AN ABSTRACT OF THE DISSERTATION OF

Melinda Knapp for the degree of Doctor of Philosophy in Education presented on November 15, 2013.

Title: A Voice from the Classroom: An Autoethnographic Study of a Mathematics Teacher’s Development to Teacher Leader

Abstract approved: ___________________________________________ Karen M. Higgins

The focus of this autoethnography was an in-depth analysis of the recorded experiences of a middle school math teacher's transitional development from classroom teacher, to teacher leader. The following research questions guided this study: (1) In what ways did the researcher’s view of self as a teacher leader change during the year? (2) What dilemmas and feelings arose as a result of developing as a teacher leader? (3) What experiences and factors either supported or hindered the process of becoming a teacher leader?

Results revealed the researcher’s view of leadership changed significantly during the study. Leadership characteristics found as helpful to changing leadership identity included trustworthiness, persistence, and metacognition. In addition, facilitating a common vision, engaging in transparent leadership, and sharing responsibilities for leadership allowed the researcher to see herself as an agent of change capable of providing transformative learning experiences for others.
The researcher used reflective journal entries collected throughout one school year as well as an audiotaped interview of a focus group comprising other teacher leaders as the main sources of data in this research. To determine categories and common themes, qualitative data were coded in several iterations and cycles.

During the study, the researcher moved beyond her efforts with students to begin influencing team colleagues, school colleagues, and, eventually, colleagues beyond her school. As that leadership identity transitioned, the researcher found that adopting a lead-by-example and lead-learner stance best supported her work with colleagues.

Because of changing leadership identity, the researcher experienced feelings of uncertainty, ineffectualness, loneliness, disappointment, hopefulness, and self-doubt. As the leadership role expanded, the researcher experienced jealously and uncomfortable feelings from colleagues. The structural dilemmas impacting leadership growth were time, access to work with colleagues, and administrative support.

Throughout the year, several factors both supported and hindered the transition from teacher to that of teacher leader. Factors supporting that transition were continuous learning, creating a supportive environment, developing a community of practice, focusing on collective goals, and visiting colleagues’ classrooms. Experiences and factors hindering the process of becoming a teacher leader included self-doubt, no clearly defined role, lack of communication with administration, lack of colleague buy-in, and time limitations.

The question, “What does it take to be a teacher leader who remains steeped in the work of mathematics teaching?” is an important one for this study. The research identified factors affecting teacher leadership in four areas—factors in which one has
control over and are directly related to self, factors directly related to one’s work with colleagues, factors involving administration, and factors that are more structural in nature.

While the study was conducted within the context of mathematics, it is believed the research has applications related to teacher leadership in any content area as well as for administrators, professional development leaders, and for teacher leaders.
A Voice from the Classroom: An Autoethnographic Study of a Mathematics Teacher’s Development to Teacher Leader

by
Melinda Knapp

A DISSETRATION

submitted to
Oregon State University

in partial fulfillment of the requirements for the degree of
Doctor of Philosophy

Presented November 15, 2013
Commencement June 2014

APPROVED:

______________________________
Major Professor, representing Education

______________________________
Dean of the College of Education

______________________________
Dean of the Graduate School

I understand that my dissertation will become part of the permanent collection of Oregon State University libraries. My signature below authorizes release of my dissertation to any reader upon request.

______________________________
Melinda Knapp, Author
ACKNOWLEDGEMENTS

It would not have been possible to write this doctoral thesis without the help and support of the people around me. My deepest gratitude is owed to numerous people who provided both professional and personal support throughout this endeavor. Especially, Dr. Karen Higgins who helped me “see” the path when I got sidetracked or took wrong turns along the way. Her guidance, care, and time during our many writing retreats made all the difference. I would also like to thank my doctoral committee, Drs. Sue Ann Bottoms, Thomas Dick, Barbara Edwards, and William Rhoades, for taking time out of their busy schedules to support me in this process.

I would also like to thank my mathematics team for their willingness to continually strive to learn more and teach better. I do not know if I would have learned as much about being a teacher leader if I had not been surrounded by such amazing teaching colleagues—they continue to inspire me. In addition, I would like to thank my leadership coaches who always offered encouragement while pressing me to reach beyond what I thought I could do. Your modeling was the vision I needed to truly understand the work of teacher leadership. I am grateful to the Master Teacher Fellows who agreed to be part of my research study. Your struggles, experiences, and insights provided an important piece to the puzzle about how teacher leaders develop.

Lastly, I would like to thank my mom, Sharon Carvalho for all her love, support, and editing throughout this long journey.
# TABLE OF CONTENTS

<table>
<thead>
<tr>
<th>Chapter 1: Introduction</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Purpose and Background</td>
<td>1</td>
</tr>
<tr>
<td>New Career, New Outlook, New Experiences</td>
<td>3</td>
</tr>
<tr>
<td>During Mathematics Leadership Institute</td>
<td>5</td>
</tr>
<tr>
<td>After Mathematics Leadership Institute</td>
<td>7</td>
</tr>
<tr>
<td>Master Teacher Fellowship</td>
<td>8</td>
</tr>
<tr>
<td>Significance of Study</td>
<td>9</td>
</tr>
<tr>
<td>Research Questions</td>
<td>11</td>
</tr>
<tr>
<td>Definition of Key Terms</td>
<td>11</td>
</tr>
<tr>
<td>Summary</td>
<td>16</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Chapter 2: Literature Review</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Introduction</td>
<td>18</td>
</tr>
<tr>
<td>Leadership</td>
<td>19</td>
</tr>
<tr>
<td>Transformational Leadership</td>
<td>20</td>
</tr>
<tr>
<td>Constructivist Leadership</td>
<td>21</td>
</tr>
<tr>
<td>Teacher Leadership</td>
<td>23</td>
</tr>
<tr>
<td>Formal and Informal Leadership</td>
<td>29</td>
</tr>
<tr>
<td>Teacher Learning</td>
<td>32</td>
</tr>
<tr>
<td>Teacher Learning Within Communities of Practice</td>
<td>34</td>
</tr>
<tr>
<td>Teacher Learning Within Professional Development</td>
<td>36</td>
</tr>
<tr>
<td>Challenges of Teacher Leadership</td>
<td>39</td>
</tr>
<tr>
<td>Gaps in Leadership Literature</td>
<td>41</td>
</tr>
<tr>
<td>Summary</td>
<td>42</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Chapter 3: Methodology</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Introduction</td>
<td>44</td>
</tr>
<tr>
<td>Research Paradigm</td>
<td>45</td>
</tr>
<tr>
<td>Qualitative Research</td>
<td>45</td>
</tr>
<tr>
<td>Self Study</td>
<td>46</td>
</tr>
<tr>
<td>Autoethnography</td>
<td>47</td>
</tr>
<tr>
<td>Researcher Perspectives</td>
<td>50</td>
</tr>
<tr>
<td>Constructivism</td>
<td>51</td>
</tr>
<tr>
<td>Positionality</td>
<td>52</td>
</tr>
<tr>
<td>Design of Study</td>
<td>53</td>
</tr>
<tr>
<td>Context and Setting of Researcher</td>
<td>53</td>
</tr>
<tr>
<td>District</td>
<td>53</td>
</tr>
<tr>
<td>School</td>
<td>54</td>
</tr>
<tr>
<td>Green Valley Studio</td>
<td>55</td>
</tr>
<tr>
<td>Master Teacher Fellows</td>
<td>56</td>
</tr>
<tr>
<td>TABLE OF CONTENTS (Continued)</td>
<td>Page</td>
</tr>
<tr>
<td>---------------------------------------------------</td>
<td>------</td>
</tr>
<tr>
<td>Data Collection</td>
<td>57</td>
</tr>
<tr>
<td>Personal Journal</td>
<td>58</td>
</tr>
<tr>
<td>Focus Group Interview</td>
<td>58</td>
</tr>
<tr>
<td>Data Analysis</td>
<td>60</td>
</tr>
<tr>
<td>Analysis of journal</td>
<td>61</td>
</tr>
<tr>
<td>Analysis of focus group</td>
<td>64</td>
</tr>
<tr>
<td>Blending of two data sources</td>
<td>64</td>
</tr>
<tr>
<td>Ethical Considerations</td>
<td>65</td>
</tr>
<tr>
<td>Trustworthiness and Credibility</td>
<td>66</td>
</tr>
<tr>
<td>Summary</td>
<td>68</td>
</tr>
<tr>
<td>Chapter 4: An Exploration of My Growth as a Leader</td>
<td>70</td>
</tr>
<tr>
<td>Introduction</td>
<td>70</td>
</tr>
<tr>
<td>Research Question #1: In What Ways Did My View of</td>
<td>71</td>
</tr>
<tr>
<td>Myself as a Teacher Change Over the Year?</td>
<td></td>
</tr>
<tr>
<td>Journal Data</td>
<td>71</td>
</tr>
<tr>
<td>Data Set 1</td>
<td>71</td>
</tr>
<tr>
<td>Leadership identity</td>
<td>71</td>
</tr>
<tr>
<td>Conflicts due to my new leadership role</td>
<td>73</td>
</tr>
<tr>
<td>Data Set 2</td>
<td>73</td>
</tr>
<tr>
<td>Leadership identity</td>
<td>73</td>
</tr>
<tr>
<td>Conflicts due to my new leadership role</td>
<td>75</td>
</tr>
<tr>
<td>Data Set 3</td>
<td>76</td>
</tr>
<tr>
<td>Leadership identity</td>
<td>76</td>
</tr>
<tr>
<td>Conflicts and coping in my new leadership role</td>
<td>77</td>
</tr>
<tr>
<td>Data Set 4</td>
<td>78</td>
</tr>
<tr>
<td>Leadership identity</td>
<td>78</td>
</tr>
<tr>
<td>Leadership actions with mathematics team</td>
<td>79</td>
</tr>
<tr>
<td>Conflicts due to my leadership role</td>
<td>79</td>
</tr>
<tr>
<td>Data Set 5</td>
<td>80</td>
</tr>
<tr>
<td>Leadership identity</td>
<td>80</td>
</tr>
<tr>
<td>Leadership actions with mathematics team</td>
<td>82</td>
</tr>
<tr>
<td>Conflicts due to my leadership role</td>
<td>83</td>
</tr>
<tr>
<td>Data Set 6</td>
<td>83</td>
</tr>
<tr>
<td>Leadership identity</td>
<td>83</td>
</tr>
<tr>
<td>Leadership actions with mathematics team</td>
<td>85</td>
</tr>
<tr>
<td>Conflicts due to my leadership role</td>
<td>86</td>
</tr>
<tr>
<td>Focus Group Data</td>
<td>86</td>
</tr>
<tr>
<td>Broadened Responsibilities</td>
<td>86</td>
</tr>
<tr>
<td>Facilitated a Shared Vision</td>
<td>87</td>
</tr>
<tr>
<td>Facilitated Collegial Change and Leadership Capacity</td>
<td>88</td>
</tr>
</tbody>
</table>
### TABLE OF CONTENTS (Continued)

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Assumed Leadership Roles in Curriculum Content (Mathematics)</td>
<td>89</td>
</tr>
<tr>
<td>Used a Teacher Leader Voice</td>
<td>90</td>
</tr>
<tr>
<td>Modeled Characteristics of Teacher Leadership</td>
<td>90</td>
</tr>
<tr>
<td>Compilation and Summary of Data from Journal and Focus Group</td>
<td>91</td>
</tr>
<tr>
<td>Leadership Identity</td>
<td>91</td>
</tr>
<tr>
<td>Advocate for students</td>
<td>92</td>
</tr>
<tr>
<td>Support for colleagues</td>
<td>92</td>
</tr>
<tr>
<td>Maintained a disposition of continuous learning</td>
<td>92</td>
</tr>
<tr>
<td>Questioned abilities as a leader</td>
<td>93</td>
</tr>
<tr>
<td>Became the “go between” person</td>
<td>94</td>
</tr>
<tr>
<td>Led by example</td>
<td>95</td>
</tr>
<tr>
<td>Facilitated a common vision</td>
<td>95</td>
</tr>
<tr>
<td>Engaged in transparent leadership</td>
<td>96</td>
</tr>
<tr>
<td>Shared responsibilities for leadership</td>
<td>97</td>
</tr>
<tr>
<td>Used a leadership voice</td>
<td>98</td>
</tr>
<tr>
<td>Brought people together</td>
<td>99</td>
</tr>
<tr>
<td>Became a change agent</td>
<td>99</td>
</tr>
<tr>
<td>Led by example</td>
<td>95</td>
</tr>
<tr>
<td>Facilitated a common vision</td>
<td>95</td>
</tr>
<tr>
<td>Engaged in transparent leadership</td>
<td>96</td>
</tr>
<tr>
<td>Shared responsibilities for leadership</td>
<td>97</td>
</tr>
<tr>
<td>Used a leadership voice</td>
<td>98</td>
</tr>
<tr>
<td>Brought people together</td>
<td>99</td>
</tr>
<tr>
<td>Became a change agent</td>
<td>99</td>
</tr>
<tr>
<td>Characteristics of Leadership</td>
<td>100</td>
</tr>
<tr>
<td>Trustworthy</td>
<td>100</td>
</tr>
<tr>
<td>Persistent</td>
<td>101</td>
</tr>
<tr>
<td>Metacognitive</td>
<td>101</td>
</tr>
<tr>
<td>Research Question #2: What Dilemmas and Feelings Arose Because of</td>
<td>102</td>
</tr>
<tr>
<td>Developing as a Teacher Leader?</td>
<td>102</td>
</tr>
<tr>
<td>Journal Data</td>
<td>102</td>
</tr>
<tr>
<td>Data Set 1</td>
<td>102</td>
</tr>
<tr>
<td>Leadership identity issues</td>
<td>102</td>
</tr>
<tr>
<td>Mathematics team issues</td>
<td>103</td>
</tr>
<tr>
<td>Studio issues</td>
<td>103</td>
</tr>
<tr>
<td>Data Set 2</td>
<td>105</td>
</tr>
<tr>
<td>Leadership identity issues</td>
<td>105</td>
</tr>
<tr>
<td>Mathematics team issues</td>
<td>105</td>
</tr>
<tr>
<td>Studio issues</td>
<td>106</td>
</tr>
<tr>
<td>Administration issues</td>
<td>106</td>
</tr>
<tr>
<td>Data Set 3</td>
<td>107</td>
</tr>
<tr>
<td>Leadership identity issues</td>
<td>107</td>
</tr>
<tr>
<td>Mathematics team issues</td>
<td>108</td>
</tr>
<tr>
<td>Data Set 4</td>
<td>109</td>
</tr>
<tr>
<td>Leadership identity issues</td>
<td>109</td>
</tr>
<tr>
<td>Mathematics team issues</td>
<td>110</td>
</tr>
<tr>
<td>Data Set 5</td>
<td>111</td>
</tr>
<tr>
<td>Leadership identity issues</td>
<td>111</td>
</tr>
<tr>
<td>Mathematics team issues</td>
<td>112</td>
</tr>
<tr>
<td>Studio issues</td>
<td>114</td>
</tr>
<tr>
<td>TABLE OF CONTENTS (Continued)</td>
<td></td>
</tr>
<tr>
<td>-------------------------------</td>
<td>---</td>
</tr>
<tr>
<td>Data Set 6</td>
<td>114</td>
</tr>
<tr>
<td>Leadership identity issues</td>
<td>114</td>
</tr>
<tr>
<td>Mathematics team issues</td>
<td>115</td>
</tr>
<tr>
<td>Leadership identity</td>
<td>115</td>
</tr>
<tr>
<td>Focus Group Data</td>
<td>116</td>
</tr>
<tr>
<td>Feelings of Being an Imposter</td>
<td>116</td>
</tr>
<tr>
<td>Uncomfortable Feelings</td>
<td>117</td>
</tr>
<tr>
<td>Structural Limitations</td>
<td>118</td>
</tr>
<tr>
<td>Leadership Identity Issues</td>
<td>119</td>
</tr>
<tr>
<td>Compilation and Summary of Data from Journal and Focus Group</td>
<td>120</td>
</tr>
<tr>
<td>Leadership Identity</td>
<td>120</td>
</tr>
<tr>
<td>Feelings of uncertainty</td>
<td>120</td>
</tr>
<tr>
<td>Feeling overworked</td>
<td>121</td>
</tr>
<tr>
<td>Feeling ineffectual</td>
<td>121</td>
</tr>
<tr>
<td>Feeling alone</td>
<td>122</td>
</tr>
<tr>
<td>School Leadership Team: Feeling ineffectual</td>
<td>122</td>
</tr>
<tr>
<td>Leadership issues beyond the school: Self doubt</td>
<td>123</td>
</tr>
<tr>
<td>The Studio Role</td>
<td>123</td>
</tr>
<tr>
<td>Anxiousness about being judged</td>
<td>123</td>
</tr>
<tr>
<td>Hopefulness</td>
<td>124</td>
</tr>
<tr>
<td>Leadership Issues as a Team Member</td>
<td>124</td>
</tr>
<tr>
<td>Negotiating two worlds</td>
<td>124</td>
</tr>
<tr>
<td>Feeling like an imposter</td>
<td>125</td>
</tr>
<tr>
<td>Disappointment</td>
<td>125</td>
</tr>
<tr>
<td>Discouraged by slow change</td>
<td>126</td>
</tr>
<tr>
<td>Loneliness</td>
<td>126</td>
</tr>
<tr>
<td>Jealousy</td>
<td>126</td>
</tr>
<tr>
<td>Feeling uncomfortable</td>
<td>126</td>
</tr>
<tr>
<td>Uncertainty</td>
<td>127</td>
</tr>
<tr>
<td>Structural Issues</td>
<td>127</td>
</tr>
<tr>
<td>Research Question #3: What Experiences and Factors Supported and Hindered the Process of Becoming a Teacher Leader?</td>
<td>128</td>
</tr>
<tr>
<td>Journal Data</td>
<td>128</td>
</tr>
<tr>
<td>Experiences and Factors that Supported Leadership</td>
<td>128</td>
</tr>
<tr>
<td>Self</td>
<td>128</td>
</tr>
<tr>
<td>Others</td>
<td>130</td>
</tr>
<tr>
<td>The system</td>
<td>132</td>
</tr>
<tr>
<td>Experiences and Factors that Hindered Leadership</td>
<td>133</td>
</tr>
<tr>
<td>Self</td>
<td>133</td>
</tr>
<tr>
<td>Others</td>
<td>135</td>
</tr>
<tr>
<td>The system</td>
<td>136</td>
</tr>
<tr>
<td>Focus Group</td>
<td>137</td>
</tr>
<tr>
<td>Experiences and Factors that Supported Leadership</td>
<td>137</td>
</tr>
</tbody>
</table>
TABLE OF CONTENTS (Continued)

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Self</td>
<td>137</td>
</tr>
<tr>
<td>Others</td>
<td>139</td>
</tr>
<tr>
<td>The system</td>
<td>140</td>
</tr>
<tr>
<td>Experiences and Factors that Hindered Leadership</td>
<td>143</td>
</tr>
<tr>
<td>Self</td>
<td>143</td>
</tr>
<tr>
<td>Others</td>
<td>144</td>
</tr>
<tr>
<td>Compilation and Summary of Data from Journal and Focus Group</td>
<td>145</td>
</tr>
<tr>
<td>Supported Leadership</td>
<td>145</td>
</tr>
<tr>
<td>Continuous learning</td>
<td>145</td>
</tr>
<tr>
<td>Creating a supportive environment</td>
<td>146</td>
</tr>
<tr>
<td>Developing a community of practice</td>
<td>146</td>
</tr>
<tr>
<td>Focusing on collective goals</td>
<td>147</td>
</tr>
<tr>
<td>Opportunities for visiting classrooms</td>
<td>148</td>
</tr>
<tr>
<td>Hindered Leadership</td>
<td>148</td>
</tr>
<tr>
<td>Self doubt</td>
<td>148</td>
</tr>
<tr>
<td>No clearly defined role</td>
<td>149</td>
</tr>
<tr>
<td>Lack of communication with administration</td>
<td>149</td>
</tr>
<tr>
<td>Lack of colleague buy-in</td>
<td>150</td>
</tr>
<tr>
<td>Time limitations</td>
<td>150</td>
</tr>
<tr>
<td>Summary</td>
<td>150</td>
</tr>
</tbody>
</table>

Chapter 5: Discussion and Conclusion........................................ 154

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Introduction</td>
<td>154</td>
</tr>
<tr>
<td>Summary of Research Questions and Methodology</td>
<td>155</td>
</tr>
<tr>
<td>Discussion of Key Findings</td>
<td>156</td>
</tr>
<tr>
<td>Conclusion</td>
<td>167</td>
</tr>
<tr>
<td>Recommended Applications</td>
<td>168</td>
</tr>
<tr>
<td>Professional Development Leaders</td>
<td>168</td>
</tr>
<tr>
<td>Administrators</td>
<td>169</td>
</tr>
<tr>
<td>Teaching Colleagues</td>
<td>170</td>
</tr>
<tr>
<td>Teacher Leaders</td>
<td>170</td>
</tr>
<tr>
<td>Limitations of the Study</td>
<td>171</td>
</tr>
<tr>
<td>Recommendations for Further Research</td>
<td>172</td>
</tr>
<tr>
<td>Concluding Thoughts</td>
<td>173</td>
</tr>
</tbody>
</table>

References                                                             176
Appendices                                                             191
Appendix A - Longitudinal Matrix Example                              192
Appendix B - Informed Consent Form.                                   194
DEDICATION

To Steve, for his quiet strength, support, and encouragement throughout the years.

Change always involves a dark night when everything falls apart. Yet if this period of dissolution is used to create new meaning, then chaos ends and new order emerges.

~Margaret J. Wheatley
Chapter 1: Introduction

“Listen, little Elia: draw your chair up close to the edge of the precipice and I’ll tell you a story” (Fitzgerald, 1945, p. 12).

Purpose and Background

I never intended to become a teacher. On the contrary, I resisted that thought throughout my formative years. I had many teachers in my extended family, and I remember being told that I would make a good teacher. I am not sure why I was opposed to the idea, other than it seemed ordinary to me. Little did I know that being a “good teacher” is far from ordinary, and my eventual decision to become a mathematics teacher has fulfilled my life in innumerable ways.

Similarly, once a mathematics teacher, I never intended to become a teacher leader. Such a shift in thinking was as immense for me as the shift in identity from teacher to teacher leader. Leadership never crossed my mind when I was a beginning teacher, but through my experiences of introspection, examination, change, and professional growth, I eventually found myself in the position of teacher leader.

The story I am writing through this research articulates my experiences in education that helped me find my leadership voice as well as reshape my understanding of what it means to be a teacher leader. The purpose of this autoethnography is to better understand teacher leadership through the lens of a classroom teacher. Ultimately, I would like to shed light on the question, “What does it take to be a teacher leader who remains steeped in the work of mathematics teaching?” Gehrke (2007) revealed that the best way to learn about teacher leadership is by speaking with teacher leaders. Because a teacher leader conducted this research, the story has the potential to influence and inform
any leaders and classroom teachers involved with the work of leadership and change in schools.

Sturtevant and Linek (2007) suggested learning about the perception of teacher leadership by exploring the effect on teacher leadership on leaders themselves. They also suggested that researchers consider significant dilemmas teachers must solve to become successful in their new roles as leaders. Through my research, I intended to carefully examine the process of becoming a teacher leader. “Scholars have rarely investigated how people become informal leaders who ‘walk ahead,’ model learning and innovation, and develop relationships and networks to extend their own learning and influence others” (Collinson, 2012, p. 247). Rather, most studies on teacher leadership have focused on the characteristics of teacher leaders (Neumerski, 2012).

This autoethnographic study grew out of a passion for teaching mathematics and a desire to support other teachers in becoming skilled mathematics teachers and leaders in education. In this study, I examined the space between research and practice, and studied the dilemmas and conflicts the dual roles of teacher and leader can create. I explored the uncomfortable feelings and status dynamics that this position sets up with department members, school staff, and administrators. Experiences and factors that supported and hindered my growth as a leader were also investigated. It is through my story that I add to the scholarship about becoming a teacher leader. Ellis (2004) stated, “Stories are the way humans make sense of their worlds. Stories are essential to understanding and are not unique to autoethnography” (p. 32). Because autoethnography connects the author personally within the culture being researched, my research will help others understand the intricacies of developing teacher leadership in schools.
This chapter includes information about me as the author, my road to leadership in order to provide background and context for the study, the significance of the study, my research questions, definitions of key terms, and a chapter summary.

**New Career, New Outlook, New Experiences**

Fourteen years ago, after having worked as an uninspired engineer for many years, I decided to go back to school and start a new career as a teacher. In retrospect, I can confidently say that decision was one of the best decisions I have ever made. I began teaching mathematics and science to sixth graders in a California middle school. During the next four years, I adjusted to my new career and all the challenges that came with being a novice classroom teacher. I was learning, I thought my students were learning, and I was happy in my new career. I finally had the sense of purpose for which I had been looking. I also realized my previous school and work experiences gave me a unique perspective compared with other novice teachers.

Motivated to escape the traffic and crowds of the big city, my husband and I moved to a mid-sized town in the Pacific Northwest. For the last nine years, I have worked in the same school and have had innumerable experiences that helped shape me professionally. My story of “becoming” a teacher leader begins there.

As a new teacher to the school, I quickly became occupied with the daily demands of teaching—planning lessons, grading, parent conferences, staff meetings, and other school duties that seemed to focus my attention outside of my classroom walls. Nevertheless, I was simply happy teaching sixth grade, and happy to have gotten a teaching job in a highly competitive job market. I had no aspirations of leadership. In fact, my definition of leadership was reserved for describing principals and other
administrators.

After a year of becoming acclimated to my new teaching environment, I was volunteered to participate in a demanding five-year mathematics professional development grant. I use the term volunteered loosely. My principal was asked to send two mathematics teachers as participants to be included in the district-wide grant. After nobody else from my school wanted to go, my principal asked the two most junior members of the staff—a special education teacher and me. After some convincing, we both agreed to go.

The Mathematics Leadership Institute (MLI) had the goal of supporting systemic mathematics reform and increasing mathematics achievement for all of the students in the participating schools and districts. MLI was a five-year research and development project that served 180 Oregon teachers, 90 administrators, and 10 partner districts across grades K-12. MLI offered teachers a residential three-week summer institute. During the three consecutive summers, participating teachers were immersed in six mathematics content classes—Algebra, Data and Chance, Discrete Mathematics, Geometry, Measurement and Change, and Number and Operations—along with an annual collegial leadership course. Each content course was designed and taught by a team of expert faculty members from universities, community colleges, and local K-12 districts.

