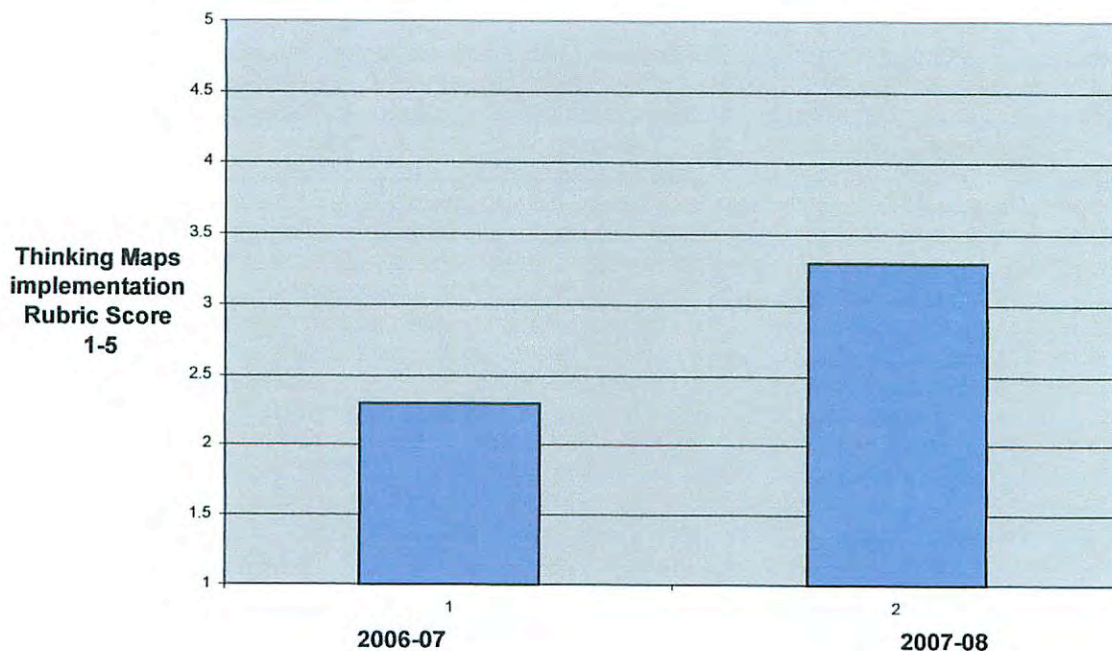# Differentiation of Staff Development

In order to meet the various needs of the staff in their implementation of Thinking Maps®, staff development consisted of four professional development days with the Thinking Maps® consultant. The teachers were grouped by their proficiency levels according to their responses on the Implementation Survey administered in June of 2007. After analyzing the data from the surveys, there were five different groups of teachers. The teachers were not explicitly told why they were placed in each group but it was explained to them that their placement was determined by the survey results.

After providing whole group staff development for over three years, the consultant planned a differentiated professional development to meet each group's needs. The goal was to increase the teacher level of implementation at least one level according to the Thinking Maps® rubric. As the year progressed, it became difficult to address every group's need due to budgetary deficits in California and time restrictions. As a result, as often happens in the classroom, the most proficient group of teachers did not receive any professional development training.

In writing the questions for this Action Research, the team was hopeful that by differentiating staff development, teachers would become more comfortable and competent in their teaching with Thinking Maps® according to the rubric and that this would reflect on the student's performance with Thinking Maps®. The qualitative data gathered at the end of the school year June 2008 indicates that the teachers felt their instruction had improved one level according to the Thinking Maps® Implementation Rubric.
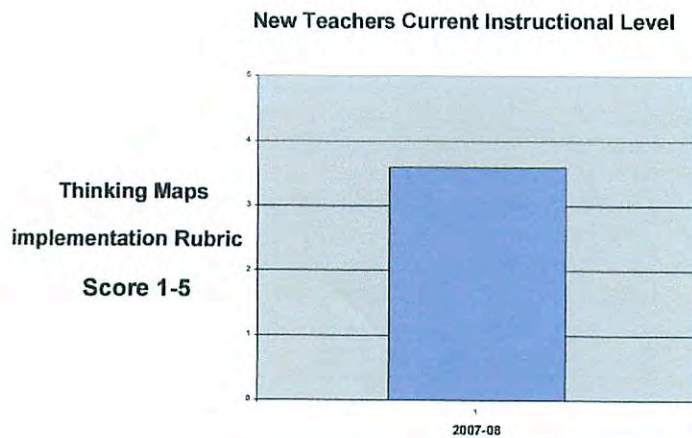
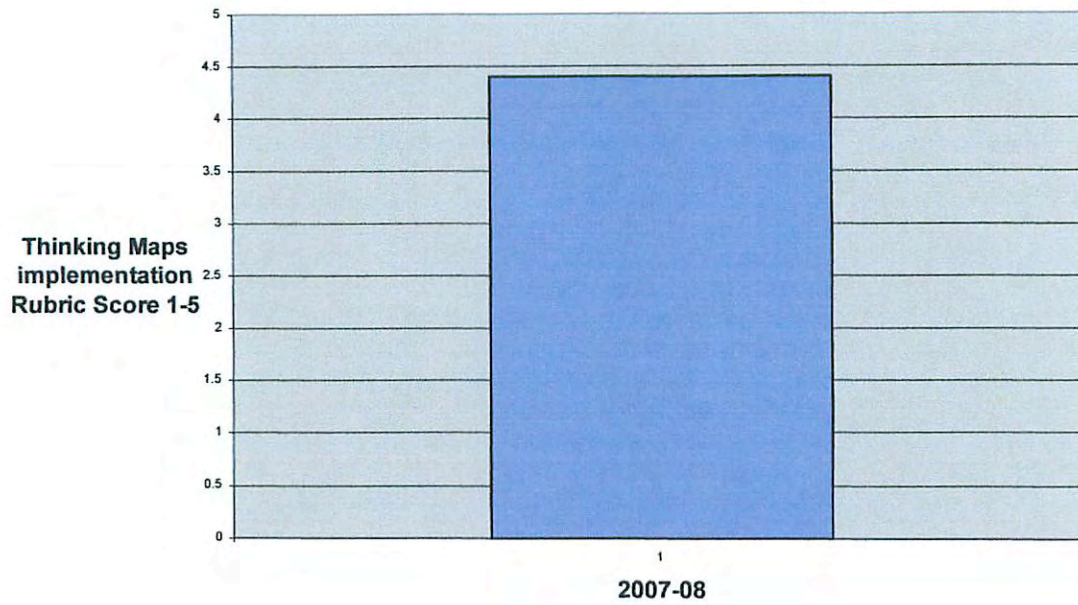**Experienced teachers rate their instruction level usthg Five Levels of Thinking Maps Implementation.**

In addition, the survey results indicate that the teachers felt that the small group differentiated staff development was an improvement over the whole staff development they received the previous year.

Another important aspect of differentiation of staff development the team hoped to observe was that teachers would become more versatile in their implementation of Thinking Maps®. In order to prove this assertion the team included the student assessment of thinking. When reflecting on the results of those assessments, the upper-grade concluded that they needed to be more versatile in their instruction and use of Thinking Maps®. However, the primary grade teachers felt that they were using all Thinking Maps® in all subject areas.

As a result of the previous Action Research work at McKinley, the team learned that it was necessary to gather qualitative data differently from new and veteran teachers. The Leadership Team wondered if the new teachers to McKinley would advance to same level of implementation as the veteran teachers in the use of Thinking Maps® if the professional development was differentiated. The survey results indicate that the average score for new teachers of implementation was very close to the average end of the year score for veteran teachers. The new teachers also indicated that due to the training received in the school year 2007-08, the Thinking Maps® facilitated their inclusion in the McKinley Staff Professional Learning Community. Also, the new teachers considered that Thinking Maps® are highly effective as a teaching strategy that improved their instructional abilities.

New Teachers Current Instructional Level

Thinking Maps

implementation Rubric

Score 1-5

2007-08

New teachers rate Thinking Maps as an effective tool to become an active member of the McKinley Professional Learning Community.

