a visual process which helps everyone on the team see exactly how the plan is taking shape. The cards can be rearranged as the plan develops. The final planning board which results after all the desired manipulations have been completed can serve as an outline for writing up the plan into document form. Or, the cards from the final planning board can be taped onto a large sheet of newsprint and kept in that form for later use by the project team.

One great strength of the approach, aside from its visual aspect, is that is involves all members of the project team in a very active way. (Special education students have for too long been passive learners!) Students will feel more committed to a plan which they have had an active role in developing. The storyboarding technique is thus an ideal application of the cooperative learning approach.

Storyboarding is a process which students enjoy doing, at least during the initial planning board process. Secondary students enjoy following the entire process through to its completion. Learning disabled children who normally have difficulty in planning a project will benefit greatly from the visual/tactile dimensions which storyboarding incorporates into the verbal process of planning.
References for Storyboarding


<table>
<thead>
<tr>
<th>Purpose</th>
<th>Subber</th>
<th>Subber</th>
<th>Subber</th>
<th>Subber</th>
<th>Subber</th>
<th>Subber</th>
</tr>
</thead>
<tbody>
<tr>
<td>Get a job—make money!</td>
<td>Get out applications</td>
<td>Get my own car</td>
<td>Uniform?</td>
<td>Get an apartment</td>
<td>Telephone</td>
<td></td>
</tr>
<tr>
<td>Freedom!</td>
<td>Newspapers—want ads</td>
<td>Use parents’ car</td>
<td>Get new clothes</td>
<td>Live at home</td>
<td>Cable TV with MTV &amp; Movie Channel</td>
<td></td>
</tr>
<tr>
<td>Get away from home</td>
<td>Ask at gas station</td>
<td>Ride the bus</td>
<td>Rent a place with friends</td>
<td>Play sports</td>
<td>Buy a trailer</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Do a resume</td>
<td>Use bike</td>
<td>Use bike</td>
<td>Use bike</td>
<td>Use bike</td>
<td>Use bike</td>
</tr>
<tr>
<td>Make new friends</td>
<td>WALK</td>
<td>WALK</td>
<td>WALK</td>
<td>WALK</td>
<td>WALK</td>
<td>WALK</td>
</tr>
</tbody>
</table>

Sample Topic: Transition from High School to Real World

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Finding a Job

<table>
<thead>
<tr>
<th>Purpose</th>
<th>Full out Application</th>
<th>Newspaper Ads</th>
<th>Resume</th>
<th>Agency</th>
<th>Misc.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Make money.</td>
<td>What info do I need?</td>
<td>How are jobs classified</td>
<td>What info to include</td>
<td>Where to find them</td>
<td>Ask at gas station</td>
</tr>
<tr>
<td>Be on my own</td>
<td>Know Social Security #</td>
<td>How to choose</td>
<td>How to arrange information</td>
<td>How to interview: What to say</td>
<td>How to dress for interview</td>
</tr>
<tr>
<td>Buy a car</td>
<td>Choose references</td>
<td>How to contact the company</td>
<td>How to type or do on computer</td>
<td>How much money can I make?</td>
<td></td>
</tr>
<tr>
<td>Feel good about myself</td>
<td>How to list experience</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Where to get Application</td>
<td></td>
<td></td>
<td>Where to send</td>
<td></td>
</tr>
</tbody>
</table>