MLI was where I first became aware of the current research about student learning in mathematics and the idea of student discourse and learning through mathematical problem solving. Because of my learning during MLI, the ideas I had about how a mathematics classroom should look and sound dramatically changed. It became clear to me, through collaborative problem solving and working with other teachers, how
such a model of learning could work in my own middle-school classroom. For me, experiencing learning through working together, mathematical discourse, and making sense of mathematics together was a new idea. It caused me to rethink the way I was teaching mathematics to my students. Seeing how the instructors carefully facilitated this learning process for adult K-12 teachers was the modeling I needed to begin transforming my own teaching practice. In a sense, it awakened me to the idea that teachers can continually learn and improve their teaching practice to positively influence the learning of their students. Teacher learning as a way of influencing student learning has been my focus since my “awakening” about eight years ago. Paulo Freire said it best in *Pedagogy of Freedom* (1998), “There is, in fact, no teaching without learning. One requires the other” (p. 31).

This significant professional learning opportunity led me to reshape my beliefs about teaching mathematics. Before my experiences with MLI, all I had to draw upon was how I was taught mathematics when I was a student. In the absence of any other model, this is what I did. In retrospect, I had something telling me it just was not right for my students. I had many successful students, but I also had many students who were unsuccessful. In my early days of teaching, I often thought of my successful students rather than my unsuccessful students. The bottom line was that I was not serving *all* of my students. All of my work over the last nine years, taken together, has reshaped who I am as a learner, mathematics educator, and colleague, and has as well helped me become the teacher leader I am today.

**During Mathematics Leadership Institute**

MLI was where I had my first exposure to the idea of teacher leadership. It seems
that including the word “leadership” in the title was no accident. In fact, one major goal of MLI was to create a cadre of teacher leaders who would return to their schools and lead their colleagues in professional development activities to increase student achievement in every teacher’s mathematics classroom. In essence, the goal was to change a school’s culture.

I was hungry to learn and worked hard to infuse what I had learned during MLI into my own classroom. I was not convinced, however, that I could have any impact on changing my mathematics department’s teaching practices. How could I? Of the five teachers in my department, I was the most novice. I was the newest mathematics teacher at the school. I was not the department chair. We barely met as a group. In addition, when we did meet, we never talked about teaching practices, never planned as a group, and never discussed student learning in any significant way.

As I was nearing the conclusion of MLI, we were tasked with planning and arranging classroom visitations in our respective schools. That seemed an impossible task, given my position at school. I wrote the following reflection near the end of MLI:

Our middle school is currently separated into curriculum departments. In the math department, we have three full-time math teachers, and two part-time math teachers. The part-timers teach only some math because we were a few sections short. These teachers do not attend meetings and never really have become part of our department—through choice or something else, I’m not sure. After exploring status issues in our MLI leadership class, I can clearly identify a hierarchy within our small math department. Our department chair takes the lead, because I believe she is so used to that role for herself. The third teacher is very experienced, but seems to have lost motivation for teaching and has adopted an ‘I don’t care’ attitude. That leaves me, in the middle, attempting to mediate and ensure our ‘I don’t care’ person gets a chance to speak, and our ‘leader’ does not talk the entire time. I have begun to think about the idea of introducing protocols into our department meetings, but I have hesitated
because I felt unsure and uncertain about myself in the role of the facilitator.

**After Mathematics Leadership Institute**

Even after completing MLI, my demeanor at staff meetings could accurately be described as reserved, quiet, and hesitant to assist in making school-level decisions. However, I had gained awareness that classroom teachers have the right and responsibility to be leaders (Lambert, 2003). With that new awareness, I began imagining that I had the potential to be a teacher leader. The opportunity would soon come.

Less than a year after MLI ended, my middle school had the opportunity to participate in a professional development grant that was an offshoot of MLI. The Mathematics Studio Project (Studio) drew upon the findings from MLI and the need to focus on the system in which teachers and administrators work. Studio was designed to more explicitly concentrate on the school as the first order of change. Studio was a job-embedded model of professional development designed to prepare teachers, leaders, and coaches to provide support for implementation of research-based best practices through collaborative learning and instructional coaching. The model involved a number of two-day cycles that included the following: (a) classroom visitations for collecting student discourse data, (b) collaborative lesson study, (c) classroom observations, and (d) specialized training for teacher leaders and administrators that would build leadership capacity.

Because of our earlier participation in MLI, my school was asked to serve as host in one of the initial Studios. I was approached by one of the district administrators to serve as the Studio teacher for the professional development project. I hesitantly agreed.
Although I did not realize it at the time, that decision would greatly change the trajectory of my career. That step was the first of many that contributed to my development as a teacher leader.

Studio is a self-sustaining and replicable structure that embeds and expands on those practices that the MLI project found to be significant and positive predictors of student performance. The Studio school serves as a context for the sustainable transformation of a school’s mathematics learning, teaching, and leadership. The model enables creation of strong professional learning communities that encourage and foster deep professional discourse about mathematics teaching and student learning while staying grounded in classroom teaching. In a Studio classroom, teachers and administrators sit on the periphery observing a peer (the Studio teacher) conduct a lesson with actual students. A coach at the teacher’s side suggests teaching strategies “in the moment.” After the lesson, the Studio teacher talks with resident teachers, administrators, and the coach about the mathematics of the lesson and the mathematical thinking of the students. They also consider the influence of decisions made by the Studio teacher during the class.

**Master Teacher Fellowship**

After a year of participating in Studio, another opportunity came my direction. Once again, I hesitantly agreed. A new grant was embedded within what we were already doing through Studio, but the goal was to develop teacher leaders within the context of Studio. Embedded within the Studio was a Master Teacher Fellowship (MTF) that involved collaboration between a University and a non-profit professional development organization for K-12 teachers of mathematics. The Studio provided a highly productive
context for developing MTFs. The intent was that MTFs would remain active as classroom teachers or instructional coaches and facilitate the professional growth of colleagues while receiving concurrent leadership development.

In the project, MTFs served as Studio teachers. They helped plan Studio cycles and eventually would assume the role of coach. In addition, they assisted with the design and co-teaching of a week-long professional development seminar focusing on “best practices” in teaching mathematics that was offered in the school district of an MTF. The intent was to give high levels of support early in the MTF project and gradually give less support until MTFs were self-sufficient.

My research for this study traces my development as a teacher leader during my first year, of three years, as an MTF. During that same time, I began my doctoral studies and decided the process might be interesting to study. As a result, I began journaling about what I was experiencing and learning about leadership through my work in Studio and as an MTF. Although journaling was a requirement of the grant, my desire to engage in an autoethnography of my growth “forced” me to provide more detail and introspection than was actually needed for the grant. In looking back, the timing of events could best be described as serendipitous.

**Significance of Study**

Reviews of the research literature (York-Barr & Duke, 2004) revealed that it has been only in the last 20 years that the education field has acknowledged teacher leadership, and even today, there are relatively few empirical studies that examine teacher leadership. The majority of literature regarding school leadership has focused on the principal. Further inquiry is necessary to uncover the true benefits of teachers providing
leadership within and beyond their classrooms, influencing others toward improved educational practice, participating as learners and leaders in community with their peers, and taking responsibility for leadership. The insights that could be gained from such research would inform the practice of school leaders, the preparation of teachers, and will result in improved outcomes for students.

Until the beliefs of teachers about the predominance of teaching within teacher leadership are ardently respected and clearly portrayed, a key dimension of school improvement will continue to be overlooked. Classroom-based, student-focused leadership must be legitimized as central to teacher professional identity and foundational to the development of strong schools. Leadership that improves teaching and learning in schools is complex and situational and often occurs without formal leadership authority (Lieberman & Mace, 2009).

There is no consistent or clear understanding of the practices and purposes of teacher leadership—how it can be cultivated, why it emerges, or what influences it can have on a school (Lambert, 2003; Murphy, 2005). Harris (2005) recognized gaps in the literature regarding what forms of leadership practice result in sustained school improvement. Another reason why the concept of teacher leadership has been difficult to articulate is that teacher leaders develop as leaders in multiple ways.

According to York-Barr and Duke (2004) “Teacher leadership is the process by which teachers, individually or collectively, influence their colleagues, principals and other members of the school communities to improve teaching and learning practices with the aim of increased student learning and achievement” (p. 287-288). In order to influence teachers, learning must occur. For teachers, learning occurs in many different
aspects of practice, including their classrooms, their school learning communities, and during professional development activities. It can even occur in a brief hallway conversation with a colleague. To understand how leaders can affect teacher learning, we must study it within multiple contexts, taking into account both the individual teacher-learners and the social system in which they are participants (Borko, 2004).

Research Questions

In order to investigate what it takes to be a school leader who remains steeped in the work of mathematics teaching, I focused on the following three research questions:

(1) In what ways did my view of myself as a teacher leader change over the year?
(2) What dilemmas and feelings arose because of developing as a teacher leader?
(3) What experiences and factors supported and hindered the process of becoming a teacher leader?

Definition of Key Terms

In order to bring further clarity for the purpose of this research, the following definitions are offered.

Best Practices

Best Practices refers to using teaching practices in a way that supports students in both conceptual understanding and procedural fluency in mathematics. They are practices that help students focus on reasoning and sense making and in understanding the fundamental mathematical structure of problems. Such instruction is effective with a wide range of students, and over time supports the development of knowledge, skills, abilities, and inclinations that are termed mathematical proficiency (National Research Council, 2001).
A practice for mathematics includes the knowledge to interpret students’ written work, analyze their reasoning, and respond to the variety of methods they use in solving problems. Teaching requires the ability to see the mathematical possibilities in a task, sizing it up, and adapting it for a specific group of students. Familiarity with the trajectories along which fundamental mathematical ideas develop is crucial if a teacher is to promote student movement along those trajectories. In short, teachers need to muster and deploy a wide range of resources to support a student’s acquisition of mathematical proficiency.

**Conferring with Students**

Conferring with students is when a teacher conferences with one or more students whose thinking a teacher wishes to examine or influence. The need to meet can arise spontaneously during a lesson or when examining a student’s written work. It is an opportunity for a teacher to either deeply understand a particular student’s thinking or that of a small group of students who have been working collaboratively.

**Data Snaps**

A data snap refers to the process of collecting student discourse data during a classroom observation. The intent of that concept is to gather data about the students’ mathematical understanding, how the teacher supports the students, and descriptions about the learning environment. The data may be used for planning, assessing, or calibrating instruction. Professional development consultants, principals, and/or teacher leaders typically engage in data snaps.

**Five Practices for Orchestrating Productive Mathematics Discussions**

Smith and Stein (2011) identified five practices for teachers to effectively
implement mathematical tasks and guide classroom discussions. These five practices include the following: (1) *anticipating* students’ responses to the task, (2) *monitoring* student responses to the task by paying close attention to their mathematical thinking and solution strategies as they work on the task, (3) *selecting* particular students to share their work with the rest of the class to get specific mathematics into the open for examination, (4) *sequencing* student presentations by making choices about the order in which student work is shared, and (5) *connecting* student solutions as well as the key mathematical ideas in the lesson. The five practices have also become the foundation for helping teachers gain efficacy over their instruction (Smith, Hughes, Engle, & Stein, 2009) and encouraging slow and steady improvements to teaching practices (Stigler & Hiebert, 2009).

**Generative Learning**

Through a combination of professional seminars, “live” classroom studio sessions, and applications in their own classrooms, teachers learn to focus more carefully on their students’ mathematical thinking, the details of mathematically productive pedagogy, and relationships between the two. Similarly, students in the teacher’s classrooms learn to attend carefully to their own understanding and to apply and question their understanding as it relates to new and unfamiliar problems and contexts. Consequently, through such a process, learning becomes self-generating and both students and teachers are able to continually add to their understanding about teaching and learning mathematics (Franke, Carpenter, Levi, & Fennema, 2001).

**High-Cognitive Demand Tasks**

High-cognitive demand tasks give students an opportunity to engage with
mathematics that leads to deeper, more generative understandings regarding the nature of mathematical processes, concepts, and relationships. High-cognitive demand tasks have been recommended by the National Council of Teachers of Mathematics (NCTM) and the Common Core State Standards for Mathematics (CCSSM). A structure for identifying and designing high-cognitive mathematical tasks is the Mathematical Tasks Framework (Stein & Smith, 1998).

**High-Leverage Practices**

High-leverage practices are teaching practices in which the proficient enactment by a teacher is likely to lead to comparatively large advances in student learning. High-leverage practices are those that, when done well, give teachers a lot of capacity in their work. They include activities of teaching that are essential to the work and that are used frequently, ones that have significant power for teachers’ effectiveness with students. (Ball, Sleep, Boerst, & Bass, 2009).

**Lesson Study**

Japanese Lesson Study (Lewis et al., 2012; Stigler & Hiebert, 2009; Watanabe, 2002) is an iterative, job-embedded, reflective, and collaborative form of teacher learning. It exemplifies constructivist and socio-cultural perspectives of learning. The Studio model of professional development is designed loosely around the structure of lesson study in that teachers involved in Studio collaboratively plan, observe, enact, and analyze a lesson. In addition, to provide focus and direction to this work, teachers identify an overarching instructional goal that they want to explore through the development and enactment of the lesson.
Mathematical Discourse

Mathematical discourse, a central premise of the original MLI project and again for Studio, is the notion that orchestrating productive mathematical discourse increases student opportunities to learn mathematics and in turn raises achievement and participation levels in mathematics (Cobb, Wood, Yackel, & McNeal, 1992; Leahy, Lyon, Thompson, & Wiliam, 2005; Mercer, 2010; Stein, Engle, Smith, & Hughes, 2008). While simple to state, embracing such a premise requires developing a teacher’s knowledge, skills, tools, and disposition for building a community of mathematical discourse in classrooms where it becomes the norm for students to talk about their mathematical thinking and reasoning.

Mathematically Productive Teaching Routines

Across a school year, work in a Studio classroom emphasizes identification, design, rehearsal, and study of specific mathematically productive teaching routines (Ball, Thames, & Phelps, 2008; Franke & Kazemi, 2001; Franke, Carpenter, Levi, & Fennema, 2001; Lampert, 2003). Routines should be selected because they emphasize the following: (1) everyday teaching of mathematics; (2) development of a student’s mathematical reasoning, understanding, and identity; (3) important mathematics content; (4) one or more challenging aspects of mathematics teaching; and (5) mathematics learning and achievement by all students.

Mathematics Studio Project (Studio)

Studio is a form of professional development that is intensive, ongoing, and tightly connected to teaching practice. It focuses on students’ mathematics learning, provides support for teachers during the rehearsal of challenging aspects of teaching, and
focuses on the development of strong working relationships among teachers (Darling-Hammond, Chung Wei, Andree, Richardson, & Orphanos, 2009).

**Professional Learning Communities**

A professional learning community (PLC) is an extended learning opportunity designed to foster collaborative learning among colleagues within a particular work environment or field. It is often used in schools as a way of organizing teachers into working groups.

**Protocols**

Protocols are predetermined structures to guide group processes. They are utilized in classrooms as structures and tools for creating an equitable classroom environment. The use of protocols helps ensure that every student is engaging in the thinking and the discourse in the classroom. Examples of protocols include the following: Think-pair-share, private reasoning time followed by a simple go around protocol, or structured partner talk.

**Summary**

Through this autoethnography, I sought to communicate details about how I came to “know” teacher leadership over the course of one school year. In my story, I conveyed what I learned about what it took to become a teacher leader who remained steeped in the work of mathematics teaching. I did that by analyzing my personal journal along with transcripts from a focus group interview. In this chapter, I presented the purpose of the study, my professional background, the significance of the study, my research questions, and definitions of key terms.
Chapter 2 of this dissertation presents the literature review that provides a lens for examining teacher leadership. The literature highlights research related to leadership, teacher leadership, teacher learning, challenges of teacher leadership, and gaps in the literature. I also explored the literature related to professional development because much of the leadership work described in this research happened within the context of professional learning.

Chapter 3 details the research paradigm and methodology for the study. I provide information about how the supportive data sources were collected. I also discuss the analysis of the supporting data.

Chapter 4 presents a detailed description of the findings of the study. Included in the findings are my identified categories and themes from the data. For each research question I analyzed my journal data, followed by the analysis of my focus group data, and lastly a narrative summary that combines these two data sets.

I conclude my study with Chapter 5. In that chapter, I present a discussion of the findings of my research and how those findings relate to the existing literature in order to answer my overarching question—“What does it take to become a teacher leader that remains steeped in the work of mathematics teaching?” Finally, I offer a set of applications and recommendations based upon the findings as well as suggestions for further research.
Chapter 2: Literature Review

Introduction

The purpose of this literature review is to examine research related to the topic of teacher leadership. The literature presented in this chapter represents the general themes related to the research questions. Research is presented regarding leadership in general, leadership related to teachers as leaders, and research related to teacher learning within communities of practice and professional development. Next, the challenges of teacher leadership are presented. Lastly, the gaps in the current literature and the need for research in the area of teachers in dual roles as leaders are discussed. I return to the literature in Chapter 5 as more specific themes emerge later in my research.

Research studies for this review were located primarily through the ERIC (EBSCOhost) electronic database. I used the following keywords in a variety of combinations: teacher leadership, mathematics education, lesson study, teachers as leaders, professional development, teacher change, teacher learning, transformative learning, mathematics instruction, and generative learning. Similar searches were conducted using Google Scholar.

By using an autoethnography, quite naturally this research bears the signature and voice of my own personal interpretation. I present a record of the world in which I, as the researcher, have been a part and show how I made sense of that world. In my research, the desire to make sense of my situation is what is interesting and motivates me. From my position at the center, I report directly from my experience as a practitioner, a perspective essential to the job of describing the tacit knowledge, or knowing-in-action (Schön, 1987) involved in the study’s focus.
Leadership

The definitions of *leadership* are vast and broad. Rost (1993) defined leadership as “an influence relationship among leaders and followers who intend real changes that reflect their mutual purposes” (p. 102). There are several parts to that definition. The relationship between leaders and followers is based on influence and is both multidirectional and non-coercive. “The relationship involves interactions that are vertical, horizontal, diagonal, and circular” (Rost, 1993, p. 105). Later, Senge (1996) identified a leadership role he called “internal networkers” or “community builders” who “walk ahead” by learning and developing themselves (pp. 54 and 45). In other words, “they work out there on the frontier where tomorrow is taking shape” (Bennis, 2009, p. xxxiii). This role describes teacher leaders who “position themselves on the cutting edge of the pedagogical frontier” (Rosenholtz, 1989, p. 66) as enthusiastic learners and innovators who freely share their ideas and help colleagues.

The broad definition of educational leadership is evolving from an individualistic definition to a more participative definition. In the past, school leaders typically deferred to the principal. Now, however, school leadership has broadened to include teachers as well. Just as principals are being called to be more instructional leaders, teachers are being called to be “high-quality teachers” (NCLB, 2001, p. 41).

A more traditional view of leadership, as in the administrative authority of a principal, remains prevalent in many districts across the country. Some credit that to the fact that schools, as organizations, have remained virtually unchanged for the last hundred years and equate leadership with authority and position (Muijs & Harris, 2003). However, in an effort to adapt to emerging trends in school improvement and
accountability, teachers at all levels are assuming greater roles of responsibility and leadership in this process of change (Muijs & Harris, 2003).

After decades of research on how distinguished leaders in non-educational organizations learn to lead, Bennis (2009) concluded, “the process of becoming a leader is the same process that makes a person a healthy, fully integrated human being” (p. xxviii).

No leader sets out to be a leader per se, but rather to express him—or herself freely and fully. That is, leaders have no interest in proving themselves, but an abiding interest in expressing themselves. The difference is crucial, for it’s the difference between being driven, as too many people are today, and leading, as too few people do … Timeless leadership is always about character, and it is always about authenticity. (Bennis, 2009, pp. xxxiii-xxviii)

**Transformational Leadership**

Avolio (1999) stated, “Transformational leadership involves the process whereby leaders develop followers into leaders … the leader has a developmental plan in her or his head for each follower” (p. 34). Transformational leadership in relationship to teacher leaders emphasizes inspiring changes for all involved through engagement in shared decision-making, setting high-level goals, school-wide success, and moving beyond self (Lucas & Valentine, 2002). The idea of transformation is not one way—it allows for growth from all parties involved. Transformation theory states that in an open, trusting environment, teachers can learn from one another.

Transformational learning opens up the channels of intrinsic motivation and desire for self-growth achieved in both formal and informal leadership roles. Through transformational leadership practices, teachers are able to share part of themselves with
others; they renew and deepen their commitment to education (Ross & Gray, 2006) and engage in leadership.

At its foundation, the ideas around transformative learning theory might be considered simple. We make meaning of the world through our experiences. What happens once, we expect to happen again. Through that process, we develop habits of mind—a framework for understanding the world (Cranton, 2002). Transformative learning and leading takes place when an experiential process leads us to open up our previous framework, discard a habit of mind, see alternatives, and thereby act differently in the world (Cranton, 2002; Mezirow, 2000). Through critically examining practices, teachers acquire alternative ways of understanding what they do and transformative learning about teaching can take place (Cranton, 2002).

Transformational leadership, studied closely in the 1990s, has given rise to encouraging results. Transformational leaders help develop and maintain a collaborative, professional school culture, foster teacher leader development, and help teachers solve problems effectively (Avolio, Bass, & Jung, 1999; Leithwood & Poplin, 1992; Morgan, 1997). However, transformational leadership situates responsibility for the growth of others in the designated leader—it is role specific. Because of this, transformational leadership can become paternal, although well meaning, with such concepts as help, assist, and foster (Lambert, 2002a).

**Constructivist Leadership**

Lambert (2002a) states “Constructivist leadership separates leadership from leaders and situates the patterns or relationships among the participants. Reciprocity requires that the formal leader is growing and changing in concert with others” (pp. 39-
What distinguishes the theory of constructivist leadership from other leadership theories is the emphasis on professional growth of an entire group (Lambert, 2002b). Walker et al. (2002) described constructivist leadership as the reciprocal process shared by many, rather than a set of behaviors invested in one person. Walker, Zimmerman, & Cooper (2002) stated that leadership is not role specific.

Lambert (2002b) states, adults need to be able to “engage in processes of making sense or meaning of our lives and work together in educational communities if capacities for reciprocity are to be developed” (p. 44). She describes leadership as a product of a mutual purpose, shared values, and communities that connect teachers and administrators. People need to engage in common efforts and through that process they create professional knowledge. In essence, they learn and grow together.

Constructivist leadership enables human growth for many rather than what was previously reserved for the few select formal leaders. According to Lambert (2003), teachers and leaders find shared meaning through conversations. Conversations create the text of people’s lives, so participants in conversations share an intention to seek truth together—a shared meaning.

Seeking truth together encourages full participation. In turn, it provides opportunities that become acts of leadership and being fully engaged in making meaning of experiences. This action activates one’s drive toward purpose and community. The participatory process creates the meaning and understandings (the reality) to which people conduct themselves. Without participatory opportunities, commitment is not possible, only compliance and disengagement (Walker et al., 2002).
Teacher Leadership

Because of the variety of definitions emerging from the field during the last 30 years, the concept of teacher leadership is difficult to articulate. Lambert (2003) acknowledged that although the concept of leadership has been studied for hundreds of years, no one agrees on a single definition of leadership, much less teacher leadership.

Professional identity is not central to the teacher leadership literature, yet it may be a key to successful school reform (Collay, 2006). Beachum and Dentith (2004) found the teacher leaders they interviewed “articulated a love for teaching and a clear sense of their own personal and professional purposes. They regarded their work as valuable and central to their life purpose” (p. 281). The researchers also found that trustworthy collaboration is highly regarded by teachers working toward a common goal (Collay, 2006).

According to Katzenmeyer and Moller (2009), “Teacher leaders lead within and beyond the classroom; identify with and contribute to a community of teacher learners and leaders; influence others toward improved educational practice; and accept responsibility for achieving the outcomes of their leadership” (p. 6). Harris (2003) believed that teacher leaders coach, mentor, and lead professional developmental necessary to improve teaching and learning while modeling effective forms of instruction. Wasley (1991) defined teacher leadership as “the ability to encourage colleagues to change, to do things they wouldn't ordinarily consider without the influence of the leader” (p. 64). Silva, Gimbert, and Nolan (2000) described teacher leaders as having the ability to “navigate the structures of schools, nurture relationships, model professional growth, encourage change, and challenge the status quo” (p. 22).
In their extensive review of the literature, York-Barr and Duke (2004) attempted to further define teacher leadership. In that study, they reported that teacher leaders have or have had substantial teaching experience, are known to be outstanding practitioners, and are respected by their colleagues. York-Barr and Duke (2004) proposed the following definition of teacher leadership:

Teacher leadership is the process by which teachers, individually or collectively, influence their colleagues, principals, and other members of the school communities to improve teaching and learning practices with the aim of increased student learning and achievement. (pp. 287-288)

An overarching feature of teacher leadership points to a teacher leader’s power to shape the profession positively by acting as a steward for change (Lieberman & Miller, 2005). Such an idea relates to Lieberman et al. (1998), who determined that teacher leaders (a) influence their colleagues without using power, (b) establish and sustain collegial relationships through collaboration with peers, (c) maintain a strong sense of purpose, and (d) extend themselves beyond traditional classroom boundaries.

Teachers typically defined career satisfaction in terms of their ability to be of service to others and make a difference in the lives of students (McLaughlin & Yee, 1988). Similarly, the leadership considerations of teachers are grounded in the desire to improve the quality of teaching and learning for all students. Rather than subscribing to traditional definitions of leadership as “higher” or “superior” positions within the organization (Devaney, 1987), teachers view leadership as a collaborative effort or banding together with other teachers to promote professional development and growth for themselves and their students (Troen & Boles, 1992). According to Gonzales (2004)
teacher leaders attempt to “catalyze others to work as hard and care as deeply about what happens in classrooms and schools as they do” (p. 69).

In the literature, many researchers agreed about the importance of building trust and collaboration among colleagues (Donaldson, 2007; Lieberman & Miller, 2005; Patterson & Patterson, 2004). In addition, researchers mentioned the understanding of the change process and a willingness to take risks as key components to teacher leadership (Fullan, 2004; Lieberman & Miller, 2004). Other researchers have found when teacher leaders facilitate change they may need to discern what they share with confidants rather than allies (Heifetz & Linsky, 2002). In doing so, teacher leaders must manage meaning, communicate, and create trust (Bennis, 2000).

Teacher leadership has quickly become widely recognized as a critical factor in meeting recent Federal and State educational mandates, such as No Child Left Behind. Barth (2001) noted that there are at least 10 areas, all of them having an affect on teacher-student relationships, in which teacher leadership is essential to the health of a school. Examples of those relationships included the following: choosing textbooks and instructional materials, shaping curriculum, setting standards for student behavior, deciding whether students are tracked into special classes, designing staff development and in-service programs, setting promotion and retention policies, deciding on school budgets, evaluating teacher performance, selecting new teachers, and selecting new administrators.