Thinking Maps
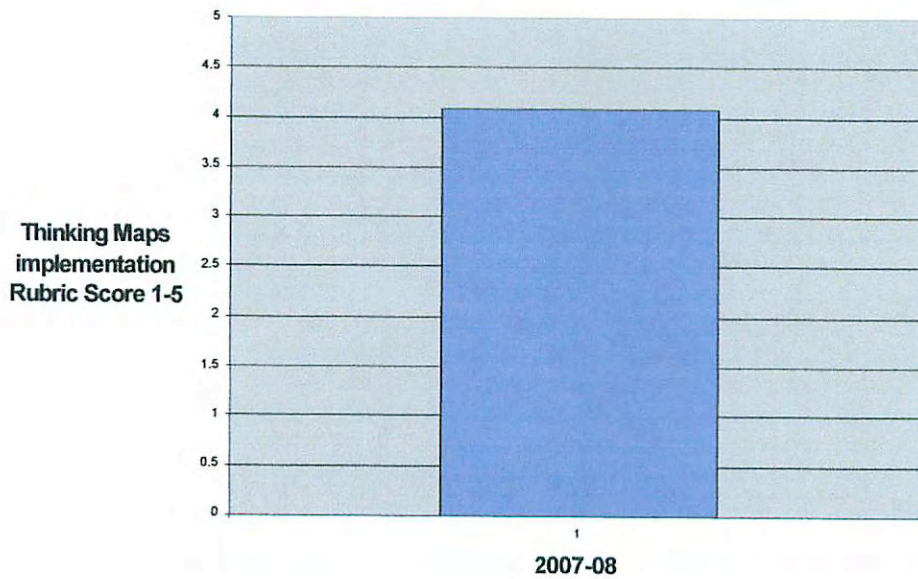implementation
Rubric Score 1-5

2007-08

New teachers rate Thinking Maps as an instructional strategy that improves their teaching.
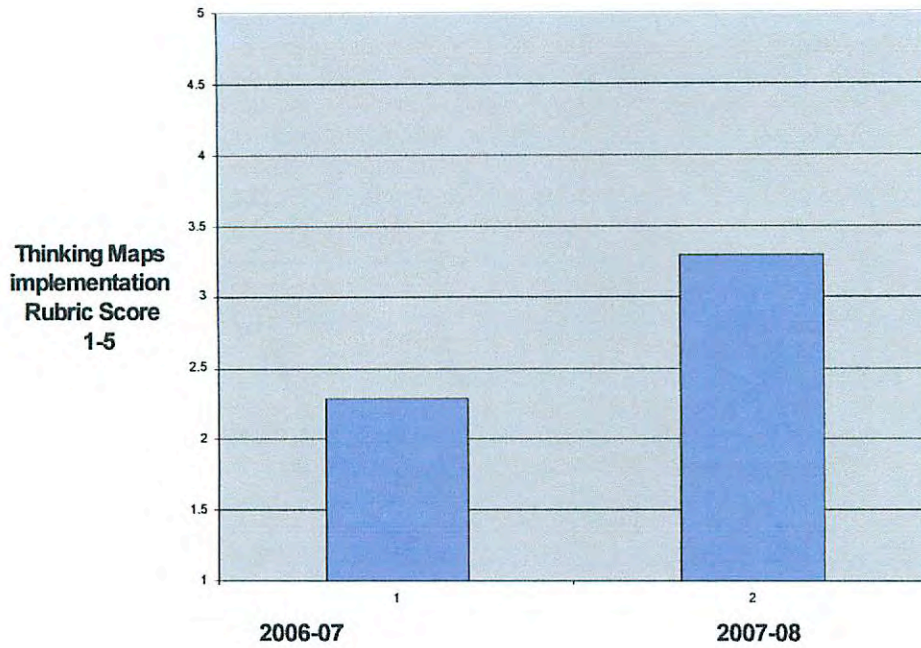
Thinking Maps
implementation
Rubric Score 1-5

2007-08
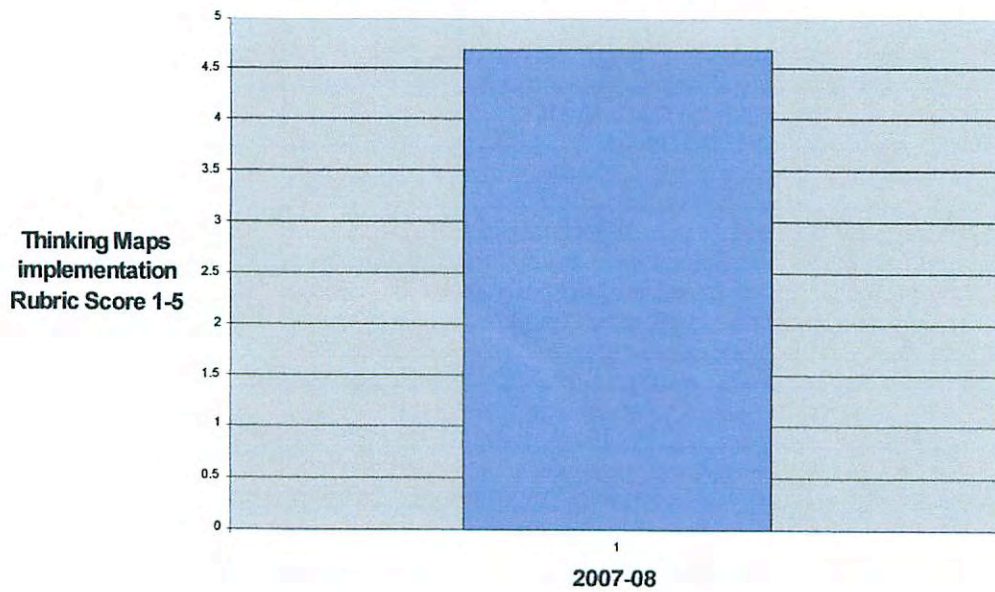
**Experienced teachers rate Thinking Maps as an effectie
tool that improve planning and collaboration at grade level meetings**

Thinking Maps
implementation
Rubric Score 1-5

2007-08
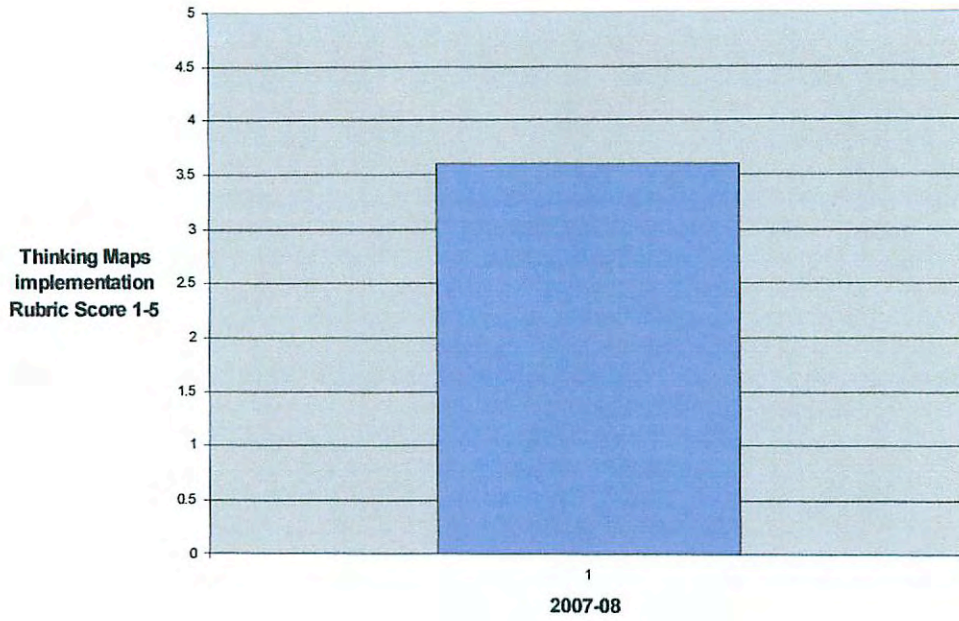
**New teachers rate the use of Thinking Maps
by administrators during staff meetings.**

Thinking Maps
implementation
Rubric Score 1-5

2007-08

4

Experienced teachers rate their instruction level using the Five Levels of Thinking Maps Implementation.

Another question the team considered for research was if the teachers will show evidence of using Thinking Maps® in different contexts such as lesson planning, staff, and committee meetings after differentiated staff development.

Include video-clip of Renee Demuth, pictures of CST graphs, video of leadership meeting (budget) and parent meeting
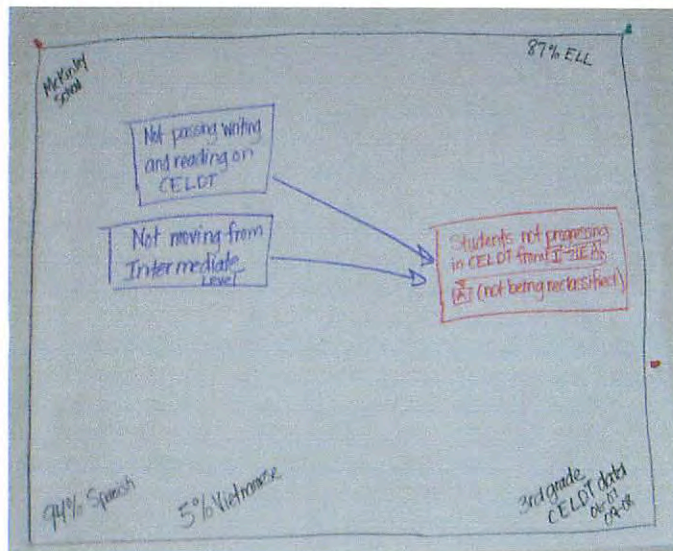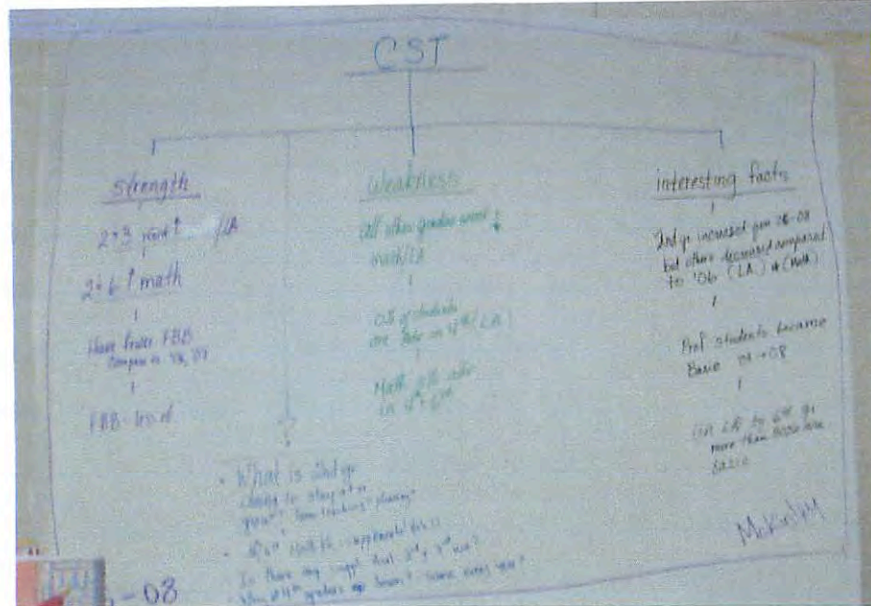
It is obvious from the qualitative data including video-clips and pictures, that the use of Thinking Maps® in staff and grade meetings has created a common language for discussion, data analysis, and lesson planning. Every member of the McKinley Community is able to use the Thinking Maps in the context of staff and grade level meetings for the purpose of planning, problem-solving, and staff presentations. It is apparent to any visitor to McKinley School that Thinking Maps® provide a common language for all staff members.