Differing perspectives in research literature concerning the teacher leader role can explain the unique nature of the leadership activities in which teachers serve. Katzenmeyer and Moller (2001) explained that teacher leaders can serve in three main
ways: (1) through the leadership of students or other teachers as a facilitator, coach, mentor, trainer, curriculum specialist, or leading study groups; (2) through the leadership of operational tasks such as keeping the school organized and moving toward its goals by serving on committees and performing action research; or (3) through the leadership of decision-making while serving on school improvement teams, creating business partnerships, and involvement in Parent Teacher Associations. Gehrke (1991) described teacher leaders as individuals who continuously work on improving their own teaching, provide curriculum development knowledge, participate in school decision-making, deliver in-service training for colleagues, and participate in peer evaluation.

Harris (2002) theorized that the teacher leadership role has four distinguishable dimensions. Those dimensions are brokering, participative leadership, mediating, and forging relationships. Teachers are able, through brokering, to translate the ideas of school improvement into practice. When operating in the participative, or shared leadership role, teachers feel part of the change or development of school improvement and collaboratively help fellow teachers by taking a lead in achieving a collective goal. Teacher leaders are important sources of information and expertise and can be used as a resource through acting as a mediator. By forging relationships with other educators, teacher leaders can model leadership techniques for colleagues.

In defining teachers as leaders, Katzenmeyer and Moller (2001) suggested “teachers who are leaders within and beyond the classroom, identify with and contribute to a community of teacher learners and leaders, and influence others toward improved educational practice” (p. 5). Lieberman (1992) stated, “Teacher leadership roles are proliferating in greater variety than many thought possible” (p. 20). Teacher leadership
roles may be informal or formal and are as varied in nature as differing school contexts (Katzenmeyer & Moller, 2001).

Another outlook on leadership is found in Ambrose’s (1995) book entitled *Leadership: The Journey Inward*, which captures her position on leadership development.

Leadership begins and ends with the internal development struggles of the individual leader. It is by integrating and learning from these crises that we gain the stamina and tools of effective leadership. In short, our blueprint for leadership is embedded in our own life story. (p. 14)

Ambrose (1995) also stated that all leaders have at their core “an ordinary person with ordinary fears, concerns, and life challenges” (p. 25). Ambrose further stated that, in order to transform organizations, leaders must begin first by transforming themselves.

The literature also suggested that perceptions of teacher leadership could shift. Lambert (2003) cited several authors who capture those shifting perceptions of teacher leadership. Some defined leadership as constructivist, problem solving, engaging and about the leading of learning, rather than authority-based (Senge et al., 2000). Conzemius and O’Neill (2001) merged constructivist leadership and the concept of “leadership capacity” to describe leadership as the capacity of the school for broad-based, skillful participation in creation and fulfillment of a vision focused on student learning.

Ackerman, Donaldson, and Van Der Bogert (1996) viewed leadership as a process, a quest that entails learning to think and act as a leader in response to the ever-changing challenges of learning, and dealing with growing children and the adults who care about them. Capra (1997) suggested that “in self-organizing systems, leadership is distributed, and responsibility becomes a capacity of the whole. Leadership, then, consists of
continually facilitating the emergence of new structures, and incorporating the best of them into the organization’s design” (pp. 8–9).

Lambert (2002) stated, “The days of the lone instructional leader are over. We no longer believe that one administrator can serve as the instructional leader for the entire school without substantial participation of other educators” (p. 37). Crossing or breaking such boundaries in order to learn and create new knowledge often creates an emotional engagement with the learning process (Robertson & Webber, 2002) through an openness of practice. New leadership models often follow a willingness to approach this vulnerability—a lowering of the facade of “everything is fine around here” and “I know everything and do all these wonderful things in my school” (Robertson, 1998) as a space where new learning can occur.

Trust is an essential element in the learning process. Trust takes time to develop and is an elusive concept for defining, but one knows when it is present. Unless a feeling of trust exists in the learning relationship, teachers will not reveal vulnerabilities or areas in need of greatest growth. They may even attempt to reinforce the facade behind which they practice. Getting beyond the facade is important for leaders to be open to new ideas and new learning in a school setting (Robertson, 2009).

There is evidence of a steady movement away from thinking about leadership traits toward leadership actions. Lambert (2003) believed that recognizing and understanding leadership actions are essential for moving beyond identifying leadership traits. When thinking about teacher leadership, Lambert (2003) also believed that leaders need to keep in mind the differences between actions and roles. Actions may precede or accompany roles. They may include asking thoughtful questions in a staff meeting,
bringing a fresh perspective to a conversation, sharing ideas and practices with others, or initiating new ways of getting tasks accomplished. Though teachers may not always be in the position to take on new roles, they can always engage in acts of leadership (Lieberman & Mace, 2010).

**Formal and Informal Leadership**

Teacher leadership roles may be informal or formal and are as varied in nature as differing school contexts (Katzenmeyer & Moller, 2009). Teachers assume many leadership roles with students in the classroom, such as facilitator, coach, provider of feedback, and counselor. Beyond the classroom, teacher leaders serve as team members, mentors, coaches, professional development trainers, curriculum specialists, or simply willing listeners (Katzenmeyer & Moller, 2009). The roles can be thought of in terms of formal leadership and informal leadership.

Formal teacher leaders are teachers who, for compensation (usually in the form of time or money), assume responsibilities beyond those outlined in their contractual agreement. Those teachers are given special titles, such as mentor teacher, curriculum specialist, instructional coach, department chair, or lead teacher.

According to Danielson (2007), formal teacher leaders are often chosen through a selection process after applying for a position and receiving training for the added responsibilities. Harris (2003) also wrote about formal leadership and described the roles encompassing responsibilities such as subject coordinator or head of a department as frequently moving away from the role of the classroom teacher to achieve this.

Smylie (1994) wrote a review of literature on teacher career paths leading to leadership roles. He argued through his analysis that although teacher leaders benefit
when taking on formal positions with greater visibility and responsibility, teacher leaders fail to significantly impact the practice of colleagues (Rosenholdz & Smylie, 1984; Smylie & Denny, 1990). Smylie (1994) also stated that most teacher leadership opportunities to that point in time were positional and authoritative as well as unsuccessful in altering the nature of a teacher’s work within the classroom. He suggested that using teacher leaders in ways that change the nature of a teacher’s work would have a greater impact on student achievement than by creating new leadership positions alone.

In the past, a commonly held belief was that if you were a teacher the only way to become a leader was to leave the classroom and possibly the school (Barth, 2001). Today, however, research studying the benefits and challenges of informal leadership is emerging. Teacher leadership is situational, so often teacher leaders assume undefined roles as a result of their willingness to extend themselves beyond traditional classroom boundaries (Danielson, 2007).

Danielson (2007) also described informal teacher leaders as emerging spontaneously from the teaching ranks. She acknowledged that teacher leaders are not always officially selected, but instead take the initiative to address areas of concern that impact change. They have no positional authority. Rather, the influence of informal teacher leaders stems from the respect they command from their colleagues because of their subject or pedagogical expertise, but also outstanding teaching practices. It has been noted that teachers cannot sustain success as leaders without first modeling pedagogical excellence (Crowther, Ferguson, & Hahn, 2009; Odell, 1997).

Little (1995) cited legitimacy for leadership as a prerequisite for teacher leaders in the influence of peers. Such legitimacy can only be given by other teachers and not by a
positional title (Katzenmeyer & Moller, 2009). As a result, other teachers permit informal
teacher leadership to occur when the teacher is perceived as a capable teacher of students.
Teacher leaders can use this legitimacy to help influence colleagues. With legitimacy,
teacher leaders build alliances and networks in order to accomplish their work (Crowther et al., 2009).

Leadership can have an influencing effect on others. Formal positions are not
necessary to influence others. In fact, teachers collaborating with colleagues can be just
as effective at influencing others as individuals with formal titles who carry the power of
position (Lambert, 2003). Although complex, teacher leaders can learn how to transfer
skills that teachers use each day in their classrooms to colleagues, thereby affirming the
idea that every teacher has “the right, responsibility, and capability to be a leader”
(Lambert, 2003, p. 33).

Lambert (2003) also stated that school leaders should stop looking at leadership as
something that lies within the individual person and start considering how different forms
of leadership might look. Teachers can lead informally by sharing their expertise and
classroom practice, by asking questions of colleagues, mentoring new teachers, and
modeling how to participate in a community of practice (Ackerman & Mackenzie, 2007).
In Whitaker’s (1995) words, informal teacher leaders are essentially the “foot soldiers”
that move their school districts forward.

Advocating solely for teacher leadership that occurs informally within a
professional learning community is tempting. If every school had healthy working
conditions, a faculty of outstanding teachers, and resources to support initiatives, then
that would be the most logical approach to teacher leadership. In the real world, however,
schools are functioning along a continuum from ideal school culture to dysfunctional working conditions where few teachers are competent, credible, or approachable. School leaders charged with the responsibility of ensuring quality education for all students must decide on the type of leadership needed within a school. The decision is situational and depends on the working conditions, the quality of teaching, and the needs of the students (Katzenmeyer & Moller, 2009).

Teacher Learning

The professional development of teachers is a key ingredient in improving our nation’s schools (Darling-Hammond & Sykes, 1999). The type of learning that will be required of teachers has been described as transformative—involving sweeping changes in deeply held beliefs, knowledge, and habits of practice, rather than additive, and involving the addition of new skills to an existing repertoire (Thompson & Zeuli, 1999). According to Ball and Cohen,

Teachers can certainly learn subject matter, as well as knowledge of children, and pedagogy, in a variety of courses and workshops. However, the use of such knowledge to teach depends on knowledge that cannot be learned entirely either in advance or outside of practice. (1999, p.12)

By situating teacher learning in practice, teachers have the opportunity to develop knowledge central to teaching by engaging in activities that are at the heart of a teacher’s daily work. In that regard, teachers develop knowledge through analysis of real situations. In this view, the everyday work of teaching would become the object of ongoing investigation and thoughtful inquiry (Ball & Cohen, 1999). A central tenet of a situative perspective is that the contexts and activities in which people learn become a fundamental part of what they learn (Greeno, Collins, & Resnick, 1996). The principle
suggests that a teacher’s own classroom is a powerful context for learning (Putnam & Borko, 2000). Situative theorists describe learning as a change in participation in socially organized activities as well as an individual’s use of knowledge as a part of their participation in social practices (Lave & Wenger, 1991). Several researchers have not only argued that learning has both individual and socio-cultural features, but have also characterized the learning process as one of enculturation and construction (Cobb, 1995).

Teacher collaboration is necessary to not only make innovations possible, but also to sustain teachers’ learning. Rosenholtz (1989) led an important study that focused on the context and common characteristics found in high-performing schools. Using both qualitative and quantitative methods, she studied teachers in more than 70 elementary schools in Tennessee. In her discussion of the findings, she used the terms learning-impoverished schools and learning-enriched schools to distinguish among organizations that promote or hinder ongoing teacher learning. Like Fullan and Hargreaves (1996), Rosenholtz (1989) discussed the limited opportunities for teacher learning in isolated settings, where the teachers must “construct for themselves an individual conception of teaching excellence” (p. 73). In contrast, teachers in learning-enriched environments identified colleagues as the primary sources of professional learning.

Other studies have found that teacher collaboration is a central factor in continued professional learning. Franke and Kazemi (2001) conducted a longitudinal study of elementary mathematics teachers trained in Cognitively Guided Instruction (CGI). The teachers participated in professional development activities ranging several years. The researchers examined the extent to which teachers maintained and developed the practices of CGI four years after the conclusion of the training. While finding generally
high levels of continued implementation among all of the teachers, Franke and Kazemi identified a number of teachers who continued to develop new skills, termed “generative growth” (p. 52). The teachers actively worked as communities of learners, meeting together regularly to discuss their students’ thinking and examples of their work. Loucks-Horsley, Love, and Stiles (1998) included similar conclusions in their study of teachers. The collaborative work of teachers was not simply a contextual variable enhancing an individual’s growth, but it was the key to that growth—the “professional culture” (p. 196) that made teacher learning and leadership possible.

**Teacher Learning Within Communities of Practice**

In constructivism, learning is a social endeavor, so community is essential for substantive and sustainable learning to occur (Lambert, 2002b). Barth (2001) suggested that there is a “powerful relationship between learning and leading” (p. 445). He stated that although the concept of professional learning communities “emerged as a logical way to engage the adults in the school in their own learning, the realization of the type of school culture is relatively rare” (p. 8). Similar to Barth’s professional learning communities are Wegner’s (1998) communities of practice. Both are structures that can embed teacher learning and leading within the school community. Communities of practice are groups of people who share a concern or a passion for something they do and learn how to do it better as they interact regularly. Members of a community of practice are practitioners. They develop a shared repertoire of resources: experiences, stories, tools, ways of addressing recurring problems—in short, a shared practice.

Teacher leaders essentially need to be co-learners because important features of the production of sustainable outcomes in schools are the activities in which principals,
teachers, and other key stakeholders “participate together as mutual learners and leaders” (Lambert, 2003, p. 38) to develop their leadership capacity. “The reciprocal learning processes that enable participants in a community to construct meaning toward a shared purpose” (Lambert, 1998, p. 18).

As an organizational arrangement, the professional learning community is seen as a powerful staff development approach and a potent strategy for school change and improvement (DuFour, Eaker, Karhanek, & DuFour, 2004). It is used in a variety of situations, such as extending classroom practice to the community; bringing community personnel into the school to enhance the curriculum and learning tasks for students; or simultaneously engaging students, teachers, and administrators in learning (DuFour et al., 2004). Astuto, Clark, Read, McGree, and Fernandez (1993) coined the concepts “professional community of learners” and “communities of continuous inquiry and improvement,” in which teachers and administrators continuously seek and share learning and then act on what they learn to ultimately enhance their effectiveness as professionals for the benefit of the students.

Communities of practice exist because members of the community have common understandings and knowledge to share with one another. The character of a community of practice reflects the social relations of its members, particularly the value or legitimacy individuals extend to others (Wenger, 1998). On the basis of such relations, individuals function as informal leaders who keep the community’s purpose at the center of activity and who help shape social relations among members to facilitate learning (Wenger, 2000). In essence, community members construct certain individuals as leaders according to the value they bring to the community, for instance, their expertise, their relational skills,
their connections to others beyond the community, or their access to resources (Spillane, Hallett, & Diamond, 2003). Leadership within the community is emergent and distributed among many school members (McLaughlin & Talbert, 2001; Spillane, Halverson, & Diamond, 2001).

**Teacher Learning Within Professional Development**

Enabling teachers to learn and grow together through teacher development opportunities may be a powerful way of reforming education and building leadership capacity from the inside out (Darling-Hammond, 2006). Rather than being a top-down initiative, the concept of teacher leadership development requires movement from within the profession. Teacher leadership has the potential to empower teachers to make decisions that not only affect teaching and learning but also have the potential to improve education and learning for students. “Leadership is the factor that enables meaning to be constructed together in that it engages people in the essential reciprocal processes. Without value-driven, purposeful leadership, communities can become balkanized, or focused on the self-serving purposes of an individual or a few individuals” (Lambert, 2002b, p. 52).

If one wants to encourage leadership within communities of practice, it is important to look at developing leading skills in professional development settings. Research has shown that quality professional development can change teacher’s practices and positively affect student learning (Darling-Hammond, 2000). Such quality professional development should be anchored in teachers’ reality, sustained over time, and aimed at creating peer collaboration (Chan & Pang, 2006; Richardson, 2003). Grounded in the assumption that teacher growth does not happen in isolation, current
professional development models seek to create learning communities where participants engage in meaningful activities collaborating with peers to co-construct knowledge about teaching and learning (Shulman, 2004). Little (2002) gave evidence “that strong professional development communities are important contributors to instructional improvement and school reform” (p. 936). Nevertheless, a need still exists for additional research that explores the complexities of teacher learning in these redefined professional development contexts (Borko, 2004).

Most professional learning for teachers has been packaged and given to teachers by administrators because of policy mandate or by providing experts to teach teachers during professional development days (Lieberman, 2009). Such methods oversimplify and underestimate how teachers learn, the conditions under which learning occurs, and how knowledge is developed and finds its way into a teacher’s repertoire. But for some reason, professional development models that focus on transmitting predefined knowledge continue to proliferate professional development in many countries (Day & Sachs, 2004; Schwille, Dembele, & Schubert 2007). The research literature is full of studies suggesting that the managerial and technical approach is not effective in contributing to a teacher’s knowledge base or professional identity (Ball & Cohen, 1999; Darling-Hammond & McLaughlin, 1995). What is known, conversely, is that professional development models that are collaborative, learning centered, and related to practice are more meaningful to teachers. Avalos (2011) suggested that authentic professional development is voluntary, inquiry oriented, pervasive across time and space, and open to the complexity, range, and variation of professional development based on teachers self-identified needs and interests.
Teachers make sense of their practice by both taking action and reflecting on action, sometimes individually, but more often collaboratively (McArdle, 2010). If that is the case, then designs for professional development should include those ideas. Changes in professional development are needed to ensure that learning is connected to practice. Much promise is seen in the movement toward professional learning communities within schools. Increased learning and professionalism among all teachers, coupled with collaborative environments, can help make significant changes in the way students are taught and in the outcome they are able to produce.

At the core of professional development endeavors is an understanding that professional development is about teachers learning—learning how to learn and transforming knowledge into practice for the benefit of their students’ growth. Professional learning for teachers is a complex process involving several levels. The process requires cognitive and emotional involvement of teachers, individually and collectively, as well as the capacity and willingness to examine where each one stands in terms of convictions and beliefs. It also involves the perusal and enactment of appropriate alternatives for change. A situative perspective has been recognized to be a productive lens to view teacher learning because it considers the multiple contexts in which learning occurs (Adler & Davis, 2006; Borko et al., 2005; Putnam & Borko, 2000). Further, a situative perspective allows for an integration of cognitive and social frameworks to describe learning through participation.

Timperley and Parr (2007) reviewed 97 studies from the United States, United Kingdom, New Zealand, Israel, the Netherlands, and Canada and concluded that the following conditions were necessary in linking professional development with student
achievement outcomes: (a) consistency with wider policy trends and research, (b) extended time for teachers to engage in new practices, (c) engaging experts external to the group, (d) opportunities to engage in a range of learning activities, and (e) participation in professional learning communities that supported new ideas and challenged problematic discourses. The results of the studies indicated that professional development had a greater effectiveness when the professional learning unfolded organically rather than being predetermined and having a simplistic endpoint or goal. Additionally, professional relationships based on trust and caring further contributed to the success of the professional development.

Challenges of Teacher Leadership

Most teacher leaders believe that peer relationships are the greatest challenge to leadership. The teaching profession is a profession in which every teacher is expected to be equal, except in seniority. Moving outside that norm can be risky for teacher leaders because doing so violates the norm of equality and implies that teacher leaders are more expert than other teachers in the school. Thus, teacher leaders could feel “caught in the middle between administration and their peers.” In addition, teacher leaders may appear to have “more access to the principal—a currency coveted by most teachers” (Katzenmeyer & Moller, 2009, p. 130).

Donaldson (2007) reported that teacher leaders’ status often puts them somewhere between administration and colleagues, thus compelling teacher leaders to decide whether or not to exercise authority and power (like administrators) when striving to achieve their goals. Like Frost and Durant (2003) and Gonzales (2004), Donaldson cautioned against teacher leaders using muscle to force change. Instead, he encouraged
teacher leaders to maintain strong collegial relationships while remaining candid about their points of view regardless of their intermediate positions.

Concern about relationships with others within schools also becomes an obstacle to a teacher leader’s success. Evidence suggests that teachers themselves can be barriers to reform efforts: “Caught in social norms about teachers’ work with students, job redesign may be rejected by teachers themselves” (Smylie & Denny, 1990, p. 257). Teacher leaders in a study by Zinn (1997) reported feeling that colleagues “resent them, their success, and their visibility” (p. 10).

The school context is a critical component of teacher leadership influence. The problem most often discussed within the school context is the inability to find adequate time in the school day for leadership activities. Similarly, the educational literature also reflects the struggle teacher leaders face with time. An obstacle to building capacity for teacher leadership is the design of the school day and the lack of substantive time for teachers to assume the new roles (Chen & Miller, 1997). The majority of school schedules require that teacher leaders take on additional tasks during planning time or before and after the school day (Katzenmeyer & Moller, 2009).

One possible reason current models of leadership using formal roles of teacher leadership, such as coaches or math specialists, continue to persist may be attributed to the challenges teachers who have taken on leadership roles have reported. Teacher leaders reported that finding enough time to accomplish all of their work is the most stressful factor with their dual roles (Hart, 1999). Teacher leaders may be unable to engage in collaborative relationships with other teacher leaders because of the school’s schedule. Without common planning time or sufficient time within the school day,
leaders reported they consistently work on weekends or evenings to do the necessary preparation and coordination efforts. In short, teacher leaders are asked to take on tasks with no allowances for extra time (Hart, 1999). Formal leadership roles and release models for teacher leadership may be in response to these challenges.

Full-time classroom teachers taking on leadership without release time can have troubling consequences for the students of the teacher leader because it forces the teachers to decide how to set priorities for their limited time, and planning for students may be shortchanged. Because most of the focus of a teacher’s attention is on the students, redirecting efforts away from students can be stressful (Cesarone, 1999 as cited in Katzenmeyer & Moller, 2009). Another anxiety for teacher leaders is the impact of additional responsibilities on their personal lives (Fullan, 1993). Teacher leaders tend to pull back from leadership tasks or even refuse to assume the roles if doing so will take time from personal responsibilities (Zinn, 1997).

**Gaps in Teacher Leadership Literature**

It appears that gaps exist in the research related to teacher leadership. Relatively few studies of teacher leadership have focused on the relationship between teacher leadership and student learning outcomes. This creates, in a sense, a blind spot in the contemporary teacher leadership literature. In addition, there is little knowledge about the ways in which teachers positively influence instructional and organizational development; existing studies are not fine grained or detailed enough resulting in many areas demanding attention. For example, we do not know how teacher leaders are best prepared for their role or which models of teacher development are the most effective in generating teacher leadership. Researchers do not know which combination of teacher
leadership offers the most powerful platform for organizational change and development (Harris, 2005). And finally, a lack of knowledge appears to exist around the specific processes a teacher must take to become a teacher leader. Collay (2006) noted professional identity is not predominant in the teacher leadership literature, yet it may be key for successful school reform. As a result, professional identity of teachers as leaders needs further exploration.

**Summary**

In this chapter, a literature review was provided that offered a lens for examining the different types of leadership and the type of learning shown to facilitate teacher leadership. In summary, the majority of the literature regarding school leadership has focused on the principal. More recently, however, teacher leadership has been shown as a way to fill the need for leaders in facilitating and enhancing school reform. An overarching feature of teacher leadership points to teachers’ ability to shape teaching and learning positively by influencing colleagues, administrators, and other members of the school community with the aim of increased student learning. But, there is no agreed upon understanding in the literature about what role teacher leaders should serve. The literature is not clear on how best to prepare teacher leaders because schools are highly contextualized. There is no prevailing model for teacher leaders providing instructional support to teachers, nor is there sufficient detail about how effective teacher leaders have been in influencing change.

The research also indicated that teacher leaders often assume undefined, informal roles that emerged from the ranks of teaching. These informal leaders have no positional authority. Their influence stems from the respect they command from their colleagues,
pedagogical expertise, and outstanding teaching practice. This legitimacy can be used to build alliances in order to accomplish their work.

In order for teacher leaders to help create a situation for lasting change, it was suggested they be engaged and engage their colleagues in transformative learning experiences. Transformational leadership emphasizes shared decision-making, continuous improvement, and moving beyond self. Transformational theory shares many characteristics of constructivist leadership although, from the constructivist perspective, the goal of teacher leadership emphasizes professional growth of an entire group, rather than focusing on the development of a few select people.

In Chapter 3, I describe the methodology used in the study. I begin by describing my own perspective as a researcher. In addition, I outline the procedures and sources for collecting data, and provide details of the data analysis process used to identify and analyze categories that surfaced from the data in the study. Finally, ethical considerations as well as issues related to trustworthiness and credibility are discussed.
Chapter 3: Methodology

Introduction

This qualitative research is a form of self-study that falls under the genre of autoethnography. “Autoethnographers vary in their emphasis on the research process (graphy), on culture (ethnos), and on self (auto)” (Reed-Danahay, 1997, p. 2). Different exemplars of autoethnography fall at different places along the continuum of the three axis (Denzin & Lincoln, 2000, p. 740). Firmly situated along that continuum, I study myself as I developed as a teacher leader during one school year.

This chapter describes the methods I used to design the study. I offer an explanation of how I conducted my study, how data were collected and coded, and justification for my chosen methodology. Generalizability, validity, credibility, and trustworthiness are addressed. In addition, this chapter explains why autoethnography became my research strategy in order to answer my primary research questions related to teacher leadership.

- In what ways did my view of myself as a teacher leader change over the year?
- What dilemmas and feelings arose while developing as a teacher leader?
- What experiences and factors supported and hindered the process of becoming a teacher leader?

The questions were designed to discover insights about the process of developing as a teacher leader. The questions help uncover the uncomfortable feelings and difficulties encountered from a teacher experiencing the changes of going from teacher to teacher leader.
Research Paradigm

Qualitative Research

The research method for this study is autoethnography—a qualitative approach with the potential to be an excellent instructional tool for educational practitioners to “gain profound understanding of self and others” in a cultural context (Chang, 2008, p. 13). For this study, culture can be thought of “as a product of interactions between self and others in a community of practice” (Chang, 2008, p. 23). Thus, culture is intertwined with people and situations. In my research, the school context in which I worked with my students, mathematics team, and administrators defined the culture. A qualitative approach was best to explore that cultural context.

Qualitative research is a situated activity that locates the observer in the world. It consists of a set of interpretive, material practices that make the world visible. These practices transform the world. They turn the world into a series of representations, including field notes, interviews, conversations, photographs, recordings, and memos to the self. (Denzin & Lincoln, 2008, p. 4)

The purpose of qualitative research is to make sense of, or interpret, the subject matter in terms of meanings that people bring to them. Denzin and Lincoln (2008) liken the process as someone “who assembles images into montages” (p. 5).

Because qualitative research is oriented toward understanding the natural world, it is highly interpretive in nature. The purpose of qualitative research is not to verify a causal relationship by falsifying a no-relationship hypothesis. Rather, it recognizes the multidimensional interpretations of human experience and relationships within social and cultural systems. The aim of qualitative research is to understand how people make sense of their world. It provides both the researcher and the participants with the experience of
discovery. “Qualitative research is a means for exploring and understanding the meaning individuals or groups ascribe to a social or human problem” (Denzin & Lincoln, 2008, p. 4). The qualitative researcher seeks “to describe, explain, and make understandable the familiar in a contextual, personal, and passionate way” (Denzin & Lincoln, 2000, p. 395). Denzin and Lincoln (2000) found the following:

Becoming immersed in a study requires passion: passion for people, passion for communication, and passion for understanding people. This is the contribution of qualitative research, and it can only enhance educational and human services practice. In the qualitative arena the individual is not only inserted into the study, the individual is the backbone of the study. (p. 394)

Self-Study

Self-study has been defined as “the study of one’s self, one’s actions, one’s ideas, as well as the “not self” (Hamiliton & Pinnegar, 1998, p. 236). Tidwell and Fitzgerald (2004) note that for teacher-researchers, self-study encompasses a wealth of experiences embodied by teachers and their understanding of what teaching is. To better understand a phenomenon in question and to make changes for improvement, teachers examine the self within the teaching environment and their practices in terms of roles, actions, and beliefs.

Drawing on traditional forms of qualitative research methods of data collection, self-study generally transforms those methods by taking them into a new context and using them in ways that depart from the traditional. Such transformations highlight the fact that the role of the researcher in self-study and the role of the teacher educator are closely intertwined (Tidwell, 2009). Thus, self-study is concerned with seeking “to
understand the relationship between the knower and the known” as well as seeking to understand what is the form and nature of reality (Kuzmik & Bloom, 2008, p. 207).

Because teacher knowledge is always knowledge in context (Connelly & Clandinin, 2000), it can be shared through a language of story that is “prototypical, relational among people, personal, contextual, subjective, temporal, historical, and specific (Clandinin & Connelly, 1995, p. 14). Clandinin and Connelly suggest, “self studies of teacher knowledge must somehow lie closer to practice, to be studies of practice” (p. 582). Ultimately, the aim of self-study research is moral, to gain understanding necessary to make the interaction between the self-as-teacher educators, in context, over time, increasingly educative (Hamilton, 1998).

Clandinin and Connelly (2004) warned, “Self-study must somehow give an account of the living of teacher knowledge in action, rather than merely the verbal (whether written or spoken) accounts of action” (p. 582). Bullough and Pinnegar (2001) state there is an important relationship between personal growth and understanding, and public discourse about that understanding. For public theory to influence educational practice, the theory must be translated through the personal. Only when a theory can be seen to have efficacy in a practical arena, will that theory have life. However, articulation of the personal challenges or issues never becomes research until connected through evidence and analysis to the issues of the time and place (Bullough & Pinnegar, 2001).

**Autoethnography**

“To write about the self is to write about social experience” (Mykhalovsky, 1996, p. 132).

Autoethnography is a qualitative genre of research where the researcher describes his or her personal experiences within a social context—in this case a middle school. In
autoethnography, the researcher is the subject, and the researcher’s interpretation of the experience is the data (Ellis & Bochner, 2000). Unlike other forms of qualitative research where the researcher is expected to keep personal bias from the writing, autoethnography is written in first person voice. The first person accounts provide richness in the descriptions of significant events, people, and cultural patterns and norms. Readers of autoethnographic writing will be drawn into the inner workings of the social context being studied and become part of the story. Such shared experience has the potential to enhance the reader’s understanding of the culture being studied.

This autobiographical genre of research displays multiple layers of consciousness. Ellis and Bochner (2000) stated the following:

Autoethnographers first look through an ethnographic lens, focusing outward on social and cultural aspects of their personal experience; then, they look inward, exposing a vulnerable self that is moved by and may move through, refract, and resist cultural interpretation. (p. 739)

Stories are the way we make sense of the world. They are essential to understanding and are not unique to autoethnography. To make sense of the world is the aim of most research (Ellis, 2004). Writing stories about our own “texts” is a way of making sense of and changing our lives (Richardson, 1997). As an example, many feminist writers advocate starting research from stories from one’s own lived experience (Ellis, 2004).

Richardson (1995) expressed the view that “all knowledge is socially constructed” (p. 26). Therefore, sharing my experiences, or stories, through my research gives me an avenue to question how my changing identity affected me during the research process
and how I connected my learning to a wider social structure (Ellis, 1998; Richardson, 2000; Sparkes, 2000).

In traditional research, the researcher is expected to keep one’s voice separate from the data collected and studied. The researcher cannot deny the impact that personal experiences have on the way they do their work (Muncey, 2010). Autoethnography is an approach that acknowledges and accommodates subjectivity, emotionality, and the researcher’s influence on the research rather than hiding from these matters or assuming they do not exist (Ellis, Adams, & Bochner, 2011).

The focus of autoethnography is not the literal study of self, but the space between the self and the culture the autoethnographer is writing about. Thus, autoethnography requires consistency in data gathered from self and others as well as in how they are brought together to create meaning (Bullough & Pinnegar, 2001). The goal of autoethnographers should be to achieve a cultural understanding through analysis and interpretation. Chang (2008) articulated, “Given that culture is a web of self and others, autoethnography is not a study of self alone” (p. 65). In other words, autoethnography is not simply focusing on the self, but about searching for understanding of others—in culture or society—through the self.

This autoethnographic approach gives me an opportunity to speak from the inside as a teacher and with the goal of experience a deeper understanding of “self” and changes that occurred in my practices during my study. My story describes the inward glance at myself as a leader, who is also a teacher, in order to examine how I facilitated learning for my colleagues.
This methodology is an appropriate methodology for my research because the voices of teacher leaders are missing from the conversation about teacher leadership (Murphy, 2005). There is no consistent or clear understanding of the practices of teacher leadership—how it can be cultivated, why it emerges, or what influences it can have on school and student performance (Murphy, 2005), so it is a worthy area to study.

Researcher Perspectives

I considered myself fortunate to have been in the position to blend my professional work with my research study. However, this closeness between my work and my research could be perceived as problematic to readers because it brings up issues related to bias and objectivity. However, an advantage of first person accounts is that they can provide nuanced understandings of significant events and social contexts being studied. Patton (2004) described autoethnography as a collaborative journey between the author and the reader.

In this study, the researcher and subject were in the same. I sought to find what it took to negotiate the dual role of teacher and leader as well as better understand the reality and the experiences I encountered during my development process. By reflecting on events from my personal experience, I was able to minimize the distance or objective separateness. My personal reflections enabled me to move from being an “outsider,” someone looking in on the position of a classroom teacher taking on leadership responsibilities, to that of an “insider,” or someone accepted in the field that has an understanding of the participants (Creswell, 1998).

As both researcher and subject, I had the opportunity to speak as a participant in the research. Studying my experiences with those of my colleagues is “precisely what is
needed to move inquiry and knowledge further along” (Clandinin & Connelly, 1994, p. 3). Placing my voice, thoughts, and reflections into the text made the study more than “a mere summary and interpretation of the works of others, with nothing new added” (Clandinin & Connelly, 1994, p. 3). Doing so is critical to understand and recognize that as I related experiences, evaluated situations, and made inferences throughout this study, my situation in life, my beliefs, and my experiences influenced the reality I saw.

**Constructivism**

This study was approached from a constructivist perspective. In constructivist research, meaning is always social, arising in and out of interactions with a human community (Crotty, 1998). Denzin and Lincoln (2008) described the inquiry aim of constructivism as one of understanding and reconstructing. In such an approach, “research is shaped from the bottom up from individual perspectives to broad patterns and, ultimately, to theory” (Creswell & Plano Clark, 2007, p. 22).

The constructivist perspective assumes that individuals construct knowledge as they attempt to make sense of their experiences. “Learners, therefore, are not empty vessels waiting to be filled, but rather active organisms seeking meaning” (Driscoll, 1994, p. 360). Constructed knowing includes the ability to deal with internal contradictions and ambiguity. Stress and conflict are accepted, rather than avoided, during the research process. Self-examination leads the constructed knower into a way of thinking about knowledge, truth, and self that guides the person’s intellectual and moral life and personal commitments (Belenky et al., 1997). For constructivists, the theme of caring for, and attending to, another person and to relate with that person is extremely important. The passion of constructivists for integrating feeling and care into their work and the
desire to improve the quality of life for others becomes a quest. Reflection about attitudes and judgments and how they integrate with their own moral convictions are vital to the constructivist. More than any other levels of knowing, constructed knowers act out of a feeling of responsibility to the community within which they participate (Belenky et al., 1997).

Viewing knowledge through the lens of constructivism meant students in the classroom, along with teachers and administrators, became more active in the process of constructing knowledge together. Therefore, the internal building of knowledge is constantly open to change; there is not a specific reality that learners strive to know. Knowledge emerges in contexts within which it makes sense. Therefore, in order to understand learning that has taken place within an individual, the actual experience must be examined (Bedner et al., as cited in Ertmer and Newby, 1993). The intent of autoethnography is to construct learning based on the self and examine the environment through observation and reflection. The autoethnographic approach is not simply consistent with my worldview, it was chosen because it aligns with the way I view learning—for my students, my colleagues, and myself.

**Positionality**

Creswell uses the term worldview as meaning “a basic set of beliefs that guide action” (Guba, 1990, p. 17). In defining worldviews, other researchers have used the term paradigms (Lincoln & Guba, 2000), epistemologies, and ontologies (Crotty, 1998). Creswell (2009) however stated that he sees worldviews as a general orientation about the world and the “nature of research that a researcher holds” (p. 6). The types of beliefs
researchers hold often leads to the researcher embracing a qualitative, quantitative, or mixed methods perspective (Creswell, 2009).

My research design situated me inside the culture in which I was the researcher and topic of investigation. The purpose of this autoethnography was to detail, explain, and make meaning of experiences (Ellis, 2004). My actions as a teacher leader could be perceived in various ways depending upon the viewer and receiver of the action. As I told my story of a mathematics teacher developing leadership practices, I was recalling, journaling, and reflecting upon my actions.

I was an established member of the mathematics community in my school district and such a role is relevant to my role as researcher. Because of the professional development opportunities in which I have participated, I had opportunities to work with a variety of people inside and outside my school district. Those people worked as professional development consultants, mathematics teachers, administrators, and district office officials. Those established relationships gave me privileged access to a variety of people and perspectives. In addition, the type of rapport I had with teachers and administrators may have made them more willing to be forthcoming with their thoughts and actions. Although, I took steps to not misuse the advantage, such access offered insights about the work at different school sites and different levels of responsibility.

**Design of Study**

**Context and Setting of Researcher**

**District.** The Cloverdale School District (pseudonym) where this research study took place was one of the largest and fastest-growing districts in the Pacific Northwest when this study began. Many residents made their living in construction, real estate, and
recreation. Many were drawn to the area by climate, the surroundings, or recreational opportunities. Even with the influx of people moving to the area, more than 40% of the district’s students qualified for free and reduced-priced lunches. About 4% of the students are classified as English Language Learners (ELL): Latino students comprised the only minority population with significant numbers. The school district’s students also typically outperformed their grade-level peers as an aggregate population.

School. Green Valley Middle School (pseudonym), with grades six through eight, had a student population of approximately 620 students and 25 teachers during the 2009-2010 school year—the year the study was conducted. The school population had two main subgroups of students. Students with disabilities represented about 13% of the school population and students receiving free and reduced lunches represented 40% of the population.

Green Valley was organized like a traditional junior high where students traveled from teacher to teacher for their various classes. The school had recently switched from a block schedule to a seven-period day. The only classes offered as a block was sixth grade Humanities—combining Social Studies and Language Arts. All other subjects were daily 50-minutes classes.

The administrative team consisted of a Principal, Assistant Principal, and Dean of Students—all male, averaging six years of administrative experience. The Principal had volunteered for Studio—just as I had volunteered for MLI years before. A different school in the district had opted not to participate, so he was asked to join the project. The year of the study was my principal’s third year at Green Valley and his third year in the district.
The school had a loosely structured, laissez-faire professional environment. Professional Learning Communities (PLCs) were not the school-wide norm. The structure of teams tended to be driven by content subjects, although grade level teams met sporadically. Collaboration seemed to be highly dependent on the teachers who belonged to the various teams. If teams contained pro-active teachers, then these teams were more likely to meet. If not, then teachers typically stayed in their rooms and worked alone.

The Mathematics Team consisted of five female teachers ranging in age from 32 to 46. The average number of years teaching mathematics for that group of teachers was approximately 10 years. Two of the team members had prior experience teaching in an elementary setting. Three of the team members, including the researcher, had attended the MLI for four years. One additional member of the mathematics team had attended MLI for one year. In general, mathematics professional development was highly valued by all team members. All but one of the mathematics teachers—a part-time teacher—had a common planning period as a result of successfully lobbying for this structure the prior year.

**Green Valley Studio.** Green Valley Middle School had participated in the Studio model of professional development for a year and a half prior to the study. Green Valley was the first school in the district to begin this type of professional development work. During the first and second year of Studio, teachers from other schools in the district—elementary, middle, and high schools—came to Green Valley to participate in the professional development. All mathematics teachers at Green Valley also participated in these initial professional development days. During the first year of Studio, Green Valley
teachers were mixed in with teachers from other schools, but during the year of the study, Green Valley mathematics teachers had their own day of Studio to work together.

**Master Teacher Fellows**

MTFs represented teacher leaders working the context of Studio in a multitude of school districts in the Pacific Northwest. All MTFs in the study originated from two states and five school districts. MTFs in the study ranged from 5 to 19 years, with an average of 14 years, of teaching experience. Each MTF participated in Studio for multiple years—a requirement of the MTF grant. There were seven female MTFs and three male MTFs participating in the study.

MTFs participated in the focus group interview during the summer of 2012 during an organized work retreat. The only MTFs who did not participate in the study were the teachers who did not attend the summer retreat. Table 1 summarizes the participants in the study by name (pseudonym), job role, grade level, years as a MTF, and years participating in Studio. It should be noted that the focus group interview happened the summer following my second year of journal data collection and after the completion of my fellowship. At the time of the focus group interview, the journal data had been completed for one year.
### Table 1

*Master Teacher Fellow Information*

<table>
<thead>
<tr>
<th>Name (pseudonym)</th>
<th>Role</th>
<th>Grade Level</th>
<th>Years Teaching</th>
<th>Years as MTF</th>
<th>Years in Studio</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kelly</td>
<td>½ Classroom teacher</td>
<td>Elementary</td>
<td>17</td>
<td>2</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>½ Math Coach</td>
<td>School K-5</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Roxanne</td>
<td>Classroom teacher</td>
<td>Elementary</td>
<td>17</td>
<td>2</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td></td>
<td>School K-5</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bob</td>
<td>Classroom teacher</td>
<td>Middle School</td>
<td>19</td>
<td>1/2</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td></td>
<td>6-8</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Karen</td>
<td>Instructional Coach</td>
<td>Middle School</td>
<td>17</td>
<td>1/2</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td></td>
<td>6-8</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dawn</td>
<td>Classroom teacher</td>
<td>Middle School</td>
<td>14</td>
<td>2</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td></td>
<td>6-8</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Peg</td>
<td>Instructional Coach</td>
<td>Middle School</td>
<td>10</td>
<td>2</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td></td>
<td>6-8</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Eric</td>
<td>Classroom teacher</td>
<td>High School</td>
<td>5</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td></td>
<td>9-12</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rhonda</td>
<td>Instructional Coach</td>
<td>High School</td>
<td>10</td>
<td>2</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td></td>
<td>9-10</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Jim</td>
<td>Classroom teacher</td>
<td>High School</td>
<td>16</td>
<td>1/2</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td></td>
<td>9-12</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Data Collection**

Rodriguez and Ryave (2002) argued that self-observation as a data collection technique is useful because it gives access to “covert, elusive, and/or personal experiences like cognitive processes, emotions, motives, concealed actions, omitted
actions, and socially restricted activities” (p. 3) and highlights data that might usually be “taken-for-granted, habituated, or unconscious” (p. 4).

One of the goals of self-study research is to produce literary representations and add value to readers of the research. With that in mind, data collection can vary greatly in autoethnographic studies. The self-study research process involves questions and data typically collected in the participant’s setting, with data analysis inductively building from particulars to general themes in which the researcher makes interpretations of the meaning of the data.

**Personal journal.** The main source of data used in this study was my personal journal maintained over the year of this study. The journal I kept was in electronic form and was a requirement of the MTF grant in which I was participating. Because of my choice to use the journal in my doctoral study, I wrote more frequently and beyond the scope of what was “required” as an MTF. I wrote regularly, but not every day. Mainly I wrote when I found time in my hectic teaching schedule. Most of the things I wrote about related to my thoughts, reflections, and questions about the leadership and mathematics teaching that I was steeped in. I also wrote about my emotions, feelings, dialogues, impressions, perspectives, negotiations, and details of the mundane. The intent of the journal was to capture the reality I experienced as a classroom teacher transitioning to teacher leader in my school district. The journal contains written reflections about the work in which I was involved at my school site and within the school district.

**Focus group interview.** A focus group was used in this study to accomplish two objectives. The primary objective was to gain a deeper understanding about the types of changes that occurred in a group of educators who had gone through the MTF, like the
researcher. Secondarily, the focus group served as a method to triangulate the data gathered from the researcher’s journal and reflections by using experiences of other teachers in similar roles in different schools and districts.

A focus group is defined as “a research technique that collects data through group interaction on a topic determined by the researcher” (Morgan, 1997, p. 6). While the suggested size of focus groups ranges greatly (Krueger & Casey, 2000; Morgan, 1997; Sim, 1998), the most common suggested size is between 6 and 10 participants per group with no fewer than 4.

Key characteristics of a focus group include the following: the participants in the group share some commonality that is of interest to the researcher, the group provides qualitative data, and the group participates in a focused discussion that is facilitated by a moderator (Krueger & Casey, 2000). Two advantages of using focus groups to gather data include the ability to gather data from many participants at one time and the opportunity to gather information on attitudes and opinions through participant interaction (Morgan, 1997; Sim, 1998). In the case of my study, all focus group participants were MTFs for some amount of time. The time varied for each of the participants. I believe this variation provided a more interesting and diverse perspective from the MTFs.

During the 90-minute audiotaped focus group meeting, the MTFs talked about their personal experiences and perspectives about teacher leadership. The following questions were asked during the audiotaped interview:

1. You have all had a common experience because of your Master Teacher Fellowship. Talk about some of the highs and lows of these experiences.
2. What, if anything, have you been able to change with your colleagues and/or administrators? What do you think made this possible?

3. At what point do you feel you made the transition from teacher to teacher leader? What do you think may have triggered that transition?

4. What processes do you think helped and hindered becoming a teacher leader?

5. Talk about the challenges, if any, your leadership role has created in your school or district.

6. How do you think the changes in your leadership have been influenced by changes in your teaching practice?

7. How do you think your school or district could best utilize your skills as a leader? Why?

8. Identify one or two critical events, or turning points, that had an impact on your work as a teacher leader.

9. In what ways do you see yourself differently after your experiences as a Master Teacher Fellow?

A professional transcriptionist transcribed the audiotape interview verbatim, so the data used for the data analysis represented the exact words of the focus group participants.

Data Analysis

Bernard (2006) stated that data analysis “is the search for patterns in data and for ideas that help explain why those patterns are there in the first place” (p. 452). Data analysis and interpretation in autoethnographies involve moving back and forth between self and others, zooming in and out of the personal and social realm emerging from the data.

Autoethnographies tell a story of the phenomenon being studied. The traditional beginning, middle, and end structure is typical of most stories, and the storytelling model
provides one way of organizing (Ollerenshaw & Creswell, 2002) the narrative research data. One basic technique for analyzing the story of change in a participant’s data is to assemble in chronological order all passages that have been similarly coded. In other words, create a tale with a beginning, middle, and end whose elements are composed of the similar themes.

My “tale” spans a nine-month period over the course of one school year. Saldana (2003) suggested at least nine months of fieldwork for an educational study to be considered longitudinal, but he also states there is no definitive length of time for a study to be considered longitudinal. Important in the discernment of time, according to Saldana (2003) is that “time and thus change are contextualized” (p. 5) Because time is contextual and change is contextual (Fullan, 1999) it made sense to look at my data longitudinally as a way to identify my changes in leadership. Saldana (2003) stated there is no definite amount of time for a longitudinal study and there is no definitive opinion on change processes and products (Saldana, 2003) so “Explanations of change are bound to be holistic and multifaceted” (Pettigrew, 1990, p. 94).

Analysis of journal. As I reflect on the analytic process used to study my journal data spanning nine months, the greatest obstacle was managing the vast amounts of data. Other challenges I faced were being sensitive to changes, determining how changes might interrelate with each other, and ultimately pulling everything together to create a coherent story.

I began my analysis by adding line numbers to the electronic version of my journal. I reformatted that file leaving a four-inch margin on the right side to provide a space to record codes. “Coding is the heart and soul of whole text analysis. Coding forces
the researcher to make judgments about the meanings of contiguous blocks of text” (Saldana, 2003, p. 48)

I then took the larger document and split it up into six smaller sets of data. Each “data set” represented a time frame during the nine-month school year. This splitting of the data allowed me to analyze my journal data longitudinally. Saldana stated “analyzing change requires at least two reference points through time, such as ‘then’ and ‘now’” and he goes on to state, “time is data” (p. 7).

The time frames and line numbers for each data set are in Table 2.

<table>
<thead>
<tr>
<th>Data Set Number</th>
<th>Start Date</th>
<th>End Date</th>
<th>Line Number Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>Data Set 1</td>
<td>9/15/09</td>
<td>10/31/09</td>
<td>1-1689</td>
</tr>
<tr>
<td>Data Set 2</td>
<td>11/01/09</td>
<td>12/31/09</td>
<td>1726-3063</td>
</tr>
<tr>
<td>Data Set 3</td>
<td>01/01/10</td>
<td>02/28/10</td>
<td>3166-4630</td>
</tr>
<tr>
<td>Data Set 4</td>
<td>03/01/10</td>
<td>3/30/10</td>
<td>4657-6554</td>
</tr>
<tr>
<td>Data Set 5</td>
<td>04/01/10</td>
<td>05/31/10</td>
<td>6636-8358</td>
</tr>
<tr>
<td>Data Set 6</td>
<td>06/01/10</td>
<td>07/03/10</td>
<td>8359-10326</td>
</tr>
</tbody>
</table>

For my first cycle of coding, I used Initial Coding (Saldana, 2009). Initial Coding is a type of first cycle, open-ended approach to coding the data that is a starting point for the researcher. All proposed codes during this cycle are tentative and provisional and some codes may end up being reworded as analysis progresses. The goal of Initial Coding is “to remain open to all possible theoretical directions indicated by your readings
of the data” (Charmaz, 2006, p. 46). Descriptive statements from the journal were organized into Longitudinal Qualitative Data Summary matrices (See example, Appendix A) that represented divisions of time as listed in Table 2. The matrices were modified from Saldana (2009). The codes were recorded with line numbers and categorized in columns with headings to capture longitudinal codes. Some examples of the column headings follow: increases/emerges, cumulative, constant, turning point, idiosyncratic, and what’s missing.

During this stage of data analysis, I also recorded analytic memos. Analytic memos are “sites of conversation with ourselves about our data” (Plano Clarke, 2005, p. 202). The memos were written at the bottom of the longitudinal recording sheet. That data represented thoughts or ideas I was wondering about as I went through the journal, paragraph by paragraph. Coding and analytic memo writing are concurrent qualitative data analytic activities, for there is “a reciprocal relationship between the development of a coding system and the evolution of understanding a phenomenon” (Weston et al., 2001, p. 397).

After my first cycle coding and memo writing, I entered the codes into an Excel document separated by data set. I printed and then cut each coded “chunk” of data and sorted them together into appropriate categories, assembled each category’s pile of coded data together, labeled each pile with the category name, then arranged them into themes. I also noted the numerical frequency of each of the codes that made up the theme. Some example of themes that resulted from Data Set 1 for research question 1 were team issues, leadership identity, and leadership actions with the math team. I followed a similar strategy when I analyzed research question 2.
For the compilation narrative for question 3, I did not look at the data longitudinally, but rather, I used the research questions as a lens to analyze how the codes grouped together. I was able to identify three major categories using this method: self, others, and the system.

One of the most critical outcomes of qualitative data analysis is to interpret how components of the study weave together. Saldana (2009) described weaving as “codeweaving.” Codeweaving is the actual integration of key code words and phrases into narrative from to see how the puzzle pieces fit together. This process was used in the narratives around the research questions in Chapter 4.

**Analysis of focus group.** For the analysis of the focus group transcript data, I used each of my research questions as a lens for looking at the data. For example, when examining the question “What supported and hindered teacher leadership?” I looked through the entire data set to find words, adjectives, comments, questions, or statements the focus group participants said that could be associated to the particular research question. Once I identified the codes, I grouped the codes into themes. I tried to stay open during this process. Some themes were identical to themes I found while analyzing my journal, while others were different.

**Blending of two data sources.** Once the codes and themes were written into narrative summaries from my journal data and the focus group data for each category, I blended these two data sources together by looking for consistent or contradictory themes. I attempted to blend the data in a way that would help the reader makes sense of the phenomenon being written about. In some cases, the focus group data reinforced what I had seen in the journal data, in other cases it provided some nuanced differences due to
differing school structures and job roles for the MTFs in the study. Ultimately, the final narratives provide the reader the opportunity to see the story of my leadership development.

**Ethical Considerations**

By following the guidelines of Oregon State University Institutional Review Board, I could ensure the welfare and rights of the participants of my study were honored. All questions and procedures for the focus group interview were submitted to the Internal Review Board for approval before administration. After giving an explanation of my study and the purpose of the focus group, I gave each potential participant a copy of the Informed Consent Document (Appendix B). The Informed Consent Document outlines the purpose and the format of the study and the role of the participants in the study. It also details any possible risks and safeguards to protect them from those risks.

The focus group members were not compensated for their participation. I restated that their participation was voluntary, anonymous, and that they could speak as much or as little as they wanted during the course of the 90-minute interview. The document provided each participant contact information in case questions or concerns arose after obtaining the focus group audio recording. Participants could clarify any questions and again consider their agreement to participate. One hundred percent of the potential focus group members consented to participate, although one group member did not speak at all during the recorded session.

To ensure confidentiality, the school districts, MTFs, and educators who participated in this study and were mentioned in my journal were not identified by name. Pseudonyms were used throughout the writing of this research.
Trustworthiness and Credibility

In qualitative studies, “terms such as credibility, transferability, dependability, and confirmability replace the usual positivist criteria of internal and external validity, reliability, and objectivity” (Denzin & Lincoln, 2000, p. 21).

Validity in qualitative research has to do with descriptions and explanation and whether or not the explanation fits the description. In other words, is the explanation credible? Qualitative researchers do not claim there is only one way of interpreting an event. There is no one correct interpretation. (Denzin & Lincoln, 2000, p. 393)

Rather than looking for validity, reliability, and generalizability, autoethnographies hope to achieve reflexivity, impactfulness, and substantive contribution by the degree to which the text clarifies some lived reality (Holt, 2003). The value of such research lies in the level of detail in the writing and the emotional credibility and honesty of the author. This type of detail and emotional credibility is essential in any autoethnographic study.