The ultimate goal for differentiating staff development was not only to enhance teacher proficieny in the use of Thinking Maps® but improve students' ability to identify the higher-level thinking processes.

In order to gather data that reflected students' fluency in Thinking Maps®, the team created rubrics for Thinking Maps for Kinder/First, Second, and Third-Sixth grades. In Kindergarten and First Grade, the students had to name the map and the thought process. It was administered individually by the teachers using pictures of each Map.

In Second Grade, teachers had their students draw all eight maps, and held individual test chats to determine if the students knew the name and thought process of each map. When scoring, the students received a higher score if they included the frame of reference in their pictures of the maps.

Also, Dr. David Hyerle created two 3rd-6th grade level assessments. One, "Marcus", was the pre-test, and another, "Maria", was the post-test. The assessments were at a third grade readability and all 3rd-6th students took the same test. The tests were scored based

on the rubrics. The grade level rubrics and testing protocols are included at the end of this report.

In the fall of 2009, the grade levels reflected on the data from the Thinking Map® student assessments. The grade-levels were asked to identify strengths and areas of improvement in the implementation of Thinking Maps®. Overall, the teachers realized that the students could draw and name each map but lacked the ability to identify the correct thought process for each map. The grade level teams realized that the students had a difficult time with the Multi-Flow Map for cause and effect. In their discussions, the teachers determined that the students struggled with recognizing the event.

In general, the grade teams identified that the data indicated a clear need for students to understand the thought process for every Thinking Maps® as well as promoting consistent and correct use of the frame of reference. Also, the teams came to the conclusion that they needed to deepen the implementation of Thinking Maps® in all content areas.

The grade-level teams were also asked to use a one-sided Multi-Flow Map to propose new strategies to be used in the classrooms to deepen the implementation of Thinking Maps® in the classrooms. The strategies included:
- Identify text structure in different content areas and choose the appropriate Thinking Map®
- Explicit questioning of students regarding the thought process behind each map
- Improve collaboration with grade-level professional learning communities
- Use Thinking Maps® chants
- Focus on the thought process rather than the Map itself
- Emphasize the use of the frame of reference including point of view and the big idea

Copies of these teacher-generated Multi-Flow Maps have been scanned and included at the end of this report.

Conclusion:

We began this project with the intention to prove that differentiation of staff development would positively impact teacher instruction and consequently improve student achievement. The teachers were grouped by their proficiency levels according to their responses on the implementation survey (Five Levels of Thinking Maps® Implementation Rubric). In the context of extreme budget cuts in California Schools, the Leadership Team had to prioritize the staff development received by each group. The Team decided to focus on the teachers on the low end of the rubric. Due to the above mentioned budget cuts, teachers at the rubric level of four or five, did not receive any staff development. The teachers who did not receive any staff development during this year had no way to rate the differentiation of staff development. As a result, the data gathered from this core group of teachers does not accurately reflect the power of differentiating instruction. Those teachers who participated in the training during 2008-09, rated themselves higher on the rubric for teacher implementation of Thinking Maps®.

However, several of them mentioned their dissatisfaction with their grouping even though the leadership team did not publicly announce the levels of each group.

According to the survey data, grade level collaboration improved within and across grade levels and facilitated focused staff meetings due to the common language that the Thinking Maps provide.

The New Teacher Survey data, clearly shows that the use of Thinking Maps® helped them to become active members of the McKinley Professional Learning Community. Also, administrative use of the Maps during staff meetings facilitated their involvement in staff and grade level decisions.

After analyzing the pre/post student assessment data, we conclude that the students improved their basic mapping skills. However, it is very evident that the teachers need to focus on a deeper understanding of the thought processes and frame of reference. Upon this realization, the staff has been working on refining and elaborating their content instruction with Thinking Maps®.

Also, when the grade levels reflected on their next steps for deepening the implementation of Thinking Maps®, it is obvious that different grade levels are at various levels of implementation according to the rubric. One of the goals for each grade level will be to analyze their next steps using the Thinking Maps® implementation rubric and determine what their level of expectation for students based on the "next steps" they wrote on their maps.

Next Steps:

- Consistent and continuous formative assessment of student understanding of Thinking Maps®
- Create more grade-level specific assessments
- Focus on Write From the Beginning and Path to Proficiency for English Language Learners
- When budget allows, plan for more staff development according to teacher needs
- Additional considerations to differentiating staff development include increased costs: consultant and substitutes.

Teacher name:_____

McKinley Veteran Teacher survey
Thinking Maps and staff development
April 2008

2006-07: Staff Development was by grade level and/or the entire staff
2007-08: Staff Development was based on self –reflection of competency using Thinking Maps®

1. Rate the impact that the whole- staff development had on your teaching this year. (2006-07)

    1   2   3   4   5

2. Rate the impact that the differentiated staff development had on your teaching this year. (2007-08)

    1   2   3   4   5

3. Based on the Thinking Maps Rubric, circle the level you were at last school year (2006-07).

    1   2   3   4   5

4. Based on the Thinking Maps Rubric, circle your current instructional level.

    1   2   3   4   5

5. Based on the Thinking Maps® Rubric, circle the level of your students at the end of the school year 2006-07.

    1   2   3   4   5

6. Based on the Thinking Maps Rubric®, circle the level of your students in April of the school year 2007-08.

    1   2   3   4   5

7. In your opinion, was your grade level planning and collaboration easier through the use of Thinking Maps®?

1   2   3   4   5

8. Has the administrator's use of Thinking Maps® improved the clarity and productivity of staff meetings?

1   2   3   4   5

9. In your opinion, rate the value of the use of Thinking Maps as an instructional tool that improves students' thinking.

1   2   3   4   5

Thinking Map® Rubric
K-1st

ADVANCED 14-16	**4** Check it out! I can demonstrate how I think about my thinking: metacognition	My Thinking Map includes: ☐ I recognize all maps ☐ I identify all thought process involved in each map.
PROFICIENT 13-15	**3** I am a competent map maker!	My thinking map includes: ☐ I recognize most maps ☐ I identify most thought process involved in each map.
APPROACHING 8-12	**2** I am approaching proficiency in mapping my thinking but I still need to keep working!	My thinking map includes: ☐ I recognize some maps ☐ I identify some thought process involved in each map.
BEGINNING 0-7	**1** I need to practice a lot!	My thinking map includes: ☐ I recognize some maps OR ☐ I identify some thought process involved in each map.

Thinking Map® Rubric
2nd Grade

|		
ADVANCED 32	**4** Check it out! I can demonstrate how I think about my thinking: metacognition	My Thinking Map includes: ☐ I can draw all maps ☐ All my maps have a frame of reference ☐ I recognize all maps ☐ I identify all thought process involved in each map.
PROFICIENT 22-31	**3** I am a competent map maker!	My thinking map includes: ☐ I can draw most maps ☐ Most of my maps include a frame of reference ☐ I recognize most maps ☐ I identify most thought process involved in each map.
APPROACHING 16-21	**2** I am approaching proficiency in mapping my thinking but I still need to keep working!	My thinking map includes: ☐ I can draw some maps ☐ Some of my maps include a frame of reference ☐ I recognize some maps ☐ I identify some thought process involved in each map.
BEGINNING 0-15	**1** I need to practice a lot!	My thinking map includes: ☐ I can draw all maps OR ☐ I recognize some maps OR ☐ I identify some thought process involved in each map.