Polkinghorne (2007) points out he researcher’s primary aim is not to discover whether the narrators’ accounts are accurate reflections of actual events, but to understand the meanings people attach to those events. Narrative researchers do not need to claim their interpretation is the only possibility, but they do “need to cogently argue that theirs is a viable interpretation grounded in the assembled texts” (p. 484). In discussing the validity of narrator’s stories—or the trustworthiness of their stories, as she prefers to call it—Riessman (2008) argues that stories that “diverge from established ‘truth’ can sometimes be the most interesting, indicating silenced voices and subjugated knowledge” (p. 186).
For autoethnography, trustworthiness, or validity, means that a work seeks verisimilitude; it evokes in readers a feeling that the experience described is lifelike, believable, and possible, a feeling that what has been represented could be true (Ellis et al., 2011). An autoethnography can also be judged in terms of whether it helps readers “communicate with others different from themselves or offer a way to improve the lives of participants and readers or the authors own life” (Ellis, 2004, p. 124). For an autoethnography, questions of reliability refer to the narrator’s credibility. “Could the narrator have had the experiences described, given available factual evidence? Does the narrator believe that this is actually what happened to her or him” (Bochner, 2002, p.86)?

Knowing full well that personal narratives present validity issues and in order to enhance the trustworthiness of my research, I used a variety of validation strategies including detailed descriptions of my collected data and the methodical manner of coding and interpretation of the data. Lastly, I triangulated my primary data source with another source.

Methodological triangulation refers to the use of multiple data sources to strengthen the integrity of an assertion, thereby helping establish the trustworthiness of that claim (Stake, 1995). Triangulation of data helps build a strong chain of evidence. Within my study, I included data from a focus group interview with other mathematics teacher leaders to add rigor to my study. By having multiple sources of data, I had an opportunity to check my interpretations of one set of data by comparing it to another. Differences in sets of data may reveal important ideas about leadership that otherwise would have been missed. In addition, I return to the literature in Chapter 5 as another way to add rigor to the study and validate or refute my own findings.
The issue of generalizability, in the traditional sense, is not really possible in this type of methodology since only a single subject is being examined, rather than several subjects that can be compared and used in creating generalizations for a larger population. What constitutes reality in a school setting is rarely agreed upon. The reality in my study, however, will be in my attempt to assemble and organize information and observations from my personal narratives as one person sees and experiences it. My goal is that readers will then take my experiences, assimilate the meaning into their own lives, and find some importance in the information. The burden of generalization, therefore, lies within the readers’ interpretations as they create meaning for themselves. “Readers are constantly testing generalizability as they determine if it speaks to them about their experience or the lives of others they know” (Ellis and Bochner, 2000, p. 751).

**Summary**

We must not only transform our data, we must transcend them:
Insight is our forte;
The whole purpose of the enterprise is revelation;
We do it to be profound. (Saldana, 2009, p. 192)

The purpose of this autoethnography was to investigate what it takes to be a school leader who remains steeped in the work of mathematics teaching. In this study, I focused on the following three research questions: (1) In what ways did my view of myself as a teacher leader change over the year? (2) What dilemmas and feelings arose because of developing as a teacher leader? (3) What experiences and factors supported and hindered the process of becoming a teacher leader?

In this chapter I discussed the perspectives that I brought to the study—the perspectives that value constructivism and social creation of knowledge. I provided
information about autoethnography and my reasoning for choosing autoethnography as an appropriate methodology for my study. I discussed information about the context and setting of the researcher, the MTFs, the design of the study, ethical considerations, and issues related to the study’s trustworthiness and credibility.

Chang (2008) states data collection and interpretation are at the heart of autoethnography. Throughout the process of analyzing my journal and focus group data, I often referred to the work of Johnny Saldana (2009) in *The Coding Manual for Qualitative Researchers* to help guide me. In the words of Saldana (2009), the bottom line with making coding decisions is to make “new discoveries, insights, and connections about your participants, their processes, or the phenomenon under investigation” (p. 51). I took Saldana’s message to heart during my analysis. I present my findings, discussion, and conclusions in the upcoming chapters.
Chapter 4: An Exploration of My Growth as a Teacher Leader

Introduction

The purpose of this study was to contribute to greater understanding of what it takes to be a teacher leader who remains steeped in the work of mathematics teaching. This self-study focused on my change as a teacher leader during the course of a school year. Throughout the duration of the study, I was a full-time mathematics classroom teacher and an emerging teacher leader. During the yearlong process of gathering information through narrative journaling, I discovered issues and uncovered feelings, challenges, and insights as I evolved and grew as a teacher leader. In addition to my own journaling, I was able to lead a focus group with other Master Teacher Fellows (MTFs) who were going through a similar process. The data from this focus group contributed to the validation of my own experiences and offered additional insights and perspectives about teacher leadership beyond my own.

This chapter is organized around the following three research questions: (1) In what ways did my view of myself as a teacher leader change over the year? (2) What dilemmas and feelings arose because of developing as a teacher leader? (3) What experiences and factors supported and hindered the process of becoming a teacher leader?

The analysis of the first two research questions has three sections: The analysis of my journal related to the research questions (explored longitudinally by data sets), the analysis of the focus group data related to the research questions, and finally a summary and compilation of both sets of data. Question 3 was analyzed somewhat differently as I was able to review the data and pull out the dilemmas, feelings, attitudes, and experiences relevant to the challenges of becoming a teacher leader. Although I realize there is
redundancy in each data set and analysis, it is important for each story to be told separately before all voices are combined in the final summary and compilation of data.

In Chapter 5, I return to the overarching purpose of this study which is to shed light on the following question: What does it take to be a teacher leader who remains steeped in the work of teaching mathematics? It is my hope that this discussion will be helpful to all who are involved in facilitating the process of teacher growth.

**Research Question #1: In What Ways Did My View of Myself as a Teacher Leader Change Over the Year?**

**Journal Data**

The data for this question centered around issues mostly related to leadership identity: how I viewed myself as a leader, including characteristics of my leadership style; and how my leadership actions within the mathematics team changed as I became more confident within my new role. In addition, conflicts and coping strategies were an important part of my growing views of who I was becoming as a teacher leader. This question is explored longitudinally through the data sets as it is about change over time.

**Data Set 1**

**Leadership identity.** During data set one, my leadership was expanding quickly because I said “yes” to every leadership opportunity that came my way—and there were many. I saw myself as an advocate for students in my school. I pressed for the idea of scheduling intervention during the school day for students who were not successful in their core mathematics class. This role of advocating for students was possible because we had de-tracked our mathematics classes the prior year.
Another way I was acting as a leader was by being the liaison for information coming from the district. Often, information from our district office administrator would come through me to pass along to my colleagues. This was one way that I was able to bring people on the mathematics team together. Another way I brought teachers together was by working with them on emergent teaching practices, ideas from Studio, and creating team and individual action plans.

During this data set I describe myself as being the “go to” person for the team. I had information to share and teachers would come to me with their information or questions. This was another way that I could be seen as bringing teachers together. I had information that teachers wanted.

I also described situations where I would learn alongside other teachers. This was happening with my mathematics team as well as in Studio with other teams of teachers. Because of the access to teachers from other schools and districts, I had the opportunity to serve as an example of a teacher who was willing to learn alongside colleagues.

During the beginning of the school year, I noted some ways that I did see myself as a leader but I also did not see myself as a leader. In this data set, I noted some things that I knew a leader was “supposed” to do, but I stated I did not yet know how to do it. For example, I stated that I needed to “facilitate transformative experiences—don’t know how yet” and I should “use evidence from the classroom to know where to press, this is in theory right now.” This viewpoint about my leadership was further reinforced by a statement where I admit that district office administrators refer to me as a leader, but I do not view myself as a leader.
During this period, I used certain words to describe my leadership style. I thought of myself as a good listener and capable of communicating with most people. I highly valued my relationships with teachers and described myself as trustworthy. I stated I had “the capacity for speaking with and listening to others while simultaneously speaking with authority.” At this time, I described my worldview as being constructivist. One journal entry was a note from my superintendent who refers to the “humble way I go about my Studio leadership work.”

**Conflicts due to my new leadership role.** In data set one, my new leadership role was responsible for much conflict, both internal and external. The main conflict I wrote about was related to the confusion I felt about my role. Was my role to form a partnership with administration? I felt a strong alliance to my teaching colleagues during this time, but I also felt in the middle between colleagues and administration. This conflict caused me to feel like I was “walking in two worlds.” I also felt a responsibility to try to keep the team together. Another idea that surfaced during this time was my feelings of being “conflicted about missing class for Studio days.” This turmoil caused internal conflict because I was having feelings of guilt about letting my students down.

In addition, I seemed to be lacking confidence about this new role. I stated that I needed “to get past my insecurities and defensiveness about my beliefs about teaching.” During this period, I wrote I felt like I should know more and questioned my mathematics content knowledge.

**Data Set 2**

**Leadership identity.** In the second data set, there was evidence I was working on my leadership practice by trying “subtle influence to create commitment to our goals”
when facilitating my mathematics team’s work together around “common goals, developing skills, and recognizing each other’s strengths and weaknesses.” I talked about wanting to capitalize on the heart and intelligence of the team. I felt everyone had something to offer to make the team better as a whole.

I was still being looked at as the “go to” person for the team. I noted that I felt I heard everything, “the good, the bad, and the ugly” from the different members of the team. I was also the person whom our district administrator would talk to as a way to check in with the team. On one occasion, I shared “everyone on the team is really stressed out right now” and he was able to plan a meeting to check in with the entire team. I was also coaching certain team members about how to approach and talk to the administrators.

It was during this time that I began talking about leading about teaching practices. I commented that I was leading by sharing my working knowledge of teaching with my colleagues. I was supposed to “set an example with my teaching practices.” I was able to open the doors of my classroom and do this through the Studio professional development. I believed that I would not be able to influence my colleagues teaching practices by trying to verbally convince them, but rather by working on my own teaching practices. This way I could share what I was learning with them. I felt this would be a more effective way to help them focus on improving their own teaching practices during our limited time together and with our competing priorities.

As in the last time-period, I described myself as a good listener and trustworthy. New in data set two, though, I described myself as having trusted in other people and that I was “a teacher leader that is transparent.”
I thought of myself as a “connector” who was protective of some of my mathematics team members. I believed I could be trusted to accurately share team information and concerns with the administration. I also described myself as having the ability to “choose words carefully.” I also called myself an innovator.

As in data set one, I described my worldview. I now was seeing myself as a humanist.

Conflicts due to my new leadership role. A conflict that arose in data set two was my questioning about shared leadership. I was feeling conflicted about becoming an MTF and how it would influence the idea of shared leadership in the team. I questioned whether a teacher leader that “stands out and from the team” is actually engaging in shared leadership. I felt I had been placed in that situation by the recognition I had gotten from the district due to Studio and because of the MTF. I stated that I thought leading from behind the scenes was not honest. This caused a great deal of conflict for me at the time especially since I valued trustworthiness in leadership. I questioned whether “you need to be transparent to be credible as a leader.”

The idea of loyalty to my team or to the administration came up during this time-period. I wondered if I came across as “neutral” to everybody. I wondered if I needed to be neutral. I was still trying to figure out how to work with people that shared different values.

I began asking broader question related to the school system and how it was affecting what our team was trying to accomplish. I wanted to know how the school’s culture was influencing the mathematics teams change efforts. I also wondered how the lack of administration attention was affecting our team’s efforts. Finally, I questioned
whether the mathematics team and the administration could ever become true partners in the change process “or are we destined to be us and them?”

Data Set 3

**Leadership identity.** In many ways, I was beginning to change my leadership stance in data set three. There were many examples of actions I was taking and the role that I was growing into. During this time period I began viewing myself as a change agent for other teachers and I saw my responsibility to provide transformative learning opportunities. I was also working on my own leadership practice through “reflection, education, training, and experiences.” I felt I could give a vision of reflective teaching practices to other teachers.

I stated that one of my leadership responsibilities was to make my planning, my teaching practice, and my reflection of my practice transparent for other teachers. Through these actions, I expected to grow and improve in both my teaching and leadership practice.

These expectations did not only apply to me but I wrote that I also had high expectations of my colleagues and my students. This hard work mainly seemed to apply to my “continuous work on my teaching practices” as I referenced this idea multiple times in this data set.

I still felt a great responsibility toward the team in many different aspects. I felt it was important to press on colleagues about the importance of having “planned and purposeful meetings,” and I encouraged other team members to “step up and say things related to teaching and learning in public forums.” Lastly, I talked about work that I had been doing to be more explicit in coaching my mathematics team about teaching.
During this time period, I made note that “my style as a leader is similar to my style as a teacher—it is who I am.” I stated that I needed to have the courage to follow my heart. I described myself as innovative and metacognitive. In two separate journal entries, I recorded words that others used to describe me. In one instance I was called “calm and logical” and in another instance I was referred to as “humble and thoughtful.”

During this data set, I began to define some theories about what I would be able to accomplish as a leader given certain constraints. I theorized that you could not be an effective teacher leader if you were not an effective classroom teacher. At this time, I also believed that if you had limited time with a teacher then this would severely limit the effect you could have on them as a leader.

**Conflicts and coping in my new leadership role.** In data set three, the number of things I was conflicted about decreased considerably. I commented about the negativity coming from the mathematics team and stated that the negativity pulled me down. I also commented that, “listening to all of the negativity is tiring.”

I observed that as one aspect of leadership gets focused, other things may “slip backwards.” This was a conflict because I wasn’t sure how to address this problem yet. The last conflict in this data set was really more of a question. I was wondering how I was supposed to lead this change process outside of my school (in the district). This seemed overwhelming to me at the time.

During data set three, I began writing about ways to cope with the challenges of being a leader. When encountering negativity I attempted to change the tone of negative conversations. I talked about going “inward” to help me stay focused and positive. When negativity would occur, I would steer conversations to stay grounded in discussions of
teaching. I stated that I encouraged new Studio teachers and was sustained by working with a mathematics team that enjoyed learning together.

Data Set 4

Leadership identity. In data set four, I am beginning to form more of my own ideas about teacher leadership. I was beginning to notice that learning about teaching and leading share a similar cycle. I was beginning to apply my tacit knowledge of teaching to what I was learning in my leadership practice. I also talked about the realization of first “believing you have the capacity to be a leader” and then take every opportunity that comes up to work on your skills and philosophy of leadership. I seemed as though I was beginning to have a stronger philosophy of teacher leadership.

I felt hopeful when I noted, “Every new day is a new chance to influence somebody” but tempered that hope with the comment “great trials and angst come from being a leader.” I was making a clear statement about my beliefs when I stated “truth is told in the actions we take, not the words we say.”

I began seeing statements that seemed to relate to my changing identity of teacher leadership. I seemed to be finding a vision about what a leader does. I made some statements about my motivation to be a teacher leader by stating I wanted to make a difference beyond my classroom. I talked about using my “leadership voice” to empower teachers to work on improving student learning. I mentioned that I was a strong believer in continuous improvement for all. I felt teacher leaders were responsible for facilitating and collaborating to come up with a shared vision. I also suggested that teacher leaders were advocates for changes in school structures that would benefit students. I did this by
advocating putting an end to our block schedule where students were receiving an average of 38 minutes of mathematics instruction per day.

In data set four, I acknowledged that the leadership qualities I valued shaped the actions I took and would take in the future. This statement seems to suggest that I was beginning to connect what I valued with what actions I took and how I took them.

I stated that I am “persistent” with sharing my ideas and beliefs about teaching with the mathematics team and the School Leadership Team (SLT). I cited the ability to work with individual teachers or teams of teachers. Finally, I listed the leadership qualities I believed were my strengths: collaborator, honorable, motivates others, cares about others, growth mindset, accountable, risk taker, good listener, and nurtures a positive environment.

Leadership actions with mathematics team. During this data set, I was explicitly working on my leadership practice by working with teachers on specific teaching routines and reflecting on the work. For example, on one occasion we worked together on the idea of selecting and sequencing student ideas for a particular lesson. I was working to connect the work we had been doing in Studio related to “productive teaching routines” and helping students “make generalizations and justify them.” I also noted that I was meeting with administration to check in about the work that the mathematics team had been working on. Even though we met some, I did not feel it was enough to truly support what the team was doing.

Conflicts due to my leadership role. This data set showed the first sign of feeling overwhelmed. I stated I was “overworked and overwhelmed.” I was feeling frustrated with everyone from the mathematics team coming to fill me in and to get filled
in on what was going on with the team. Typically, these conversations were not the ones I wanted to have about teaching and learning. I tried to focus my conversations by suggesting productive teaching routines but at this point these suggestion were not working to change teaching practices.

The pull by the team and not feeling valued by the administration added to my feeling of frustration and being alone in the work. I also stated I was becoming frustrated and was “opposed to the status quo” that was so prevalent in our building.

**Data Set 5**

**Leadership identity.** During this data set, my beliefs were being influenced by what I was reading. At the time, I had been doing a lot of reading on the writings of Margaret Wheatley (2006), and I discussed five beliefs that I thought influenced me as a teacher leader. First, equilibrium is not a desirable state. This seems to directly relate to my earlier discussions about not being a fan of status quo. Second, teacher leadership is best thought of as behaviors, rather than a role. Third, information needs to be shared and available to all and information should flow back and forth among the system. Fourth, to make a system stronger, strong relationships need to be created. Fifth, in living systems (like a school system), order is never imposed from the top down or from the inside out. It emerges when the parts of the system work together.

In this data set, I talked about using my “leadership voice.” It seemed at this point I was finding/being presented with many opportunities to do so. I wrote about handing over leadership responsibilities to my colleagues to follow through with the idea of having shared leadership in our mathematics department. I used my leadership voice to emphasize the work that the entire team had been focusing on in order to change the
culture of our mathematics classrooms. I was able to use my leadership voice in settings beyond my school.

I saw myself as a “teacher leader who is a classroom teacher” who was willing to work on my own time to get things done. I saw myself as doing more than I had to do. I described myself as a facilitator of curriculum training and I believed I was becoming “more of an expert in curriculum and pedagogy,” although I stated I was not comfortable with that distinction.

At this time, I was the main connection to “outsiders.” Frequently, I would be contacted from teachers outside of my school and district to come and observe because they had heard about Studio and me. I always agreed but encouraged teachers to “see what the entire team is working on” by observing all classrooms. In doing this, it was easier to see what could be accomplished as a team.

I said I was looking for authenticity with the team, but not always finding it. I theorized that people were not always authentic because they did not want to be found out.

During data set five, despite the feeling of “us and them” with the administration, I wrote that I was being persistent with trying to meet with my principal about the mathematics team’s collaborative goals for Studio. This appears to be an example of the perception that I was “striving for effective communication.”

I described myself as a “mediator” in an effort to calm the mathematics team down in testing a meeting with administrators. At the time, we were at a critical juncture with Studio so we needed the test scores to back up the progress made in our classroom
teaching practices. I was the liaison with the district administration and the mathematics team.

**Leadership actions with mathematics team.** This data set shows evidence of the most specific leadership actions to date. I mentioned multiple times sending research and information to the mathematics team related to new ideas we were working on. For example, when we were putting together common formative assessments, I sent related research via email and brought information to our team meetings. I also supported the team by reminding everyone about our collective Studio goals between Studio professional development days. Our Studio goals were also starting points for planning conversations with teachers about the associated teaching practices.

I noted here that I was working with the team “using inquiry instead of telling” and was asking questions like “What are you learning?” when working with team members. In a related journal entry I stated I was “trying to explicate the difference between what we are ‘doing’ as teachers to what we are ‘learning’ as teachers.” I also talked about the planning that needs to happen to create good and thoughtful questions when working with teachers. I seem to appreciate that purposeful planning is part of leadership and that I needed to ask specific questions to get team members to focus on specific parts of their practices. I commented how all of these ideas had parallels in my own classroom, and my learning there was supporting my learning as a leader.

During this period, I mention a few times, about my “coaching” of another one of my team members about leadership. This teacher was one who would come and complain about different aspects of the team and administration and I began working with her on her leadership role within the team. We had many discussions about how to “talk to the
administration,” and I challenged her to “behave more like a leader.” We talked about different leadership moves she could make to support our team and our team goals. I was making my leadership moves transparent to her.

**Conflicts due to my leadership role.** At this stage of my journal writing, my frustration is growing about being the “go between” for administration and the mathematics team. I use “getting resentful” as a way to describe the situation at the time. Even though I was acting as a connector for the administration and the mathematics team, I believed I was not being viewed as a leader by administration. I also stated that the current relationship between the two could be described as “us and them.” I also wondered about my role related to district administration and was feeling as though I was “a puppet” for the district goals.

Another idea I had mixed feelings about at the time was my effectiveness in a leadership role beyond my mathematics team. I stated I felt my leadership “is limited to my mathematics team, rather than influencing whole school change.”

During this time, there was a lot of pressure placed on me and the mathematics team because of our standardized test scores. Because I was the go to person, I heard more about the situation than the rest of the mathematics team.

**Data Set 6**

**Leadership identity.** During the last data set of the year, my beliefs about my leadership were developing into broader categories. I stated that we must keep students at the core of our work and meet the needs of all students. I seem to have concluded that my focus should be on facilitating change in the mathematics team rather than focusing on
school-wide change. In my journal, I wrote that in leading I needed to expose myself by exposing my learning. I wondered if this is what it meant to be an authentic leader.

I make two statements that seem to answer one of the questions that I had been asking all year. In one entry, I ask myself “how my own beliefs get in the way of accomplishing things” and then in a different entry I answer my own question. I stated that I needed to keep my own beliefs from clouding the work we were doing together. I state definitively “lead learner is the role of the teacher leader.”

In data set six, I saw that I needed to break down the barriers between people so we could all move forward. I mentioned that I had been trying to get everyone together and moving in the same direction. I said, “We all (special education, administration, and the mathematics team) need to be at the table” to make the best decisions and systems for students. This was evidence that I was beginning to look outside of myself to go beyond the whole department view to have a “whole school perspective.” To attain this, I mentioned I needed to keep the talk from being “superficial” in team and staff meetings.

I believed that I was using my learning from my doctoral studies to help explain my beliefs and worldviews and how this influenced my leadership. I brought some of these ideas into our mathematics team meetings because I wanted to use this framework to go through the process of “examining beliefs, norms, and patterns of behavior” to deepen their understanding of their own views.

I continued to have the realization that my classroom is a “vehicle for working on my facilitation skills.” I talked about how the cycle of learning was critical for me. I acknowledged I needed to stay with something long enough to “really learn it.” I
identified my learning cycle as, “Learn it. Debrief it. Tweak it. Decide if it is or is not working. Model this process.”

I wrapped up the year by expanding my leadership role into facilitating a weeklong professional development course related to best practices in teaching mathematics. I had been a previous participant, but now I was beginning to learn the course with the intent of facilitating it in my district. This first summer, I wondered how I could help teachers have the deep learning experiences I had. I used my experiences as a leader in my building to make connections to teachers and principals from different schools. I connected with principals at the summer class about Studio. I stated, “If you have the opportunity to participate in Studio you need to do it.” I gave specific examples about how the teachers in my mathematics team were “learning together to change the culture of our classrooms.” I always came back to the idea “if students were deeply engaging in mathematics, and teachers used common teaching practices in K, 1, 2, etc., imagine where they would be by middle or high school?” In this professional development forum, I used the many opportunities I had to talk about the good work we were doing at my school and the positive outcomes for students. I always invited them to come to see what was actually happening in the classroom.

**Leadership actions with mathematics team.** The leadership actions I focused on at the end of the year seem to relate to practicing and learning more about the actions I was merely talking about during the last data set. I said things like “learning how to do more purposeful planning” and “learning more about implementing ‘high leverage practices’” both relating to working with colleagues. I also noticed that I needed to help make my mathematics team move forward and really “drill down on teaching practices.”
I mentioned needing to work with the mathematics intervention teachers “to come up with a plan for these classes.”

**Conflicts due to my leadership role.** What I wrote about conflict during this data set was minimal. One theme that was consistent for the whole year and what I seemed to be looking for was the idea of having a definite role. I also complained about being a sounding board for the principal to talk about the other mathematics teachers. This put me in a conflicted position regarding my mathematics team. My last conflict had to do with an expanded role of coaching for the following year. I asked “How can I begin in the role of coach to my colleagues when I have never coached before?”

**Focus Group Data**

For myself, the first research question focused on change over time. It is important to note that many MTFs were in various stages of their leadership work when we met as a focus group. Because of this, the focus group responses I explored for my first research question were more about how they viewed themselves as teacher leaders at that point in time. Although, in a sense, they answered a different research question, I believe it still sheds light on my original question.

When I sorted the focus group codes for this question, the following themes arose: broadened responsibility, facilitated a shared vision, facilitated collegial change and leadership capacity, assumed leadership roles in curriculum content, used a leadership voice, and modeled characteristics of teacher leadership.

**Broadened Responsibilities**

Many of the focus group members discussed the idea of how they saw themselves as teacher leaders by relating it to feeling a sense of broadening responsibility. One
teacher, Rhonda, said she began seeing herself as a leader “once you face the realization
students in your school need more than one good classroom, you are compelled to act.”
Jim similarly said he chose to act as a leader because “there can’t be pockets of
excellence in a school.” Eric referred to the responsibility of contributing to “the sense of
urgency” about the work with his colleagues.
  Roxanne related the change in her leadership identity by talking about how her
worldview about teaching “became bigger in scope.” She described the change in her
leadership by “seeing beyond the walls of her own classroom” and thinking about every
student in her school and district, rather than her own classroom of students. She also saw
it as her responsibility as a leader to help other teachers to move beyond their own
thinking as “just a teacher of these students” to thinking and learning more generally.

Facilitated a Shared Vision

Another common theme that arose when I coded the focus group data was the
view that the group saw themselves as the people responsible for supporting and
facilitating a direction for the teachers with whom they worked. Four teachers spoke
about this idea in the way they described themselves as leaders. Eric stated he needed to
“have a vision for where the team needs to go” and “to help create and reach collective
goals for his department.” Jim added to this by saying his leadership guides “a common
focus for my school.” Karen also talked about seeing herself as the person to provide a
direction for the teachers, but she added she saw it as “more of a bottom up situation.” It
seemed clear that she viewed herself and her team as being responsible for creating and
enacting a shared vision.
Facilitated Collegial Change and Leadership Capacity

Another prevalent theme with the MTFs revolved around their work with their colleagues. In this situation I define colleagues in the case of elementary teachers, as the whole school, and in the case of secondary school, this would include a department team. I also include administrators into the group called colleagues.

Most of the discussion about colleagues centered on facilitating change and learning within their group of colleagues. Eric noted he saw himself as “responsible for facilitating others’ learning” and being responsible for “pushing” the professional development work in the department. He also spoke of helping his colleagues take “ownership of Studio.” He commented that he could do these things best by “getting teachers to work together and collaborate.”

Roxanne took a slightly different view about working with colleagues. She used words like “continuous improvement” and “guiding people to be on their own journey.” She was one of two teachers in the focus group who described working and learning “alongside her colleagues.” Kelly stated that she saw herself as a “support for teachers” and preferred working on things “together” with her colleagues.

Peg saw her role as one “to get buy in from teachers” when teachers’ practices were contrary to the work that was happening in the rest of the department. This comment reminded me of Jim’s earlier comment about not having pockets of excellence, but striving to change the culture in every classroom in the school. It seems Peg is thinking in these terms too. She also commented that she worked to facilitate an atmosphere of involvement in change and improvement by being a “tight team.”
Two teacher leaders commented about the necessity of building leadership capacity. Both Peg and Roxanne spoke about that idea being one way they viewed themselves as leaders. Specifically, Roxanne said “to me, a leader is building capacity with other teachers by trying on the work with them.”

One teacher, Karen, noted that she had a huge realization about her role as a leader the previous year. She described that she realized the learning she had as a facilitator paralleled the learning of her students.

Lastly, only two teachers (Kelly and Peg) mentioned a connection to administration. Kelly stated she viewed herself as “a true partner with administration” and Peg said she viewed herself as “working in partnership with administration.” It is not clear why so few of the teacher leaders did not mention administration but perhaps these teacher leaders saw the principals’/administrators’ roles as distinct and different from themselves and their roles.

**Assumed Leadership Roles in Curriculum Content (Mathematics)**

As I was analyzing the focus group data, a few specific roles were mentioned. Rhonda mentioned that she saw herself as “an advocate for mathematics in the school and in the district.” Kelly saw herself as “an expert and go to person” for mathematics in her school. She also noted that in an elementary school you might have many teacher leaders because different teachers will have different content strengths. It seems she was viewing herself as the “expert” in mathematics content and this contributed to her teacher leadership in mathematics. Kelly also saw herself as someone who was responsible for analyzing what was happening in classroom. Eric identified being the Studio teacher as one of his leadership roles.
One unique response came from Peg. She was the only participant who talked about seeing herself as “responsible for the schools test scores going up.” It made me wonder if this was because she was in the role of Mathematics Coach that she was making this connection or if there were other factors in her school context.

**Used a Teacher Leader Voice**

Three MTFs talked about using their voice in their leadership role. Eric felt it was important to use your leadership voice in a variety of contexts, but it needed to be backed up by your classroom practices. It seems he was talking about the need to be authentic and to use credibility as a good teacher to move the work forward. He also noted that some in his department have a “loud leadership voice” that was not always used to move what he viewed as important work, forward. This caused me to wonder about his team and if they had a shared vision of teaching and learning in the school. Jim also commented about “using your leadership voice in a positive and productive way.” Bob stated he saw himself as having “a voice” in his mathematics community.

**Modeled Characteristics of Teacher Leadership**

Another theme that emerged from the focus group included descriptors that could be classified as characteristics of leadership. Peg commented that “being reflective” helped her develop as a leader. Rhonda came to the realization, through her own learning, that she was most effective when she could relate “empathetically” to other teachers with whom she was working. Eric’s saw himself as building “efficacy” in himself, his students, and his colleagues. He also stated he modeled “passion” for the work and felt he had influenced others’ passion for the work too.
Kelly, Peg, and Roxanne all stated, in their view, teacher leadership was not “evaluative” and they worked hard to clarify this point to the teachers with whom they worked. They also noted this was an area that caused many ongoing issues in their new role. Peg added that she saw herself more to “assist and help” teachers in their teaching practice.

Karen stated one characteristic of her leadership was to “be intentional” in everything she did. Kelly used the word “relentless” to describe her stance as a leader. Over the course of her leadership development, she came to realize that persistence and resilience were necessary and most teachers needed ongoing support.

Last, two MTFs spoke about their responsibility to “make the invisible, visible.” Both Rhonda and Eric referred to that idea as a characteristic of teacher leadership. Eric spoke more specifically about teaching practices where Rhonda spoke more generally related to the idea of being transparent in your work teaching. She said this had helped her when she was transitioning from classroom teacher to mathematics coach and used this idea in her current work with teachers.

**Compilation and Summary of Data from Journal and Focus Group**

This summary is based on a compilation of data from the six data sets related to question 1 in my personal journal and the MTF focus group.

**Leadership Identity**

The way I viewed myself as a leader at the beginning of the year was very different from how I viewed myself at the end of the school year. The transition to teacher leader began gradually. I began the year as an experienced classroom teacher but a novice teacher leader. I viewed myself in a variety of ways during my first year as an
MTF. Those varying perspectives help trace my development as a leader throughout the year.

**Advocate for students.** One way I identified myself early in the year was as an advocate for students. Along with my colleagues, I pursued systematic changes that would make our school more equitable for the students’ opportunities to learn mathematics. The role of advocate was an area in which Rhonda, a focus group participant, also identified in the beginning of her leadership development.

**Support for colleagues.** Shortly into the school year, I began stepping outside of simply viewing myself as a colleague, and began to see myself as a support for my team members by supporting emerging teaching practices and important ideas from Studio. The role of teacher leader to help support colleagues was a theme echoed throughout the data from the focus group. Some focus group members described an urgency to act when they began to notice major differences in teaching and learning from one classroom to another. One teacher said he chose to get involved in supporting colleagues because he believed there should not be pockets of excellence in the school. He and others felt it was their duty to influence beyond the walls of their own classroom and begin to influence on a broader scale.

**Maintained a disposition of continuous learning.** An important theme in my leadership development centered on the idea of the importance of continuous learning. Throughout the year, I made multiple statements to indicate I valued this as a way of learning about leadership. I referred to making my planning, teaching, and reflecting transparent for others and through this, “I expected to continue to grow and learn about teaching and leading.” Not only was I an advocate for continuous learning for myself, in
my journal I frequently stated I believed in continuous improvement for all—including colleagues, administrators, and students.

My impression of continuous learning included what I was learning from my doctoral studies. The learning helped me better understand my changing beliefs and my worldview and provided a framework for my colleagues’ understanding of their own perspective. I also made connections between improvements in my teaching practice to improvements I was making in my leadership practice. It was not until late in the year that I referred to my leadership role as “lead learner.” The theme of continuous learning was particularly pronounced in the responses Roxanne made in the focus group.

**Questioned abilities as a leader.** Not surprisingly, at the beginning of the school year, I noted many ways in which I was questioning my abilities as a leader. Each new layer of leadership began another cycle of learning. In the first data set, I knew about things a leader was supposed to do, but I did not yet know how to do them. Early in the year, I questioned my abilities as a leader and my mathematics content knowledge and felt as though I should “know more.” As the year progressed and although I was beginning to make an impact as a leader in my mathematics department, I still questioned how I was supposed to “lead the change process outside of my school.” Each new layer seemed like a brand new situation because I was not yet able to generalize my learning about leadership to each new situation.

Another example of the types of questions I was asking because of my novice status included the need to “facilitate transformative experiences—don’t know how yet” and I should “use evidence from the classroom to know where to press teacher—this is in
theory right now.” I also wondered how to keep from slipping backwards in one area of leadership when focusing on another area.

A statement further reinforced the viewpoint about my own leadership where I admitted that district office administrators referred to me as a leader, but I did not yet view myself as a leader.

Became the “go between” person. Early on, I was viewed, and, even viewed myself as the “go between” person for my team members, the district administration, and the school administration. My team members saw me as having important information, and they would come to me with questions and share information with me. By “choosing my words carefully,” I believed I could be trusted to accurately share team information and concerns with the administration. Even though I never felt comfortable in such a role, it made sense given the more visible role I had recently taken on. That was especially true later during the year when I became frustrated with my mathematics team “coming to fill me in and be filled in on” what was going on with other team members. My frustration stemmed from the topic of these conversations—not related to teaching and learning.

Late into the school year the back and forth continued, but I still did not feel I was being viewed as a leader by the administration, but rather as a sounding board for my team and administration.

Another way I acted as the go between was my connection to outsiders. Teachers from outside the district contacted me on numerous occasions as a result of their having heard of me because of our school’s Studio classroom. I always agreed to the observations, but encouraged teachers to observe every mathematics classroom in the school to capture the vision of teaching and learning mathematics in our school.
**Led by example.** A few months into the school year, my leadership identity was changing. I started to realize I could not simply tell teachers to focus on improving their teaching practices, but I needed to set an example for other teachers to see how I was changing my own practices. My perception was that I was going to be more effective if I could “show” teachers how to examine and reflect on teaching through my own learning and by sharing my knowledge of teaching. It was through our Studio professional development work that I felt I could make a difference beyond the walls of my classroom and provide a vision of reflective teaching practice to my colleagues. I shared my strengths and weaknesses as a teacher with my colleagues by opening up the doors of my classroom to others.

Leading by example was a leadership stance I seemed to value throughout the early to mid-part of my initial year as an MTF. I referenced valuing actions over words. I felt people could learn from me because I had the opportunity to “serve as an example” of a teacher who was willing to learn alongside colleagues. I referred to myself as the lead learner.

**Facilitated a common vision.** My belief was everyone on the team had much to offer the team as a whole. In order to make the team better, I would need to find and utilize everyone’s strengths. I also needed to try to get everyone together and moving in the same direction. That idea became clearer to me as I started to facilitate our mathematics group around common goals related to teaching and learning. I mentioned bringing teachers together to work on ideas from Studio and common goals related to improving teaching practices—our common vision of teaching. As the year was nearing an end, I strongly believed teacher leaders were responsible for collaborating with team
members to facilitate “a shared vision.” Such a realization was evidence I was developing a broader perspective—from classroom, to department, to the entire school. There was one caveat, however, to such a broadened perspective. While I acknowledged this broadening was ideal, because there was not yet shared vision of teaching and learning school wide, I chose to focus on facilitating change within the mathematics department.

Facilitating a common vision was also a theme that came up in focus group conversations. Most of the teacher leaders spoke about their leadership responsibilities as “guiding, supporting, and facilitating” a vision of teaching and learning in their schools. They emphasized the importance of having collective goals to give direction to their vision of learning.

**Engaged in transparent leadership.** As the year continued, I was beginning to see beyond my own classroom and I felt responsibility to make my planning, teaching, and reflection transparent for my colleagues. I also saw the need to have my mathematics team colleagues examine their own worldview to explain their beliefs and patterns of behavior in their teaching. In that context, I was attempting to work with colleagues in a way that made it easy for them to see my intentions. My intention was for teachers to make the connection between their own beliefs and their actions in the classroom.

Over time, I began to think of teacher leadership as a set of behaviors rather than a defined role. If that were true, then I needed to work with my colleagues on making my leadership actions more transparent. And that was precisely what I began doing toward the end of the year. I started by “coaching” a colleague about how to effectively talk with administration and about leadership moves she could make with the team that would help support our shared vision of teaching.
I also started working in ways that made my colleagues’ learning more transparent to others. By asking rather than telling, I was able to draw out what teachers were understanding about our work and gathering information that would help me know where they might need more support.

Rhonda from the focus group said this in essence by stating she needed to “make the invisible, visible.” By allowing my mathematics team colleagues to see how I was working on my leadership practice, I was enacting what Rhonda had described. That action was consistent with my view on continuous learning. Such thinking seemed to be a precursor to being able to build leadership capacity with my colleagues.

**Shared responsibilities for leadership.** As I began sharing leadership responsibilities with my colleagues, expectations for my colleagues increased. Late in the school year, I began pressing team members to share in the leadership responsibilities. I encouraged colleagues to have planned and purposeful meetings and encouraged team members to use their voices about learning in contexts outside of our school. Through those actions, I was attempting to shed the role of being the sole “go to” person for the team. The idea of building capacity within my team was emerging as I explicitly started to uncover my leadership role. “The necessity to build leadership capacity” was a theme specifically brought up by two of the focus group teachers.

I begin using words such as responsibility, empowerment, and making a difference. That indicates a shift in my thinking about who I was becoming as a teacher leader. The shift from a more self-centered perspective to a broader perspective becomes more evident. I wrote about wanting to “make a lasting difference beyond my classroom” and “being responsible for collaborating and facilitating others to create a shared vision.”
I began enacting many of the teaching routines from Studio and embedding the work into our Professional Learning Community (PLC) meetings. I was asking teachers to try the work out in the classrooms and bring evidence back to the group so we could debrief and learn from one another. While my efforts were not always successful, I was becoming more specific about the collective work we needed to be doing.

**Used a leadership voice.** It was during the latter part of the year that I began talking about using my “leadership voice” to empower teachers. It occurred to me that the person I had to empower, before trying to empower others, was me. Because of the language I was using in my journal at that time, I would infer that I was beginning to feel empowered in my leadership role so I was more able to empower others.

“Teacher leader voice” was an identified theme in the focus group interview. Throughout the 90-minute discussion, the leaders described a variety of ways they used their voices in different situations. Specifically, participants suggested that leadership voice was an important tool for influencing mathematics instruction in their school, reinforcing the vision for teaching and learning, and again reinforcing the changing culture in the school. Eric, a focus group participant, emphasized that what teacher leaders said needed to be authentic and “backed up by your classroom practices.”

As an individual, I was finding many situations where I could use my leadership voice—as a facilitator of our district curriculum, in Studio professional development, and during other district-wide trainings. I was becoming more visible throughout the district and I used every opportunity to talk about the shifting culture of the mathematics classrooms in my school. The Studio and I were becoming well known enough that many teachers contacted me to observe my teaching. I always said “yes,” but encouraged
visitors to observe every mathematics classroom in the building to get a sense of the culture in the school, not just my classroom.

Shortly after school was out for the year, I had the opportunity to connect with district principals during a weeklong professional development class. During the class, I encouraged principals to participate in Studio and was able to talk about the “good work” we were doing at my school. It seemed an ideal time to make connections to the work going on in the professional development class we were attending and to the work going on in my school.

**Brought people together.** By the end of the school year, I viewed my leadership stance as one of “breaking down barriers” and “bringing people together to make decisions.” By looking outside of the mathematics team and myself, I was gaining a broader perspective. I was making sense of my changing views with what I was learning in my doctoral studies. I was bringing the information into our mathematics team meetings as a way to facilitate making sense of the change process we were all going through together.

By the end of the year, I came to the realization that my classroom (of students) had been a vehicle for me to work on my facilitation and leadership skills with my colleagues. In addition, working on my leadership with my colleagues, in turn, provided a context to work on my leadership practice that I could generalize about and use in different settings.

**Became a change agent.** During data set number three, a big shift seemed to be taking place in the way I was viewing myself as a teacher leader. While I still spoke of continuously working on my teaching practices, I also saw myself as a “change agent for
other teachers.” I stated that it was my responsibility to provide transformative learning experiences for others, just as others had done for me.

Focus group participants Roxanne and Kelly, who were both elementary teachers, spoke of continuous improvement and change through working together with colleagues. Roxanne felt it was important while working alongside colleagues to also guided them “so they can be on their own journey.” I referred to this same idea in my journal as “providing transformative learning experiences for others.”

**Characteristics of Leadership**

Toward the end of the year, I reflected about the leadership qualities I valued and thought were my strengths. These included the following: a good listener, collaborator, honorable, caring, risk taker, growth minded, and nurtured a positive environment. Upon reflection, it occurred to me that those characteristics were ones I valued when I worked with leaders, colleagues, and my students.

The following additional characteristics of leadership emerged throughout my journal and were reinforced by my colleagues in the focus group.

**Trustworthy.** Early in the school year, I described myself as a good listener and capable of communicating with most people. I highly valued my relationships with teachers and described myself as a trustworthy colleague. I stated I had “the capacity for speaking with and listening to others while simultaneously speaking with authority.**”

Early in the year, I identified trust as being important. I described having trust in other people and trying to continually develop trust with others by being “transparent” in my leadership practice. Two MTFs also described “transparency in their work” as a desirable leadership quality and a way to gain trust.
In my journal, I described myself as a “connector” who was protective of some of my mathematics team members. I believed I could be trusted to accurately share team information and concerns with the administration. I also described myself as having the ability to “choose words carefully.” That characteristic was particularly important in navigating the relationship between my colleagues and the administration. By default, I ended up being the go-between with my principal and my colleagues. While never smooth or easy, such a “partnership” was increasingly necessary to continue the work of Studio and the work of the mathematics department. Navigating between these two entities proved to be one of the most difficult parts in my development as a teacher leader. None of this would have been possible without trust.

**Persistent.** Later in the year, I talked about my “persistence” with sharing my ideas and beliefs about teaching with the mathematics team, the SLT, and the administration. As evidence, I noted my ability to work with individual teachers or with teams of teachers. Even though I worked well with other groups of teachers, I was not always successful in facilitating change. Even so, I was “striving for effective communication” with others and despite the feeling of “us and them” with the administration, I continued in my attempts to meet with my principal about mathematics-related issues. That was an example of my persistence. In the focus group, Kelly relayed this message in a slightly different way. She described herself as being “relentless” in her focus on continuous improvement with her colleagues. She said she “came to realize persistence and resilience” were necessary leadership characteristics.

**Metacognitive.** By mid-year I made notes in my journal indicating, “my style as a leader is similar to my style as a teacher—it is who I am.” I stated that I needed to have
the courage to follow my heart. I described myself as metacognitive. The idea of metacognition also came up in the focus group interview when Peg described herself as “reflective” and she believed that supported her learning and her effectiveness as a teacher leader.

**Research Question #2: What Dilemmas and Feelings Arose Because of Developing as a Teacher Leader?**

**Journal Data**

Most of the data related to this question focused around issues related to my own identity as a leader as well as the mathematics team. Because of my increasing role as a studio teacher, there is evidence of the impact of this work in terms of dilemmas and feelings throughout the school year. Because of the overlap with Question 1, the reader will also notice some redundancy as the story continues. Once again, this data was analyzed longitudinally to show changes over time.

**Data Set 1**

**Leadership identity issues.** Intellectually, I knew about teacher leadership. I knew that teacher leaders should ground their work in the classroom. This required spending time in other teacher’s classrooms—something I was not currently doing due to the lack of time and school structures. I knew what I should be doing, but I was not sure how to do it. My internal voice kept telling me I should already know how to be a teacher leader. Self-doubts about my content knowledge were also folly for my subconscious.

I felt it was my responsibility to move my team forward. I wrote in my journal about feeling strongly about being part of a team because of the multiple perspectives that a team can bring. Even though I knew how critical effective team collaboration was, I
was starting to feel like I was walking in two worlds now—the world of being a colleague, and the world of teacher leadership.

**Mathematics team issues.** As I looked at the categories that came out of my first two months of school, I began feeling consternation about the new leadership role I was in and how it affected my role as a mathematics team member. That thinking was reinforced when I brought up the idea of creating a team action plan. I imagined this would have been a productive activity to help the team come up with a focus for the year. I wrote that the team thinks we are “doing well because everyone is working hard.” I noted in my journal that working hard did not always equate to increased student learning. I suggested the team set a goal related to our most recent Studio focus. I asked the team to intentionally plan for conferring with students, once per week. At the time, I noted this task would be an opportunity to guide conversations toward ideas related to improvement of teaching practices.

I began realizing the team had differing priorities than mine. One of the priorities that came up at this point was working on unit skill sheets. We had recently changed our grading system to a proficiency grading system so skill sheets were needed for every unit. This was extremely time consuming and we all saw the benefit of completing the task collaboratively. The work was worthwhile, but it conflicted with my priorities as a teacher leader.

**Studio issues.** I noted I was getting anxious about the first Studio of the school year. Even though I had been in the role of the Studio Teacher before, I felt there was added pressure due to the expectations from the district administration. I was nervous because I did not feel my students are “ready” mathematically. I question how that would
reflect on me as their mathematics teacher. Would I be judged by my students’ lack of mathematical ability? I was also feeling apprehensive about our first Studio because a district administrator was bringing teachers from his former school to witness the “success” of Studio. I discussed an advantage of having so many teachers in my room for Studio—lots of data about what my students understood and did not understand. Student discourse data was invaluable information for me as a teacher. I often used that data to inform my future lessons, a luxury not many teachers had.

The Studio day came and went. Many of my earlier fears were calmed once I got through the day. Our visitors seemed to welcome the professional development and left with important goals to take back to their schools. A surprising moment at the beginning of the day was when the principal of a different middle school announced—with her teachers looking quite surprised—that her school was making plans to de-track mathematics classes like we had done years earlier. That statement marked a critical moment where I realized the potential impact that our mathematics team and the Studio work had beyond my school.

Shortly after the first Studio of the year, our Superintendent wrote in one of his “shout out” emails a thanks to our mathematics team for being the initial “guinea pigs” for Studio. This email went out to the entire district in recognition for the work started at my school. This struck me on a couple of levels. First, it named what leadership looked like and it named the work of the team, not just me. I had struggled with this idea for a while. I questioned how I could create a team that believed they had an equal stake and responsibility in our work when I was continually being placed in front. Second, I needed his email to begin to see the potential I had as a leader.
Data Set 2

Leadership identity issues. In the second data set, I was reflecting on my background as a classroom teacher, reluctant leader, and researcher. I felt conflicted about these seemingly distinctive roles. I often questioned my own teaching practices. I contemplated who I was becoming and wondered if my identity was changing.

At this time, my speculating about leadership had changed from questioning my leadership role to more broad-based leadership questions. Examples of the questions I asked during this time frame included the following:

- How do we share our working knowledge of teaching with others?
- How do I deal with people who hold different values that may impact my role as a leader?
- As soon as one person has more status or is seen as a leader, is there really shared leadership?
- What if the leadership style and direction of the school does not align with my beliefs?
- Is laissez faire leadership effective?
- Am I in conflict with the laissez fair leadership because they seem to work in a rank based system where our team works in a peer based system?

In data set two, I realized I did not need to persuade everyone about how important working on teaching practices were—I just needed to work on improving my own teaching practices. I also noted that I was beginning to realize that the importance of listening as a leader was analogous to the importance of listening as a teacher.

Mathematics team issues. My team was unaware of my new leadership role as a MTF and I felt conflicted about this. It was draining for me to try to keep everything “perfect” in the mathematics team. One member regularly talked about wanting to leave because of frustrations with the administration and the school culture. I sympathized with her situation, yet I was motivated to keep the team together.
In this data set, I came back to the idea that if I was singled out, was the team really operating as shared leaders? I was trying to figure out systems to bring more structure to our team meetings while trying to maintain the idea of shared leadership. I was noticing that I was still struggling with competing priorities among the team members. I wondered if that was causing the tension within the team. I worried about how to get my colleagues to focus on enacting routines to improve teaching practices—one of the main goals of Studio. As a leader, I was recognizing the importance of analyzing the work of teaching as a way to inform me about what teachers needed to learn. Again, as in the previous data set, I recognized the necessity to focus on my own teaching practices to create a context for sharing learning with my colleagues. But I also noted, in the face of resistance, I should not let them interfere with what I viewed as critical to my role as a teacher leader.

**Studio issues.** In data set two, my journaling related to Studio decreased in frequency. While I continued to acknowledge that classroom visits and collecting data snaps helped teachers stay grounded in the classroom practice, I was beginning to write more specifically about the artifacts from Studio. I was beginning to think about how the ideas the team generated during our Studio professional development days could be kept from getting lost. These ideas and artifacts represented the team’s collective learning, so they were important to keep at the forefront of the team’s work.

**Administration issues.** During this phase of data collection, tension between administration and the mathematics team increased which caused me to wonder if we were destined to be “them and us.” I also wondered if not including the principal in team discussions created the situation where he just “tells.” The mathematics team was at odds
with the administration because of scheduling decision that were made that did not allow
time for a mathematics intervention for our struggling students. I acknowledged that we
needed the administration’s support because they ultimately made the scheduling
decisions, but we needed to balance that by continuing to be strong advocates for our
students. I reminded myself that I should not let these types of setbacks deter me from my
purpose in advocating for students.

I noticed a connection to my first data set about being in two worlds. On one hand,
I was a part of a team of teachers, but then was repeatedly selected to serve in leadership
opportunities. I had been selected to be the Studio teacher for the second year, to serve on
the District Curriculum Team to select new mathematics curriculum during our adoption
period, and now was selected as an MTF. Because of my access to district administrators
and decision makers, I began wondering if my mathematics team was questioning my
alliance to them and if I would become the principal’s “spokesperson.”

Data Set 3

Leadership identity issues. In data set three there were significant changes in my
roles at school and beyond the school. I was selected to be on the School Leadership
Team (SLT). Of the eight people on the team—two were administrators, three were
mathematics teachers, and three were teachers from other disciplines.

In addition, I was given an opportunity to begin facilitating Studio professional
development for others in the district. I went into this with much uncertainty. I wondered
how I could influence their teaching practices when I only saw them every two months
for Studio. I questioned whom I was supposed to be influencing. Was I to influence
teachers, administrator, or both? Lastly, I was not convinced that it was within my realm
to change mathematics instruction at another middle school and wondered if leadership from the people who had actual authority would be more impactful in this situation. 

It was during this segment of time that I first mentioned being overworked and underappreciated. The idea that kept me going through all of this hard work and turmoil was striving to learn as much as I could. After all, I had to keep going because I had high expectations for myself as a leader and for others. This perseverance was necessary for me to continue my process of changing and growing as a teacher leader. I saw this as an example of transformative learning in action.

My beliefs about transformative learning at this time revolved around the idea that leaders are made, not born. I stated that I believed leadership was a learned set of behaviors or actions. Even so, I still questioned whether my humble leadership style was what gave me traction with the teachers with whom I worked. At this time, I felt I was not making progress with the administrators and teachers on the School Leadership Team. This team began working together during this period. I planned to apply the leadership learning I had within the context of the mathematics team and apply it to the entire school.

**Mathematics team issues.** I was no longer aligning with the mathematics team entirely. I was getting tired of listening all of the time and the tones of the conversations were becoming frustrating to me. The negative attitudes of the team were becoming harder to handle. This negativity did not gain us anything. I started to combat this attitude by acting as the “cheerleader” leader. I acknowledged that things were discouraging but we had to keep moving forward in our work. I reminded everyone about the focus of our work being on our more rigorous mathematics program and improving our teaching practices to raise mathematics achievement in our students.
At this point, I began to feel disconnected from both the mathematics team and the administration. I had mixed feelings about my responsibilities. At one point, the assistant principal emailed me all of the mathematics team’s standardized test scores without any information. It left me wondering what I was supposed to do. Was I supposed to pass them along to the team, analyze them, or was that just to share information? In my journal, I noted the lack of effective communication often caused confusion on my part.

I began to relate my disconnection from the mathematics team and the administration to the loneliness I was feeling. That sense of loneliness seemed to be a result of my changing role. I questioned whom I could really confide in. It seemed that I could not confide in the administration and there were no other teachers in my mathematics team that were going through similar leadership changes. When I shared my struggles with my mathematics coach, did she turn and share these with my principal? I was not sure.

Data Set 4

**Leadership identity issues.** Questioning about my idea of leadership continues in this data set. I wondered if there was a connection between my leadership stance and my personality. I also questioned how teachers could feel empowered in order to have some control over their situation. And last, I questioned my lead by example stance. I wanted to know how leading by example works if teachers do not know what to notice?

This was the second data set where I brought up the idea of burn out. My own thinking about burnout brought me to the work of Maslach (2003). She reported the areas most often associated with burnout are the following: workload, sense of control (or lack
of), reward (or lack of), community, fairness, and when lives are chronically mismatched with belief system. After only six months of school, was I already feeling burned out?