Thinking Map® Rubric
3rd-6th

|		
ADVANCED	**4** Check it out! I can demonstrate how I think about my thinking: metacognition	My Thinking Map includes: ☐ A frame around my map ☐ My frame includes the big idea and/or point of view (why the information is important, where did I get the information) ☐ I recognize my thought process ☐ I chose the correct map to represent my thinking ☐ The information is complete and neatly written
PROFICIENT	**3** I am a competent map maker!	My thinking map includes: ☐ A frame around my map ☐ I recognize my thought process. ☐ I chose the correct map to represent my thinking ☐ The information is complete and neatly written
APPROACHING	**2** I am approaching proficiency in mapping my thinking but I still need to keep working!	My thinking map includes: ☐ I recognize my thought process ☐ I chose the correct map to represent my thinking ☐ The information is complete and neatly written
BEGINNING	**1** I need to practice a lot!	My thinking map includes: ☐ I recognize my thought process OR ☐ I chose the correct map to represent my thinking OR ☐ The information is complete and neatly written

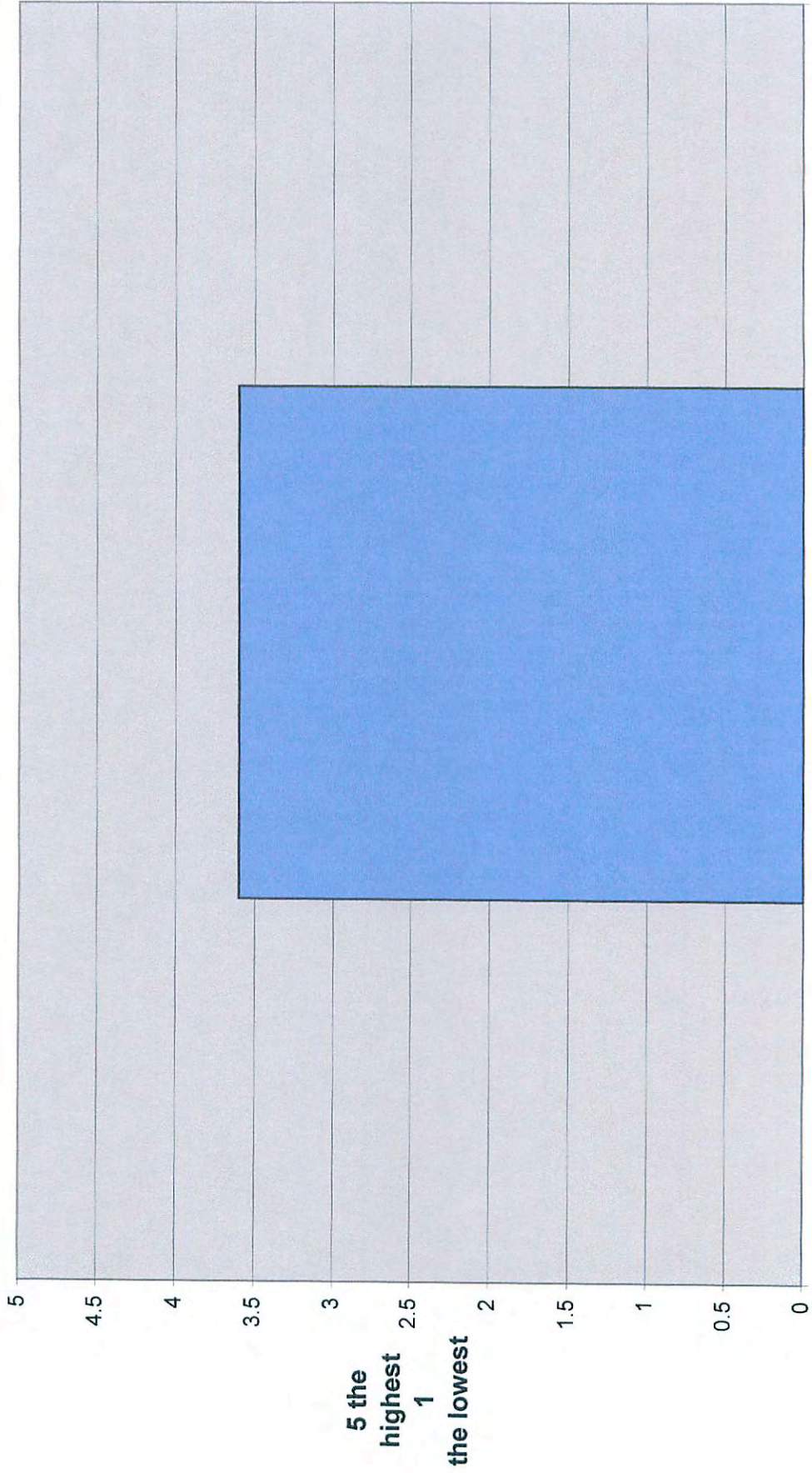# Experienced teachers rate the impact of whole-staff development on their teaching.
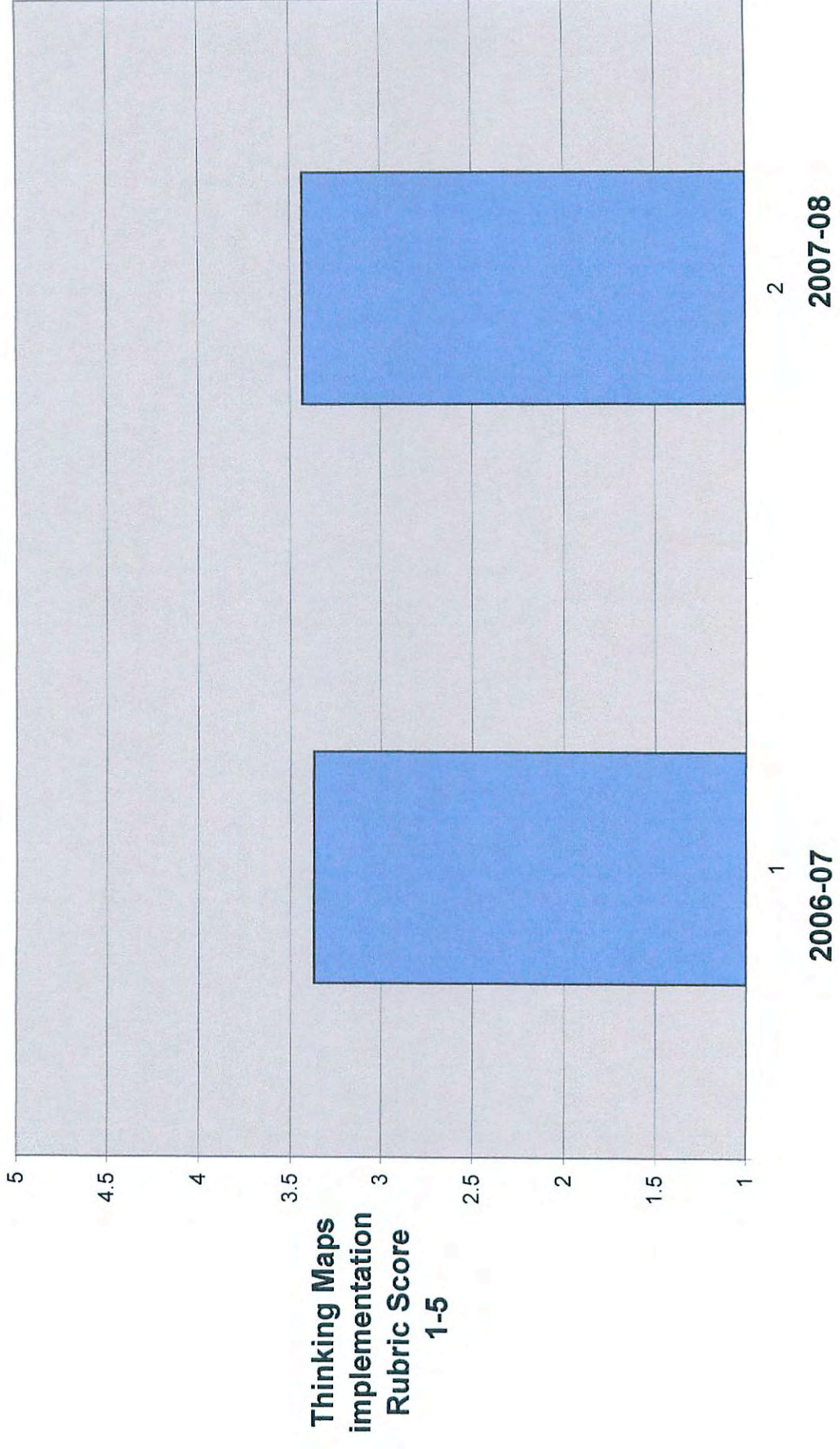
Thinking Maps implementation Rubric Score 1-5

	1 2006-07	2 2007-08

Experienced teachers rate their instruction level using
the Five Levels of Thinking Maps Implementation.
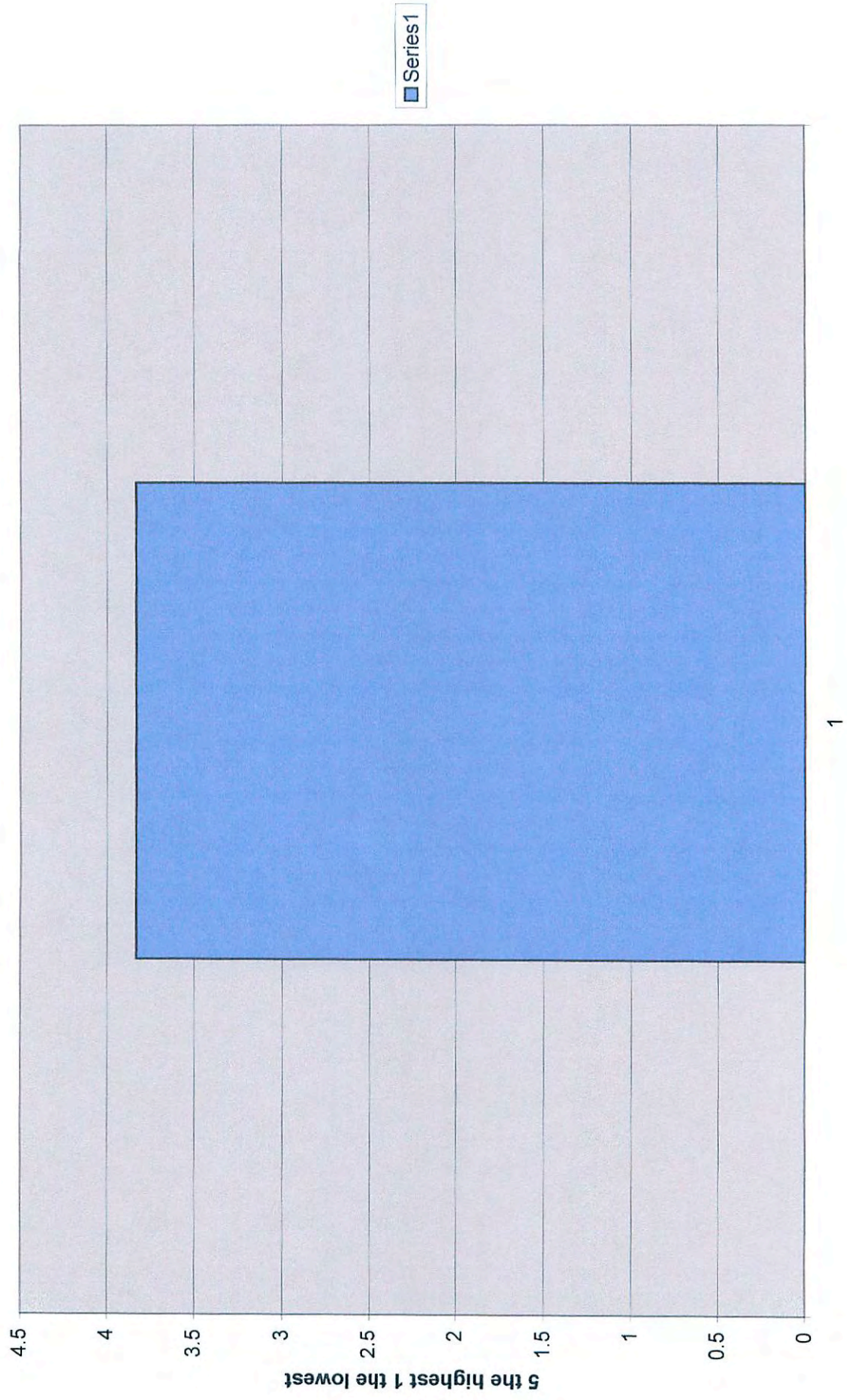

Thinking Maps
implementation
Rubric Score
1-5

2006-07   2007-08
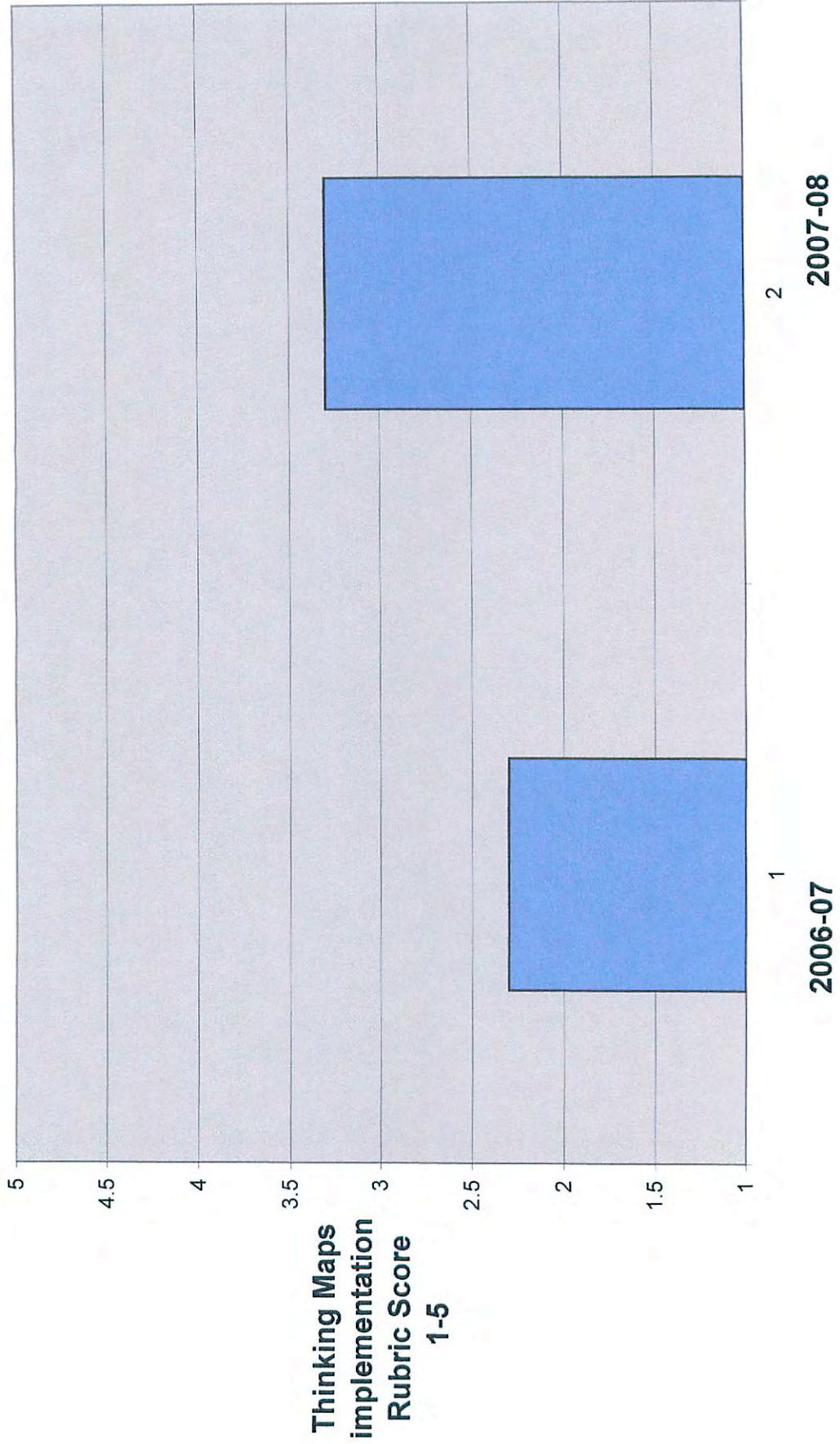
Experienced teachers state their students' level
on the Five Levels of Thinking Maps Implementation
# at the end of the school year

Thinking Maps implementation Rubric Score 1-5

Series1

2006-07

2007-08
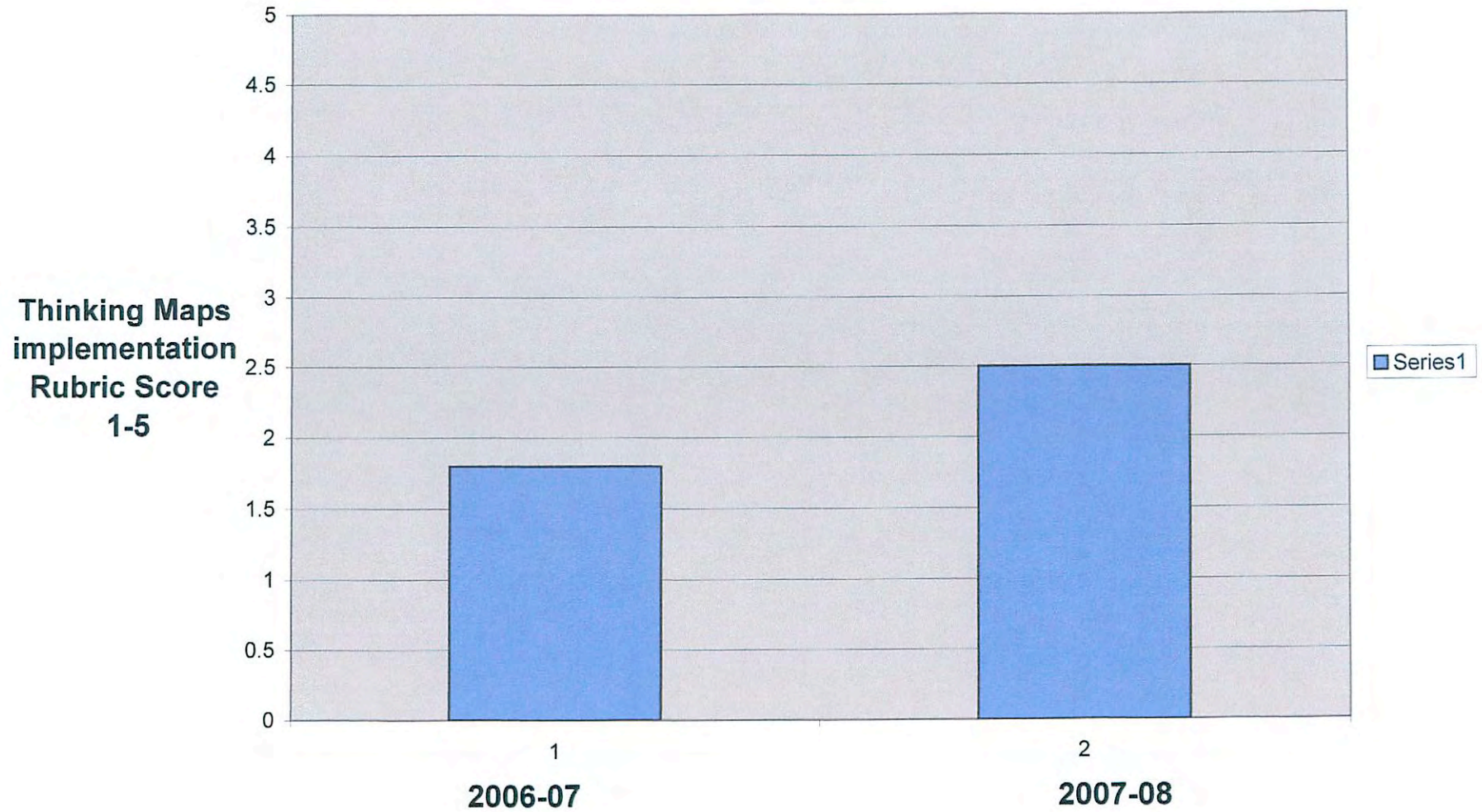
Grade level planning and collaboration using Thinking Maps.