I continued to wonder about my place on the SLT. Even with the few forward thinking team members, I was left wondering what we were actually learning together as a team. To me, it seemed that the status quo was the preferred state with many members of the team—including the administrative team. A statement I made during this time was that I enjoyed the process of learning, and I wished we had the opportunity to learn on the SLT. At the time, I was convinced that if the SLT was learning together then we would be able to create goals that the whole staff could support. What happened instead was resistance from some members of the SLT. They were unwilling to ask staff to make any changes. I could not make sense of the unwillingness of some people to try something new.

**Mathematics team issues.** My work with the SLT and the mathematics team required me to deal with disappointment by having a “short memory,” staying persistent, and focusing on our goals. Again, I mentioned feeling alone in that struggle. I worried about losing two of our solid mathematics team members and fretted about what this would mean for our collaborative work. I mentioned being both frustrated and inspired about our current vision.

As part of my work with the mathematics team, I was beginning to create specific tasks for the team to discuss at our weekly team meetings. On one occasion, I had teachers bring student work so we could analyze the quantity and quality of student justifications. This turned into frustration when only some of the team members were prepared and had followed through with the agreed upon plan. On another occasion, I
had teachers bring “select and sequence” sheets to share with the team so we could
analyze and learn from each other. To avoid the same fiasco from the previous team
meeting, I asked teachers to scan and upload their sheets and email them to the team
because we were not going to have a meeting as originally planned. I encountered some
push back from one teacher and it made me consider what learning together meant. Did it
only mean sitting down face-to-face and discussing ideas or were there other ways to
learn together? Or did they just not get the work done? I did not know.

This idea came up again when I was thinking about the role of part-time teachers.
Emerging in this data set was my questioning about how to keep part-time teachers fully
engaged in our collaborative work. Were they missing out on learning together if they
were only at our meetings half of the time? I could not solve this problem, but it affected
the work of the mathematics team.

Data Set 5

Leadership identity issues. During the fifth data set I felt like I had made no
impact on administration and I questioned this by stating “if they don’t talk to me then
they don’t see me as a leader.” I was bothered that I had not been included in the
administration’s decision making and this caused concern that I was not trusted with big
decisions. I noted that one of our newer mathematics team members seemed to have great
access to the administration and this caused me to question my approachability and my
role as a teacher leader.

During this time I began questioning where my role ended and the principal’s role
began. I asked if I was doing work that the principal should have been doing. At this
point, I questioned if the definition of a leader was “doing what needs to be done
regardless of your title or role.” This disagreement in my mind was causing me much angst.

At this point in time, I was better connecting my mathematics leadership work with my work on the SLT, although, I continued to wondered how my actions should be the same or different in the two contexts. I noted that working with the whole staff caused me to have some “aha’s” about my work with my mathematics team. It made me appreciate what we had that was working. It seemed to me a lack of communication was a problem with the whole staff. I speculated that lack of communication was hindering staff learning. I felt the learning that was happening was merely surface level. This caused me to wonder how we might improve the flow of information at the school, so teachers could begin engaging more deeply in the work of teaching and learning. I was beginning to see the potential of using my leadership skills to bring about change.

Mathematics team issues. At this stage, I mentioned some jealousy of a team member who commented, “Melinda’s plate is being cleared so she can do other things.” This comment was directly related to opportunities I had to work in other middle schools to facilitate curriculum and Studio work.

I mentioned feeling a dilemma of trying to influence the mathematics team versus trying to influence the school. I was on the SLT and was a teacher leader in the mathematics department. I questioned what actions would gain leverage or cause friction in the mathematics team compared to the whole school. One team member referred to me as “the boss.” Was this how I was seen by my other team members? After asking other members of the mathematics team to take on some of the team facilitation, one team member stated “you’re willing to do this on your own time, I’m not.” This attitude caused
concern about teachers not being willing to do anything outside of the school day. I was being paid a stipend for my leadership work and my extra summer work, but I could not share this with the team.

During that time I expressed frustration about a team member going behind everyone’s back to make schedule changes that would impact the entire team. I continued to talk about always having to hear about the problems between administration and some mathematics team members.

In data set five I noted the confrontational nature of the administrative and mathematics team meetings. I noticed that neither side heard or saw the other side. The Assistant Principal often referred to the mathematics team sarcastically and this attitude added to the feeling like the administration did not support the mathematics team. I did not want to get involved with the negativity, but I also felt I could not ignore it. I noted, “All of this animosity is getting in the way of what we need to be doing … working on our teaching.” The feeling of isolation continued in this data set.

In addition, during this time, one of my grade level team members made the decision to teach fewer mathematics classes for next year. This was disappointing to me because she was one of the team members I confided in the most.

During this data set, I noted an incident about feeling pressure about our statewide standardized testing because the team had made the decision to only test all students twice. At the time, that decision caused a huge response from one of our district administrators and we had to figure out a way to test all students a third time before the testing window closed.
Studio issues. At the end of data set five I was expressing the sense of loss about giving up my Studio teacher role for the following year. I had been the Studio teacher for two years—it was a role in which I was comfortable. I mentioned that a mathematics colleague was lobbying to serve in this role next year. I was looking at the positives by noting, “great things come out of Studio days.” I thought about the potential in every Studio day—including the following year’s Studio—as more opportunities to learn and get better at teaching. During Studio, the team had the opportunity to do this work together.

Data Set 6

Leadership identity issues. I continued to question how my leadership should look school-wide compared with the team. I was still wondering what my specific leadership practices should have been, and what the principal’s practices should have been.

I was broadening my view of leadership by noticing it was critical to align goals for the district, the school, and teachers. I questioned whether teachers could get to deeper levels of understanding of common goals if they did not go through the process of examining beliefs and patterns of current thinking together. I believed if you merely stayed at the surface of beliefs, transformation of people could not happen.

Once again I questioned whether the administrators believed I could have impact outside of my mathematics team. I questioned whether I could have impact outside of my team.

One responsibility for my expanding teacher leadership role was to become a facilitator for the district’s weeklong “Best Practices” professional development class. At
the end of the year I was beginning this process. Once again, this new situation brought up many feelings of inadequacy.

I noted statements of feeling very tentative as a facilitator and asked questions such as “How do you facilitate when you do not feel confident?” I felt like I had an overall understanding of mathematics best practices, since these were the practices I worked on every day in my classroom, but I did not yet understand how to facilitate this for others.

Mathematics team issues. In the final data set of the year, I began talking more about the specific actions that would cause changes in teaching practices. It is at this time I realized that the idea of creating systematic changes and having systematic routines in place facilitated department-wide changes. I mentioned the following changes as needs for the mathematics team:

- Teachers need to get into each other’s classrooms regularly.
- When we set goals, we need a feedback system for accountability.
- We need to collect more data to help us make decision and to get feedback related to our goals.
- We need a systematic feedback system that is aligned to the principal’s goals so he can have a way to feed back information to the system.

Even with the suggestions about systematic changes, I still wondered if I was solely responsible for making sure these changes happened. Even though this dilemma was at the forefront of my mind, I felt I did not have the necessary support of the principal and the mathematics team to be able to enact the ideas.

Leadership identity. During the last data set, I continued feeling like I was doing the leadership work alone. I was feeling separated from others by the experiences in which I had the opportunity in which to engage. My role as a leader was still on my mind
and I was feeling like leadership meant “trying to do it all.” I was questioning myself about what was “enough” to the point of using an analogy of a sinking boat. “I’m in a boat filling up with water and I’m scooping as fast as I can, but it is sinking ever so slowly.”

An important question on my mind at the time was “How do my own beliefs get in the way of accomplishing what I set out to do?” Was this clouding how I was “seeing” things?

**Focus Group**

When I sorted the focus group data related to the second research question, four major themes arose: feelings of being an imposter, uncomfortable feelings, structural limitations, and leadership identity issues.

**Feelings of Being an Imposter**

One of the major themes related to feeling and dilemmas of becoming a teacher leader was the sense of being an imposter in the complex role of teacher leader. Roxanne captured this by saying “I wonder why in the world they chose *me* for the MTF?” Rhonda spoke of her feelings of uncertainty by describing how overwhelming it was to be leading colleagues about teaching when she felt she was not a master teacher herself. Kelly, who described the difficulty of the expectation to facilitate and teach other teachers “when I was still working on my own teaching practice,” echoed Rhonda’s sentiment. Kelly referred to the Studio work by also noting that it was a challenge putting into practice teaching routines you have never seen modeled. Rhonda punctuated the conversation by talking about being a teacher leader, but not being sure about what to focus on with colleagues. She said, “They look to you for direction and guidance and I didn’t always
know what the focus was.” Roxanne added, “Admitting to my colleagues that you didn’t know it all actually allowed me to begin to understand what leadership is.” Roxanne’s statement showed that she valued the idea of teachers learning together and had come to this realization during her fellowship term. She also seems to be pointing out the role of authenticity when trying to overcome feelings of uncertainty.

**Uncomfortable Feelings**

Another theme that came up while coding the focus group transcripts was how the leadership role affected the fellows’ relationships with their peers. Two teachers voiced their uncomfortable feelings because of status changes when they took on leadership in their respective schools. Eric, the youngest and most recently hired teacher in his department, said: "I came into the department with this slight status change, and it made people say 'who is this guy?'"

In addition to the uncomfortable feelings because of status changes, these emerging leaders had to field many questions about their role from their peers. Kelly, Eric, and Roxanne all articulated that people questioned their motivation for doing so much “extra” work. One teacher shared “without a title or getting paid extra people wondered about my motivation. They thought I was crazy for working so hard.” These teachers were all full-time classroom teachers and not instructional coaches, so these reactions were not surprising. At the time, my theory was those questions would not have come up if a teacher leader held a formal leadership role because ‘leader’ was in the job description.

Another situation causing MTFs to be uncomfortable was the anxiety about feeling as if you were evaluating your peers. Two teachers, Karen and Kelly, conveyed
this idea. Karen recounted “I’m just another teacher at the school, so my leadership role put me in a funny relationship with my peers because it seemed evaluative.” She went on to say she was still trying to overcome the fragile relationships with her colleagues.

**Structural Limitations**

Some of the dilemmas of the MTFs in the focus group had to do with structural limitation and challenges when working within school systems. The group of fellows each worked in different schools and represented five districts. Some of the fellows were full-time classroom teachers, some were part-time mathematics coaches, and others were full-time mathematics coaches. The comments from the fellows represented some of the challenges they faced.

Bob and Karen represented the same district and expressed frustration with “trying to be a leader without school or district support” and not feeling supported at the district level. Bob stated he was concerned about sustainability when the fellowship was over and the fact that the district had not seemed to fully embrace the work they were doing. Roxanne articulated she felt “bound by responsibilities of the fellowship” even though there were many things out of her control.

Teachers who were full-time classroom teachers offered a unique perspective. Kelly, Roxanne, and Eric asserted, “Being a full time teacher limits what you can do as a leader.” Roxanne asked, “How can you be effective as a teacher leader when you teach full time?” Eric stated he was “jealous of people who get to coach because they get to get into other classrooms.” There seems to be a conflict about the need to get into others’ classrooms and to continue working on teaching practices. There does not have to be a formal role of “coach” to be able to get into others’ classroom, but these comments cause
me to wonder if these sorts of things were happening regularly in schools that had teacher leaders who were also full-time teachers. I wondered if the structure at the schools would support full-time teachers?

Another feeling voiced by participants was frustration with how slow change takes place in schools and in a school system. Kelly felt “disenfranchised at times about trying to affect all layers of the system,” the classroom, school, and district. Eric attributed this “slow movement” to the challenge of leading colleagues who were resistant to the ideas being put forth by the teacher leaders and Studio. He felt his school was lower in implementation so it took longer for change, while other schools that were higher in implementation change would be “easier” and “faster.” Eric wondered if school culture impacted implementation of improved teaching practices.

**Leadership Identity Issues**

Even with the challenges of leadership in schools and districts, the focus group participants talked about the sense of responsibility they now had due to their leadership position. Eric stated the “sense of responsibility” that came with his new role was an “aha moment” for him. Roxanne described her feeling of responsibility as “overwhelmed by the enormity of it.” She related learning about leadership the same way as she thought about learning about teaching. “It’s the realization that the more you learn about how students learn mathematics, the more you have to be ‘on’ the whole time. Leadership is like this, too.” Kelly agreed, but stated that as a teacher leader you continually are asked to add responsibilities to your leadership. She also shared “the time commitment to the MTF has affected my personal life.”
Compilation and Summary of Data from Journal and Focus Group

When I analyzed for the collective data for codes relating to feelings and dilemmas, I found they related to four major areas: leadership identity, the Studio role, leadership issues as a team member, and structural issues.

Leadership Identity

Feelings of uncertainty. The data from my journal related to my conception of leadership was filled with questions as I was trying to actualize my understanding of leadership. I was also trying to figure out who I was as a leader and what it would take to be a leader. The goal was to be the best leader I could, but I had many doubts about how to do this because I had never been in such a role before. I was not even sure that this was something I wanted to do, or if I was the right person to do it. Those feelings of uncertainty were similar to many of the feelings expressed by the focus group participants.

Through questioning, I was considering who I was becoming as a leader and thinking about how my identity as a teacher leader was changing and how it might need to change to become a more effective leader. Each question represented a dilemma I was trying to understand and resolve in my own mind. In reality, that questioning helped me make sense of the leadership issues I was experiencing. The questions are listed longitudinally by data set (DS) number in order to have a sense of when the questions surfaced.

- How do we share working knowledge of teaching? (DS1)
- How do I move forward with people who hold different beliefs and values about teaching? (DS1)
- As soon as one person has more status in a group, is there still shared leadership? (DS2)
• What leadership style is the most effective? (DS2)
• What if the leadership in the school and district does not align with my beliefs about teaching? (DS2)
• How do I empower teachers to feel they have control over their situation? (DS4)
• How do I lead by example when teachers do not know what to look for (notice)? (DS4)
• Where does my role end and the principal’s role begin? (DS5)
• Is a leader the person who does what needs to be done regardless of their position? (DS5)
• In the role of leader, how much is enough (as one person)? (DS6)
• How do my own beliefs get in the way of accomplishing my goals? (DS6)
• Were my own beliefs clouding my perception of things? (DS6)
• Is the term “coach” synonymous with teacher leader? (DS6)

**Feeling overworked.** In data set number four, I was beginning to think about burnout as I was trying to reconcile my changing leadership role. I was working in many different roles, and I did not always know what the purpose was. Was it for my leadership growth or was it to influence others in different settings? I was attempting to make sense of how I was feeling by noting the symptoms and causes of burnout. In the focus group data, the idea of being overworked was mentioned by one teacher. She commented that as a teacher leader, she was continually asked to add responsibilities to her role and all of the responsibilities took lots of time. She mentioned the time commitment had affected her personal life.

**Feeling ineffectual.** By data set number five, the dilemma I was experiencing was the notion that I had made no impact on the administrative team. I also felt that if they were not talking to me and including me in decision-making, they must not see me as a leader. My feelings of concern about my ineffectiveness were rooted in the fact that I felt I was not trusted by the administration with important decisions.
Feeling alone. By the end of the school year, I described feeling separated from my mathematics team colleagues because of the diverse experiences and opportunities I was having. These experiences helped me gain a broader vision of leadership in a variety of contexts. That added to my feelings of loneliness about my leadership work.

School Leadership Team: Feeling ineffectual. During data set number three, I was selected to participate on the SLT along with seven other colleagues. At the beginning, I was hopeful I could apply the ideas I was learning through my leadership work in my mathematics department to this new team of teachers and administrators. I wondered what we were learning together as a team. It quickly became evident to me that “status quo” was the preferred school culture with many members of this team. At the time, I expressed confusion about the unwillingness of some team members to try something new and facilitate changes within the whole school.

I was making connections between my work with the mathematics team and my work with the whole staff. At that point, I believed the “surface level” communication style of the school was hindering the staffs’ learning potential. I expressed feeling stuck because of the team’s resistance to examine the staffs’ beliefs and current thinking as a way to achieve more meaningful conversations.

During data set number six, I continued to wonder where I fit into whole school leadership and how I could influence on a broader scale. I began to broaden my view of leadership by thinking about alignment of goals at the teacher level, school level, and district level, but I felt others did not appreciate that point of view. By the end of the year, the constant resistance left me feeling I would not be able to affect the entire school team as I could my mathematics department colleagues.
Leadership issues beyond the school: Self-doubt. During data set number three, I began working with a different middle school to facilitate Studio professional development. As with most new roles, I approached this with much apprehension. I doubted my ability to influence teachers outside of my school department. I also wondered if I could be influential in changing teaching practices when I only saw them every two months. I was plagued with doubts in this expanded role.

At the end of the school year, I had yet another opportunity to expand my leadership role. As part of the fellowship, I was to receive training to become a facilitator for a weeklong professional development course that was offered in the district. Throughout the week, I worked with and learned from the experienced facilitators, but once again, feelings of self-doubt crept into my thoughts.

The Studio Role

Anxiousness about being judged. At the beginning of the school year I described being anxious about the first Studio of the year although I had been in the role of Studio teacher before. I was also apprehensive because our district administrator had plans to bring teams of teachers from outside the district to observe my Studio so they could gain a vision of the work our district had been involved in for about two years. My anxiousness came from the feeling I was going to be judged by others because of my students’ abilities in mathematics and my own abilities as a teacher.

Hopefulness. It was during the first Studio day that I came to realize what we were doing at my school had far-reaching influence. A visiting principal planned on changing the way classes were offered at her school to be more equitable—a model she
had gotten from my school. She attributed this decision to the success of our school and the work our team had done to make this happen.

Still early in the year, the mathematics team received much-needed recognition for our initial work with Studio. The Superintendent sent a district-wide message thanking us for being the “guinea pigs” for Studio. I felt encouraged about being a part of this ground-floor effort, and it allowed me to begin to see the potential I had to be a leader. I was also encouraged by the progress the mathematics team was making.

As the year continued, I focused more on the work our team was doing to improve our teaching practices, which was a result of our collective Studio goals. I visited classrooms and collected student data to stay grounded in teaching and learning. I referenced the artifacts from Studio to help guide my team in our work to improve our teaching. In my mind, that represented forward movement in our collective thinking and learning.

By the end of the school year, my tenure of Studio teacher was ending and I expressed a sense of loss knowing I would not be in this role any longer. I reflected about the year in Studio positively and stated “great things always come out of Studio.” I expressed that every Studio was a chance to grow and learn and I knew this would continue the following year, regardless of my role.

Leadership Issues as a Team Member

Very quickly in the school year, it was evident to me that my new leadership role affected my role as a team member as I encountered many feelings and dilemmas.

Negotiating two worlds. Although I appreciated the multiple perspectives of my team, I realized that those multiple perspectives led to differing priorities. Even in my
first data set, I experienced the dilemma of walking in two worlds—that of a colleague and a teacher leader. I did not yet understand how to blend these two roles. During that time, although I strongly identified as a classroom teacher, I did not yet identify myself as a leader.

**Feeling like an imposter.** In the focus group interview, a few of the teachers described how these dual roles led to feelings of being an imposter. Because teachers were not always confident in their own teaching and facilitating abilities, they associated much uncertainty with their new leadership role. This seemed to be especially true when colleagues were looking to teacher leaders for direction and guidance, but the teacher leaders did not always know what the focus was. One teacher dealt with those feelings of inadequacy by admitting to her colleagues she did not know it all. This authenticity proved to be helpful in moving her leadership practice forward.

**Disappointment.** As I was trying things out in my own classroom and in Studio, I was disappointed with my team’s lack of follow through. Even so, I continued to work on my own practice through the work from Studio. In an effort to keep moving forward, I also began outlining collective tasks for our mathematics team to work on together. At the time, I believed this was in keeping with my emerging role as a teacher leader. The lack of follow through with this work brought on feelings of frustration. The work that was so important to me did not seem to carry that same level of importance with my colleagues. As the school year progressed, I found myself feeling more and more disappointed when the expectations I had of the team were compromised, for a variety of reasons.
**Discouraged by slow change.** Focus group participant Eric described a dilemma when working with his mathematics team colleagues. He became discouraged at times because he felt change was especially slow in his school. He believed his colleagues were slower in implementing changes in teaching practice than in other schools. The result of that was few cultural changes took place in his department. He expressed being discouraged because changes were so difficult and so slow.

**Loneliness.** Beginning during the third data set, I started feeling more alone as a team member because of my changing set of responsibilities. When I experienced negativity within the team, I believed it was my responsibility to combat the negativity in order to keep the team focused on our vision and goals. The negative attitudes within the team and lack of support from the administration toward the team resulted in feelings of isolation and disconnection from both groups.

**Jealousy.** Toward the end of the school year, I started dealing with jealousy issues from one team member who referred to me as “the boss.” It was during that period that I started questioning whom I could confide in and whom I could trust. This reinforced my feelings of isolation and loneliness from the mathematics team.

**Feeling uncomfortable.** As my formal leadership responsibilities continued to grow as an MTF and as a member of the SLT, I started feeling uncomfortable with my mathematics team colleagues and felt the need to hold back information about my new leadership roles. Questions about why I was working so hard and why I had been chosen to do so many things were prevalent. Three participants from the focus group, all full-time classroom teachers, experienced the same situation in their schools. Each described
the uncomfortable feelings when their colleagues questioned their motivation for taking on the “extra work” and “acting like a leader.”

**Uncertainty.** I experienced feelings of uncertainty about what my leadership responsibilities were in the different arenas. That uncertainty became especially clear when my leadership expanded to another middle school. This presented a dilemma of being spread too thin and made me further question my role within the team, school, and beyond the school. Kelly, a focus group participant, became similarly disenfranchised in her role as teacher leader when trying to change multiple layers of the school system. As one person, she felt the task was insurmountable in successfully influencing the classroom, school, and district levels.

**Structural Issues**

The opinion of some of the teacher leaders in the focus group was that being a full-time classroom teacher limited what you could do as a teacher leader. They believed that one of the major limitations to their leadership was having limited access to other teachers’ classrooms. The limited access they referred to was “time” and “administrative support.” They felt as a whole, in order to help support colleagues learning about teaching, you needed to get into classrooms regularly. However, getting into a colleague’s classrooms presented a dilemma. Two of the focus group members stated this type of work with teachers sometimes “felt evaluative” and, at times, put you in a difficult position with your peers.
Research Question #3: What Experiences and Factors Supported and Hindered the Process of Becoming a Teacher Leader?

Journal Data

Experiences and Factors that Supported Leadership

In the analysis of my codes related to the actions and ideas that supported my leadership, I found the codes organized into three major categories: self, others, and the system. Most of the codes from my journal fell into the “self” theme. This made sense to me as my journal was focusing on how I was becoming a teacher leader, so most of my journal represented the thoughts, ideas, and actions I reflected about throughout the course of the year. In thinking about myself, I did identify ideas and actions that seemed to support my teacher leadership when enacted by teammates and the administrators. Further sorting indicated there were some ideas that went beyond others and me because they were more systemic in nature.

There are many overlaps between this question and the other two. This makes sense in that some of the experiences and feelings that affected my leadership identity over the year also supported or hindered that growth process.

Self. When thinking about what supported my leadership process, I noted it was important to think of my actions as a leader rather than focusing on what a leader was. I stated that you must listen to your own leadership voice and have “self-leadership” before you can expect to influence others. I also noted that setting goals and reflecting on my changing leadership role was crucial. Lastly, I believed leadership could be learned as long as you have “the desire and willpower to take on the work.”
Another idea that came up frequently in my journal was related to learning. I stated it was helpful to my leadership by “always being a learner” and “continuously improving my own teaching practice.” I offered support to my colleagues by being a teacher, like them, but I saw myself in the role of lead learner. On another occasion, I reinforced this idea by stating it was helpful when I “set an example with my learning as a teacher.” I also mentioned the need to “facilitate learning and collaboration” with my colleagues and to “allow others to learn what they need to learn about teaching.”

On a broader scale of learning, I mentioned that my facilitation work mirrored my work as a classroom teacher. I also noticed other leadership roles “always lead back to teaching.” This comment, along with the previous comment, seems to suggest that I saw a strong connection between being a leader and being a classroom teacher.

Another theme that came up in the data set about myself as a leader related to creating a space for a supportive environment for my colleagues. I stated it was helpful when I offered encouragement to my colleagues. Not only did I offer support, but I also created an environment of respect by being “honest and authentic.” I saw the need to “wake people up out of their trance” by asking “hard questions.” With these leadership actions, I also acknowledged that I needed to be patient because many ideas would be planted like seeds “that may not germinate immediately.”

As a teacher leader, it was helpful when I volunteered for roles that reinforced the work I was doing with my team or in my classroom. Taking on formal leadership roles that enhanced the work I was already doing helped my informal leadership. However, I also noted that when I thought these potential leadership roles would not enhance my growth as a leader, it made sense to say “no” to the new opportunities.
Another important theme in my data showed teacher leadership required a teacher to find his or her leadership voice. This meant it was important when I spoke up to others about ideas that were important to my vision. By placing key ideas into conversations and “engaging in thoughtful discussions with everyone around you—you’re never off the clock” I found I could reinforce my voice. I used my leadership voice in a variety of settings and was able to give credibility to the Studio work through the telling of my personal experiences. That use of my voice was helpful to encourage others to volunteer to participate in our ongoing Studio work.

A key idea that helps support teacher leadership is being able to collaborate with administration and meet with administration frequently. Without this, even the best ideas or collaborative teams will not be fully realized.

Some other ideas that were noted as helpful to my leadership were that I needed to get past my own insecurities and defensiveness and remember it was about the learning of our students and our teachers. I needed to open myself up to others and be vulnerable; only then could I stretch my own thinking. My approach was helpful when I remained calm, logical, and humble—and did not let stressful situations get the best of me. I needed to continue moving forward regardless of the circumstances. Last, having a depth of content knowledge was necessary to be able to have credibility with colleagues and to be able to better understand what my colleagues needed to learn about teaching mathematics.

Others. One of the biggest supports when it came to leadership within my team was the notion of developing a community of practice. We did this by regularly discussing teaching practices. We needed to have common experiences to ground our
learning and our discussions about teaching. In doing so, we had experiences that could be recalled by all. This community of practice allowed learning to happen between peers and it held all teachers accountable for the work we were doing together. My role in the community of practice was to intentionally plan for our meetings and connect the work we were doing in Studio. I could “press” teachers about the work and help us focus on what we were learning collectively. By focusing on the collective, we began to appreciate new ideas and experiences that everyone brought, and hearing others’ ideas made us better teachers. As our team built trust with one another, the community of practice became more functional and we were able to keep moving forward with our work.

From my journal data, I identified a few specific actions that seemed to move my leadership forward with my colleagues (team and administration). One helpful move with my colleagues when leading by example was not working, was explicitly coaching by having specific questions and expectations. I also noted, that “having reflections prepared ahead of time for all team meetings, even when you’re not facilitating” was helpful in my leadership.