5 the
highest
1
the lowest

5
4.5
4
3.5
3
2.5
2
1.5
1
0.5
0

1

Rate the clarity and productivity of staff meetings

5 the highest 1 the lowest

Series1

Rate the value of Thinking Maps as an instructional tool for improving students' thinking

5 the highest 1 the lowest

■ Series1

1
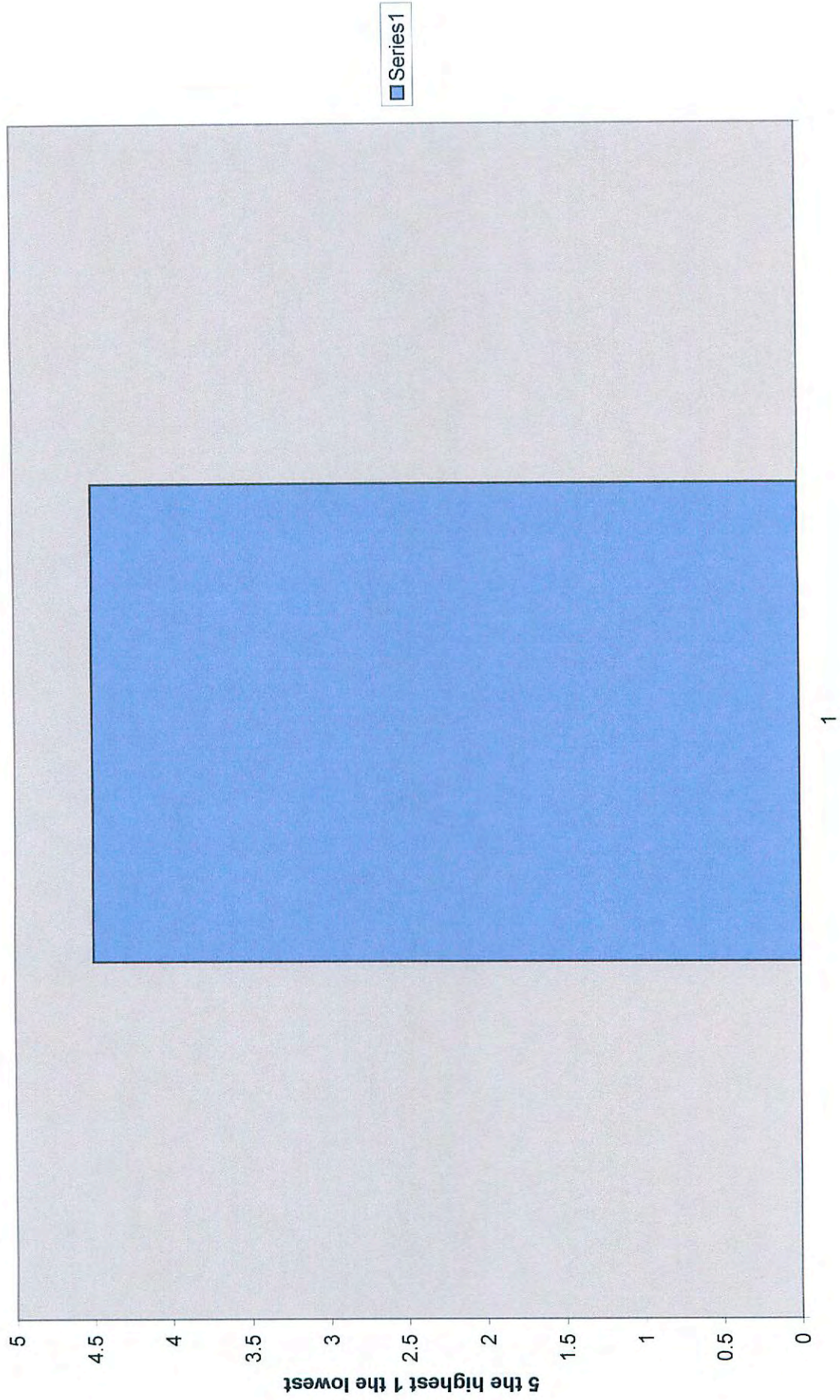
Rate the overall level of school implementation of Thinking Maps based on the rubric

Series1

5 the highest 1 the lowest

new teachers average of all questions

value 0-5

question number
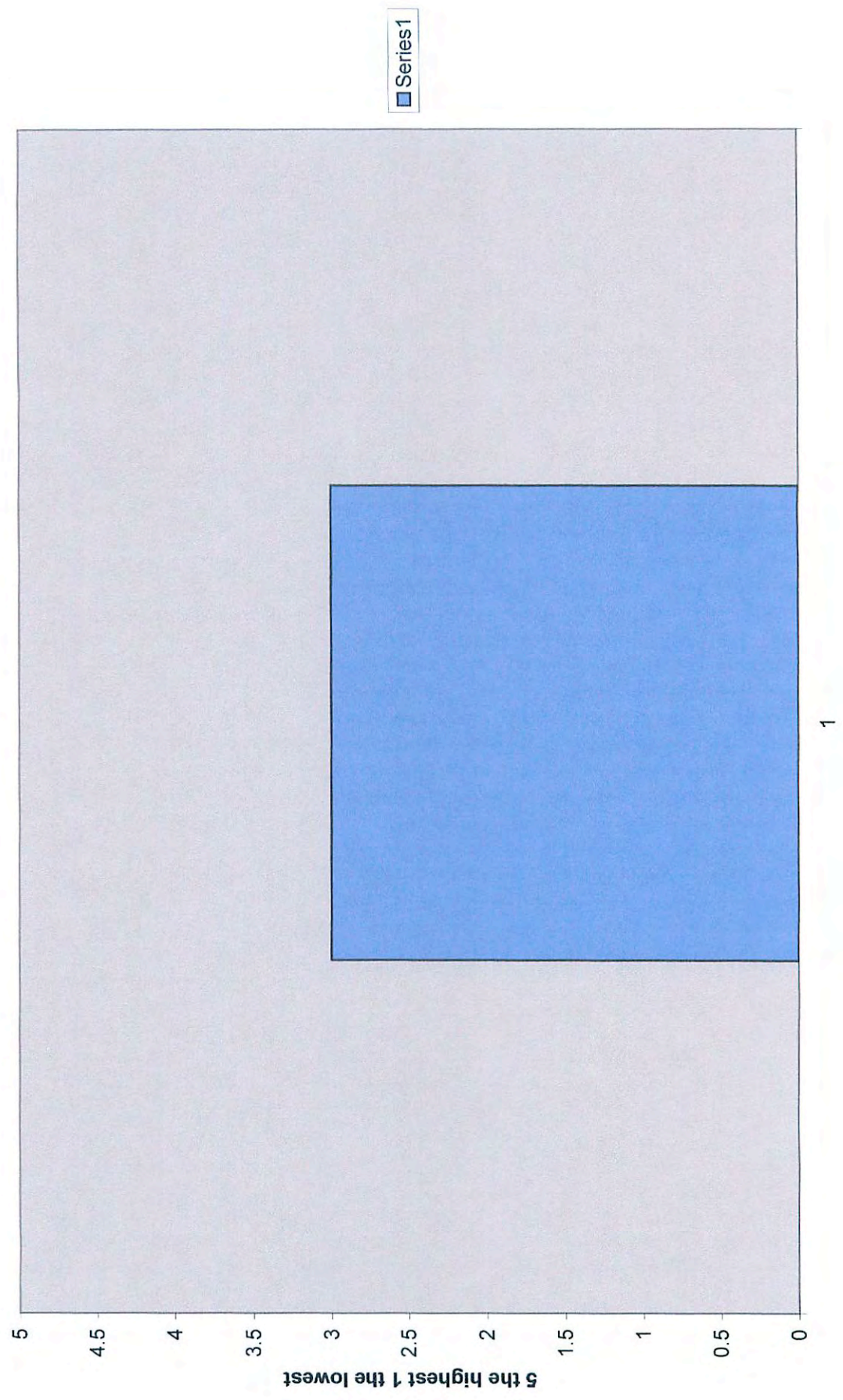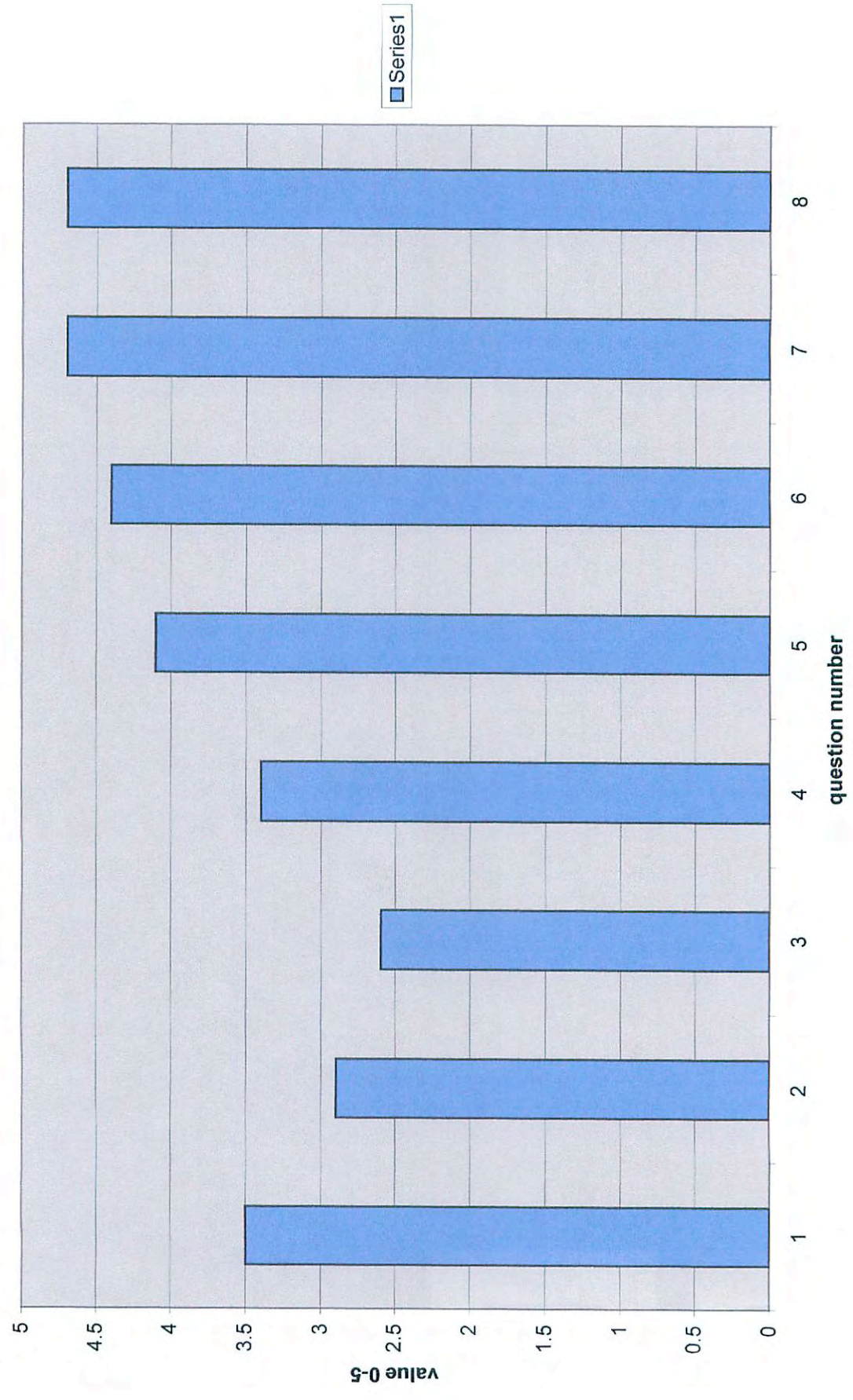
experienced teachers average of all questios

value 0-5 / question number

Series1
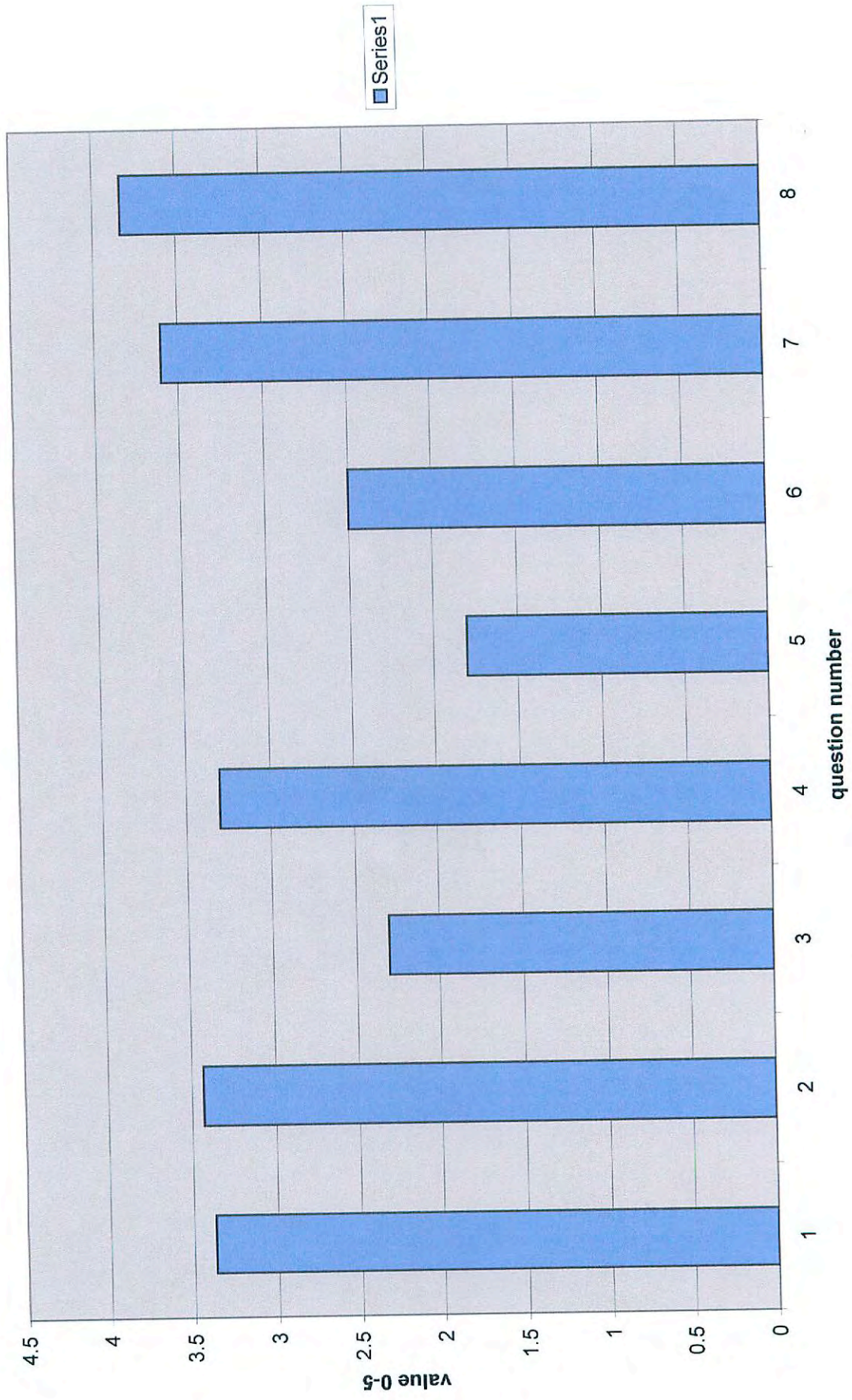
Diver in
Thinking
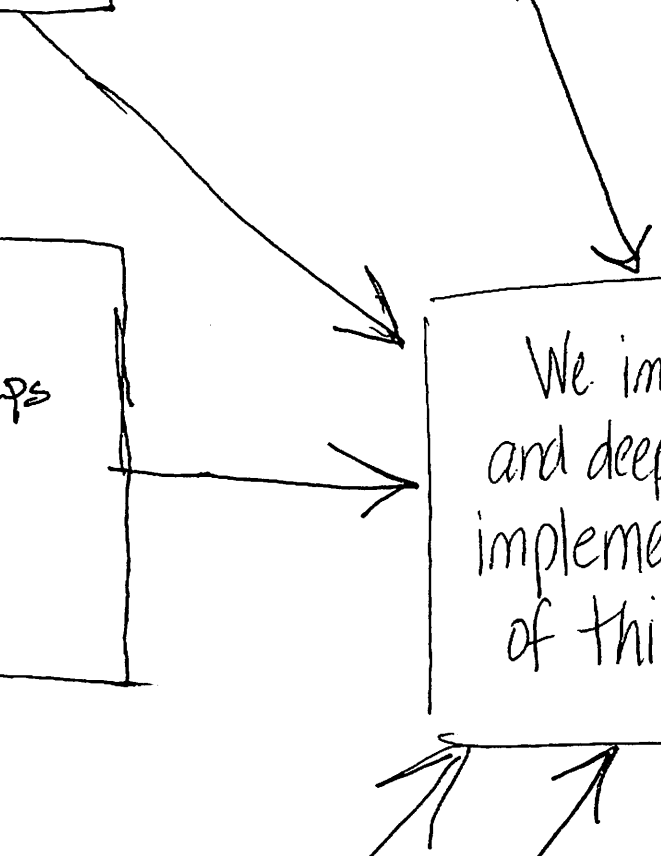Process
Use different
maps

Passport to
Success

Re teach
Thinking Maps

We improve
and deepen our
implementation
of thinking

Use maps more
often. (Model)

All sub. areas.
Use

Emphasize
~~Use~~ a frame with a point of view/reference for each map.
* or big idea

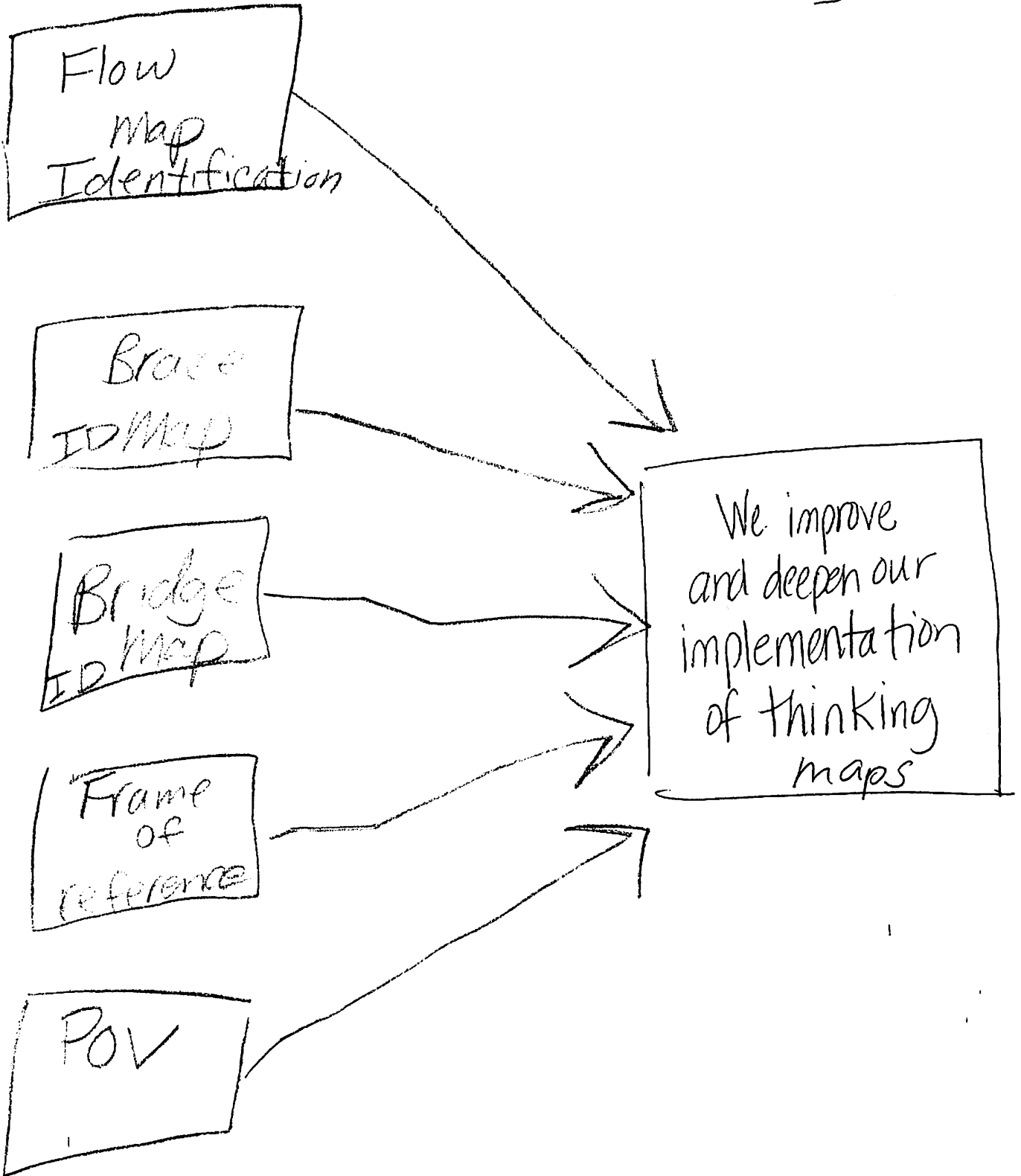Use multi-flow maps and brace maps with more consistency.

Focus on the thought process rather than the map itself.

Have students identify the thinking process and appropriate map for the material.
☆ Challenge them to do different maps.

We improve and deepen our implementation of thinking

How To Deepen Implementation Grade: 4
of Thinking Maps for
Students by Teachers

Flow
map
Identification

Brace
ID Map

Bridge
ID Map

Frame
of
reference

POV

We improve
and deepen our
implementation
of thinking
maps

From 3rd + 4th Grade Pre+ Post tests.
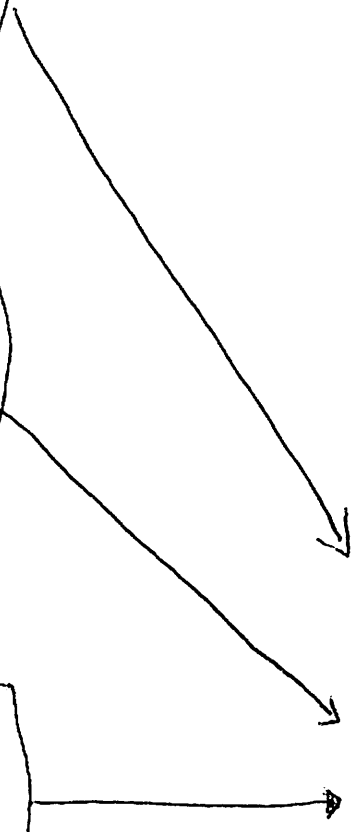
Identify structure in the content area & choose appropriate map

Use ~~they~~ teach them more often

Feel more secure & knowledgeable in using them
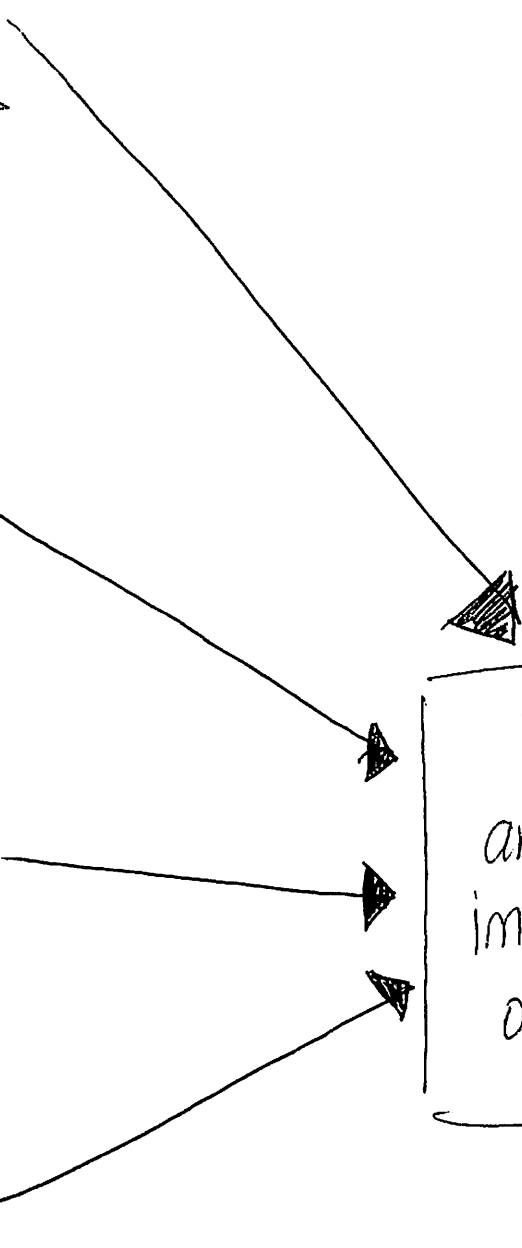
We improve and deepen our implementation of thinking

regularly &
conscientiously
~~consciencously~~
use frame on
all maps

regularly
use the
maps

"We're going to
do ___. What
map should
we use?"
why?

TM
chants

We improve
and deepen our
implementation
of thinking

Cause

We want students to meet grade level standards

Ask Explicit questions and elicit answers relating to thought process

Use more variety of thinking maps

Focus on more "difficult" maps. Bridge MultiFlow Double Bubble. Bubble.

Collaborate with PLC.

Identify thought process in stories

We improve and deepen our implementation of thinking