Related to administration, I commented that it was helpful for teachers to make connections in the work when our principal had parallel goals to that of the mathematics team. This would allow him to attend our team meeting and do classroom visitations with knowledge as to what the teachers were working on.

Toward the end of the year, I noted that other teachers needed to be willing to go beyond their “job description” and I challenged others to take on leadership within the team and I supported them by setting up some specific leadership actions. This transparency about my own leadership seemed to translate well to some of my teammates.
The system. The third major category that came up revolved around how school structures, or the system, helped support my leadership. In thinking systematically, I noted the biggest goal was to increase students’ learning, so we could not forget about this. Everything we did should go back to this idea. I wrote about the need to have our department, school, and district goals aligned in mathematics. I also noted that what we focused on and where we looked for help should come from research and our experiences, not our “opinions.” Lastly, I stated that we needed to “be persistent, especially when the work and people are challenging.”

I found that being intentional in all of my work with students, teachers, and administrators supported my leadership on the larger scale of the school system. The system needed to accommodate structures that would allow me to get into mathematics classrooms so I could actually see how teachers were implementing the ideas and routines we were all working on. There needed to be a systematic structure for giving teachers feedback about their teaching and the students’ learning, and we needed to “allow an open flow of information” focused on the goals on which we were working.

The goals that we were working on in our team (community of practice) were helpful in guiding the structures needed at the school level. The goals needed to have a focus on a school-wide need for student learning and be connected to specific actions for the teachers to take. Once the collaborative goals had been set, we could utilize data to see if we were reaching our goals. Data from data snaps, conferring with students, or looking at student discourse all gave evidence of what was taking hold with the teachers. This data was then used to plan for Studio, team meetings, or discussions with specific
teachers. In addition, I could determine department-wide action plans based on the needs of our students and teachers.

Some general themes emerged while looking at how the system can support teacher leadership. First, we needed to involve the teachers we were trying to reach. Collaboration allowed leadership to thrive. We needed to have discussions that challenged previous beliefs. These discussions about teaching and learning needed to also be grounded in specifics and grounded in evidence from research. What do we want to know about our students’ and teachers’ understanding? What did we notice about what our students were saying and doing? What do they need to learn? Finally, the systems we had in place needed to support teachers’ continuous learning and improvement.

Experiences and Factors that Hindered Leadership

Self. There was one set of related journal entries I found particularly interesting. At one point, I talked about how my desire to stay as a full-time classroom teacher was something hindering my leadership. In a later journal entry, I wrote about how “my desire to leave the classroom” was a hindrance to my leadership. I believe this shows my uncertainty and my questioning about the effectiveness of informal leadership compared to formal leadership. My self-doubt about leadership crept into my writings on many occasions during my year of journaling.

My doubts were reinforced because I felt I did not have a confidant to talk to about my developing role as a leader. I did not know how forthright I could be with the administration and my mathematics team. Throughout most of the year, I strongly identified as a classroom teacher, but when my principal shared things about staff, it caused me to feel in the middle between administration and my team. On one hand, I felt
responsible for the team’s actions because I was a part of the team; on the other hand, I had greater access to the decision makers. This dual belonging added to my feelings that I did not have anyone I could fully trust about my leadership dilemmas. That internal push and pull hindered my effectiveness as a teacher leader as I noted “being alone in the struggle” in my journal.

That dual citizenship in my team and as a teacher leader was further exacerbated when I received individual recognition from the Superintendent in an email to the entire district. He wrote, “I also personally thank Melinda Knapp and the team from Green Valley Middle School who became our initial guinea pigs with the [Studio] process.” Much of the work I had been involved in also involved my team. By being named individually and being included in so many leadership opportunities, I was gaining status over my teammates. This caused problems with some of the mathematics team members. In the following months, I had to negotiate with the team in order to minimize my status and be fully accepted by my team members. On one occasion, a teammate referred to me as “the boss” in a sarcastic manner.

The last major theme related to hindering my leadership had to do with time limitations. Because I had so many responsibilities and time away from my classroom, I felt there was “not enough time to properly prepare” for my dual roles as classroom teacher and teacher leader. Being pulled from my classroom for leadership activities (Studio, curriculum committee, etc.) led to feelings of “being spread too thin.” As one person, I could not do it all and still be effective. The time it took to do a good job in all areas was not possible and as a result, my teaching, leading, and personal life suffered.
**Others.** Factors related to administration, the mathematics team, and communication all surfaced as hindrances related to my leadership.

By far, the largest factor hindering my leadership was attributed to the administration. The leadership work we were doing was new to everyone and the expectations were not clearly defined. Because of this situation, I stated it seemed like “we were all making it up as we went along.” At times, the team had to convince administration about the legitimacy of our teaching methods and practices. Because of this, I believed they did not fully understand why we taught the way we did and it seemed the administration and counselors did not know how to support our teaching to parents.

I began questioning if administration believed in shared leadership. I was attempting to create this environment in our team and it definitely included the principal. Shared leadership must be desired by all to be effective. My principal missed many of our planned meetings as well as many team meetings. Frustrations led us to choose not to communicate with the administration as frequently as we should have. I noted, “When communication is cut, we have no leverage” with decision making with the administration and “it really does not help the ‘us and them’ situation.”

At the time, I theorized our patriarchal school system was part of the reason for the tension between the administration and the mathematics team. Our administration was male and the mathematics team was a group of confident female teachers. I wondered if this contributed to the separation between the groups. This separation hindered our communication and widened the gap of truly understanding each other’s work.

Some of the other issues that hindered the leadership work I was trying to do related to the internal dynamics of the team. There was a lack of trust with some of the
team members and I felt this caused “underlying issues.” That lack of trust within the team and the feeling by the team that they were not supported by the administration added to the challenge of my leadership. That situation caused the team to have negative feelings toward the administration and sometimes within the group. My high visibility added to this team tension.

The system. Experiences and factors that hindered my leadership within the larger system were some of the same things that I struggled with personally. The expectations for my leadership were not verbalized so I was trying to figure things out for myself. I believed this was the same for my principal. At times, I felt “nobody seemed to have the answers.” The expectations coming from my principal, the district office, and the Studio facilitators were not always clearly understood and this left me wondering, “Who was in charge?” I felt this severely hindered my leadership actions, especially early in the year. As the year progressed, I began to gain confidence and realized this was our situation so I needed to keep moving forward regardless of the “unknown.”

At times, it seemed that some school decisions set our work back. These were decisions that were out of our control. In contrast, another setback was the replication of superficial aspects of teaching. I explained these as practices or programs that “offer the least resistance by teachers, but do not provide meaningful change.” When situations like this occurred, speaking out was not encouraged.

The final theme that came out in my data was my reflecting on the larger scale of supporting teacher leadership beyond the school. I noticed the tension between the district using teachers’ leadership abilities and over-using them. When good things were happening, the district, understandably, wanted to capitalize on it, but in doing so, only a
few teacher leaders were being developed. This caused me to wonder about when and how to develop more teacher leaders so a few did not get to the point of being overworked. Moreover, what training is best to develop the next generation of teacher leaders? I also struggled with the idea of having two part-time jobs. For example, at two points during the year it was suggested by different administrators that I should “work in other schools as a coach” because they felt good things were happening at my school. This was always suggested with the idea of being a half-time classroom teacher and a half-time coach. This idea was difficult for me because I knew how hard it was to move a team and continue to be an effective classroom teacher. I did not see how I could do both jobs since I saw these as “two full-time jobs, not two part-time jobs.”

Focus Group

Experiences and Factors that Supported Leadership

The same three categories of self, others, and the system were appropriate in the analysis of the data from the focus groups.

Self

As I began to analyze the codes that fit into the MTFs discussions of what supported their leadership, they spoke frequently about their own classroom practice. Improvement of teaching practices is a major goal of teacher leadership, and there seemed to be a strong connection with this group of teachers about the interrelatedness of their leadership and personal teaching practice. Karen stated, “my work with other teachers (as a leader) is helping me become a better teacher” but Eric saw it differently. He thought as he got better at leading and owning the ideas from Studio, “his teaching changed drastically.” So, does teaching impact leadership, or does leadership influence
teaching? Roxanne and Kelly saw this as a cycle and concurred, “they influence one another.”

Others spoke more about specific classroom practices as being influential to their teaching and leading practice. Bob recalled an important moment that he and his colleagues had the previous year. He said they had a realization that all of the teaching routines they were working on in Studio were to support student engagement in making conjectures, generalizing, and justifying important mathematical idea. They had lost sight of the purpose of working on the routines in their classrooms. Eric stated he remembers his purpose as a teacher leader when he “sees students engage in mathematical thinking, discourse, and mathematical practices “ in his classroom. He also stated bringing his classroom experience into leadership settings had been helpful.

Roxanne’s viewpoint attempted to describe how she was now thinking more generally about learning and leading. She said, “Thinking about my own classroom practice in a multilayered way helped me grow in teaching and leading.” Karen mentioned that her work with her students helped her bring a focus to work she does with colleagues.

The last subtheme had to do with better understanding teaching practice from outside of your own classroom. Kelly thought seeing other teachers’ work on teaching practices improved her leadership “because I can see good teaching.” Rhonda underlined this idea by saying it was helpful in her leadership “to make explicit what makes a good teacher.”

Some MTFs saw the need to develop their facilitation skills if they were to take on leadership responsibilities. Others saw this as “practice” for when they would go back
to their classroom and “facilitate” with their students. Karen commented, “My work with students is also helping my facilitation of leadership. The two are intertwined.” Kelly noted “facilitating some of the protocols and structures with adults first helped me facilitate them in the classroom.” This causes me to go back to the idea of how leadership practice and classroom practices are interrelated.

One participant made a statement that seemed significant. Eric conveyed that facilitating a weeklong professional development course in the district was when he first identified himself as a teacher leader. Peg added onto Eric’s statement by saying that it was helpful for her to have had training in facilitating and leadership before having to facilitating on her own.

Others

When MTFs talked about the factors and experiences that supported them in their leadership roles, it was not surprising that most of the responses related to their working with colleagues. As seen in the previous data set, MTFs again commented about the strong tie between classroom practice and leadership practice. In this grouping of data, MTFs talked more about shared learning with their peers. Four different MTFs talked about “sharing practices” and “learning together.” Roxanne conveyed it was helpful for her leadership when “I began building capacity by trying on the work with my team.” She spoke about maintaining an attitude toward their work of “we’re all in this together.” Roxanne further stated it was important for the team to see the teaching practices in action in the classrooms together to be able to create a shared understanding of what they were working on as a team. Teamwork was also important to Jim. In his leadership role, he found it helpful to “have focus and intentionality when you get teachers together.”
In addition to Roxanne and Jim’s view on working as a team, Karen said she realized what she did in her classroom also applied to her team of colleagues. She saw this as a way to help lead the work in her mathematics team. She stated simply, “we’re all learners.” Rhonda thought of developing “shared practices” as a helpful way to work on teachers’ practices at a school-wide level. She reiterated that it was not enough to have pockets of excellence, but every teacher must engage in the work to make lasting cultural change.

Eric thought it was important to have department buy-in to make leadership more effective. He felt in order to get that buy-in, he needed to be “highly visible” in his use of teaching practices and the work from Studio. If not, teachers would not view him as credible in the position of leader. Peg felt her credibility was enhanced, which helped her leadership, by “gaining different perspectives from colleagues” in order to better understand what mathematics education looks like for students. Both Peg and Kelly mentioned how important it was to have “trust” in and with the team and to maintain “relentless attention” to the work.

Interestingly, Peg was the only participant who brought up that the principal could support one’s leadership practice. Maybe this idea was implied with the other MTFs, or maybe it was something lacking in the schools of the focus group participants. Peg said it was helpful when “administration understood the work deeply” and they would build their understanding “by being in the classroom with teachers.”

The System

Multiple comments about changing the school culture were identified by the teacher leaders as being supportive to leadership. It was not clear in many of the
statements whether the participants were referring to the whole school culture or the culture of the department. In most cases MTFs referred to “school,” so I do not know if it was whole school or department-wide culture. My assumption is what is helpful to the department would be helpful in the whole school and vise versa.

Changing school culture was seen as highly productive to teacher leadership and many of the comments described first-hand experiences of the focus group teachers concerning their leadership roles. Three teachers mentioned alignment of school goals. Rhonda commented that the Studio professional development should line up with the “coaching and school goals.” She also noted it was helpful for teachers to think beyond their grade level and think about all grade levels. She said, “only then can you change a whole school culture.” Rhonda also added the collective goal was helpful for her administrators “to know how to support teachers, even if she doesn’t really know the mathematics.” Peg reinforced Rhonda’s idea by stating that the “collective goals” are what help change school culture. Eric added on that having a specific culture and expectations in a school were helpful for new teachers.

One MTF brought up the idea of capacity building within schools and departments. Peg talked specifically about the need to sustain the work that had been going on through Studio and through the MTF. She stated it had been helpful to her to build capacity in her building so other teachers could “step up and I can leave.” It should be mentioned that Peg had recently gotten a new job as an Assistant Principal for the following school year, so she had already left her previous school and role as mathematics coach.
The advantages of a formal leadership role (mathematics coach) and informal leadership roles (classroom teacher) have been debated in the literature. While it is not a specific question in my research, it did come up in the focus group interview because there were some MTFs who were full-time classroom teachers, half-time time classroom teacher and half-time time coach, and full-time mathematics coaches. The sample is too small to generalize in this study but the comments were interesting in their contradiction of each other.

Rhonda, who was a full-time mathematics coach, stated “being a full time coach and being in the classroom helped me know what [teaching] move to do and catch things better in the moment.” Eric stated he was “jealous of the mathematics coaches” because they had many opportunities to observe and work with their colleagues in the context of a classroom—a luxury he felt he did not have because of his status as a full-time classroom teacher. Kelly noted that she tended to be (overly) optimistic about teachers self-reporting of their teaching practice. “I trusted what they said. Once I became a half-time mathematics coach and got into their classrooms regularly, I was able to assess their practice more accurately.” Kelly stated it was helpful to her leadership practice when she had the opportunity (as a coach) to get into classrooms regularly. Conversely, Peg, who was a full-time mathematics coach, believed “not having a formal title of coach helped sustainability at her school.” Some other systematic structures MTFs identified as helpful were (1) having full day Studio professional development days so teachers could work together, (2) having fewer people to impact at a secondary level instead of the elementary level, and (3) the “press” and the training we had received through the MTF grant.
Experiences and Factors that Hindered Leadership

Self

During the focus group interview, there were a number of situations the participants described involving doubts about their leadership. Most of the teacher leaders seemed to have negotiated past these self-doubts at the time of the interview but described situations from early in their MTF by using words like “awkward,” “overwhelming,” and “uncomfortable.”

Rhonda expressed her leadership was hindered by her thoughts of needing to be a great teacher before you can be a teacher leader. She had been out of the classroom for a couple of years by the time she assumed the MTF role and she was plagued with doubts about “if I could still teach.” She also wondered about her credibility with classroom teachers in her MTF role. Early on, Roxanne was overwhelmed by the enormity of what had to change and was not certain she was the right person to take on the leadership role in her school.

The confusion about MTFs dual roles was a theme that came up in the focus group analysis. One MTF stated she had a formal title but she did not really know how to be a leader yet. Others did not have a formal role associated with the MTF and they commented not having a formal role caused confusion for their colleagues because they wondered why MTFs were doing what they were doing. Eric was the youngest and newest teacher in his department and his colleagues wondered why he was acting as “the leader.” He felt he had to gain credibility using his classroom practice and he did not “start to feel like a teacher leader” until he began facilitating district-wide professional development.
Being a full-time classroom teacher hindered the leader’s access to other classroom teachers. This presented a hindrance because one of the major roles leaders identified was supporting their colleagues in taking on the work from Studio. When teacher leaders could not get into classroom regularly, they felt they could not accurately access or support teachers’ changing practices.

Another problematic issue that surfaced because of the dual roles was “feeling like you are evaluating your peers.” Everyone agreed evaluation was not the responsibility of teacher leaders, but many of the MTFs felt their actions “seemed evaluative.” Karen stated, “I’m just another teacher at the school, yet I’m doing things that seem to evaluate and this creates awkwardness for me and my colleagues.” One teacher referred to herself “in dual roles of ‘colleague’ and ‘evaluator.’”

**Others**

Kelly made an interesting observation through the work with her principal. She felt it hindered teacher leadership if “the administration tells everyone what to do” but she also felt it hindered her leadership if she “had to tell the administration what to do.” Ideally, the teacher leader and principal form a partnership and share the responsibility for supporting teachers and making decisions related to mathematics instruction and professional development. Karen affirmed Kelly when she said “top down leadership” was not helpful in leading the mathematics work. Eric added, “I think the telling and directing has some merit and might get you there, but it’s not going to be a sustainable system.” Eric makes an important point by recognizing that “telling” may garner short-term results, but will not serve to transform teachers in the process. Transformation needs to take place for teachers and teacher leaders to build capacity and change school culture.
Upon reflecting about their work as teacher leaders, the focus group identified a few ways that colleagues could hinder teacher leadership. Eric felt when he had to work with colleagues who were not convinced about “the urgency of the work,” it could get in the way of his mathematics team moving forward. He also said it hindered his leadership when he had to lead his team in something that was “contradictory to what the rest of the department wanted.” He felt he was less effective in his leadership role when the “loud voices” were listened to, even if they were not moving the work towards their goal. Jim stated that this happened in his school the previous year and he struggled with how to overcome this. Rhonda offered her expertise by suggesting the teacher in his team might not really understand or be convinced about the focus or goal of Studio.

Compilation and Summary of Data from Journal and Focus Group

For this narrative summary, I will describe the experiences and factors that supported my leadership process and then I will describe what contributed to hindering my leadership. Included in this summary is the synthesis of the focus group interview.

Supported Leadership

My journal data indicated my leadership was helped by a variety of thoughts and actions that were centered on my own my leadership experiences.

Continuous learning. During my year of journaling, there was a strong tie between classroom practice and leadership practice. I stated the idea of “always being a learner” was helpful in supporting the continued development of my colleagues and my own teaching practices and it supported my belief “that leadership can be learned.” I believed that reflecting about the things I was learning helped support my growth, an idea that was also mentioned in the focus group.
Focus group members also spoke frequently about how continued learning and growth in their classroom practices were influential in their leadership practice. Learning about productive classroom practices as a way of supporting student learning helped the teacher leaders stay focused with the purpose of their leadership role. It also helped the teacher leaders stay focused on what was most important—students learning through their engagement in conjecturing, generalizing, and justifying important mathematical ideas.

Not only was my continuous learning focused on classroom teaching, but on how I could facilitate my colleagues’ learning by setting an example of continuous learning: a lead learner. I noted collaboration was helpful to allow them to learn what they needed to learn about teaching. Teamwork and shared learning with colleagues to build capacity was mentioned with some frequency in the focus group interview.

**Creating a supportive environment.** In order to create a place for learning together, it was helpful to create an environment that was supportive where I offered encouragement to my colleagues. I created a space where we could be honest and authentic with one another in our collective learning. Only then, could we move beyond the status quo and explore “the hard questions.” One teacher in the focus group said it was helpful in moving forward with her team when she maintained the idea of “being in this together.”

**Developing a community of practice.** One of the biggest supports in my leadership was our team developing a community of practice. At the beginning of the school year, I did not set out with this vision in mind, but I believe it evolved over time. Our community of practice allowed us to examine our teaching practices collaboratively,
and allowed us to create a shared understanding of what teaching mathematics looks like at my middle school. It also provided an environment of accountability for teachers. Over time, we built trust with one another and became more functional as a team.

Some of the focus group data indicated other MTFs were working to create a community of practice. One of the focus group teachers talked about “sharing practices” and stressed the importance of creating a shared understanding about teaching and teaching practices. It is not clear to what degree others were successful in creating a community of practice, but certainly, the groundwork for collaboration already existed and was identified as a support to the teacher leaders in their attempts to create lasting cultural change in their school.

**Focusing on collective goals.** In order to lead this type of cultural change, it was noted that teacher leaders needed to be highly credible within their team to build trust and get “buy-in” from colleagues. Teacher leaders need to maintain relentless attention to the vision and collective goals of the team. It was also noted that alignment of classroom, department, and school goals was helpful to their leadership. Further, one teacher stated that it was helpful when principals had “parallel goals” to the department so the administration could better support the school-wide efforts in mathematics.

Initially, it was important for the MTFs to begin thinking beyond their classroom and grade level, to thinking about whole department/school improvement. One teacher pointed out that having collective goals appeared to be the driver for whole school change. Once changes were happening, it became important to maintain the continuous learning and cultural changes by having systems in place and by building leadership capacity with other teachers.
Opportunities for visiting classrooms. An agreement did not exist in terms of which structures and roles, formal or informal, were most supportive for teacher leadership in schools. However, there was agreement that structures were needed that allowed MTFs who were classroom teachers opportunities to get into other colleagues’ classrooms. This was important because it allowed teacher leaders to support and assess individual teacher change. One focus group participant stressed the importance of not evaluating colleagues while visiting classrooms.

The teacher leaders in the focus group who were in full-time coaching positions had such an advantage when it came to visiting classrooms. Although Peg believed having a formal leadership role got in the way of building leadership capacity in her school.

Hindered Leadership

At the beginning of my fellowship, I was able to identify some key points that hindered leadership in the situations in which I was involved. The themes sorted into the following categories: self doubts, lack of clearly defined role, lack of communication with administration, colleague buy-in, and time limitations.

Self doubt. An early hindrance was in the minds of the teacher leaders. Many of the MTFs described having self-doubts about their ability as leaders in their new leadership positions. That feeling frequently stemmed from not having a clearly defined role or set of explicit responsibilities. One of the focus group participants had so much doubt that she questioned why she was chosen to be in the role of teacher leader at her school.
No clearly defined role. I personally struggled with the lack of specific expectations for my leadership role. Because expectations were not verbalized, I felt as though I was trying to figure things out by myself. I did not get the needed guidance from my principal because I am not certain he knew what I should be doing, either. Our vision was not clear or communicated to others and this severely hindered what I could do as a leader.

Confusion about roles also came up in the focus group data. The informal nature of the MTF leadership role for some MTFs who were also classroom teachers caused questions from colleagues. The MTFs reported being asked why they were taking on more work and “acting like a leader” when they had no formal position. Those relationships within teams had to be negotiated by the teacher leaders in order to get beyond colleague attitudes. This was not generally an issue for teachers already in a formal position—Mathematics Coach or Mathematics Specialist.

Lack of communication with administration. I wrote in my journal about the lack of communication and support from the administration. At times, I felt as though I must convince the administration about the legitimacy of the work of Studio as well as the work I was doing with teachers. It caused me to wonder if administration desired shared leadership, as I did. I felt my team was evolving into a community of practice, so the gap between the two groups was increasing. I wondered if having an all-male administration and an all-female mathematics team exacerbated the tension between the two groups.

The interview with the focus group participants added some additional ideas about how administration hindered leadership. Teachers felt a top-down approach did not
work, nor did it work when the teacher leader had to tell the principal what to do. An ideal situation was allowing the teacher leaders and administrators to form a partnership and share decision-making when it came to the work with Studio and mathematics instruction. Another focus group participant stated top-down decision-making can work but it will not facilitate long-term changes in the mathematics instruction.

**Lack of colleague buy-in.** Colleagues hindered the efforts of the leaders by not being convinced about the urgency of the work brought forth by the teacher leaders. Working with other teachers on teaching practices contrary to their own beliefs about teaching could also hinder leadership. Those teachers often derailed the overall goal by using their leadership voice in a way that distracted the team from their collective goals.

**Time limitations.** Another theme emerging from my data related to development of teacher leaders and building capacity. My experience as a teacher throughout the school year had me participating in multiple settings in my school and beyond my school. I began to question how effective I could be when I was being “spread so thin.” On one hand, it gave me many opportunities to grow as a leader, but on the other, I doubted my effectiveness in influencing at a deep level. As a full-time classroom teacher and a teacher leader, I was feeling overworked and exhausted. One teacher in the focus group also expressed the frustration with multiple responsibilities in limited amounts of time. While it may not have hindered leadership because we both chose to do it, it is something that should be considered to avoid teacher burnout.

**Summary**

My story began with the desire to improve my own classroom instruction and positively impact my students. At that time, I did not recognize the need for a broader
perspective that included my team, my school, or my district. I was fortunate to have been offered—and accepted—a number of professional development opportunities that first helped me understand the need to expand my view and then gave me the skills to enact that broadened view, and ultimately become a teacher leader.

The results discussed in this chapter focused on what it took to become a teacher leader while remaining steeped in the work of mathematics teaching. I examined research questions in the context of my school setting during a year of involvement in the MTF. Through that investigation of personal experiences, I had an opportunity to carefully consider and discuss the analysis of my journal data along with the data of a focus group interview with other MTFs.

The way I viewed myself as a teacher leader changed significantly during the year. I saw myself as an advocate for students in the beginning of the year and as support for colleagues. Early in the year—and when expanding my leadership role—I questioned my abilities as a leader. I became much more visible in my expanding leadership role and became the “go-between person” for information among my colleagues, my principal, and the district administration. As my leadership identity changed, I adopted a leading-by-example stance in my work with other teachers. I held onto that view until I realized it was not creating the changes necessary in the teaching practices of my colleagues. By facilitating a common vision, engaging in transparent leadership, and sharing responsibilities for leadership, I began to see myself more as an agent of change capable of providing transformative learning experiences for others.

I could identify characteristics of leadership that emerged in me throughout the year, and I believe that those characteristics played a part in my ability to facilitate
change for the teachers with whom I worked. I identified the following characteristics as helpful to my leadership practice: trustworthy, persistent, and metacognitive.

As a result of my changing leadership practice, I encountered a wide variety of dilemmas and feelings. The feelings and dilemmas not only resulted from my changing leadership identity, my Studio role, and issues as a team member, but also from structural issues.

Because of my changing leadership identity, I experienced feelings of uncertainty, being overworked, being ineffectual, loneliness, and self-doubt. The Studio role brought on anxiety about my being judged and then hopefulness. The dilemmas I faced as a team member put me in a position of having to negotiate two worlds. On my team, I often felt myself an imposter because of the uncertainty about my expanding position. I had periods of uncertainty, disappointment, and loneliness. I experienced jealousy from team members and had uncomfortable feelings as my leadership role continued to expand. Last, structural dilemmas were identified. The dilemmas came in the form of time, access to other teacher’s rooms, and administrative support.

Throughout the year of my leadership development many experiences and factors supported as well as hindered the process of my becoming a teacher leader. I found that the following experiences and factors supported my leadership development: continuous learning, creating a supportive environment, developing a community of practice, focusing on collective goals, and having opportunities for visiting classrooms. The following experiences and factors hindered the process of becoming a teacher leader: self-doubt, no clearly defined role, lack of communication with administration, lack of colleague buy-in, and time limitations.
In Chapter 5, I present a discussion and summary of the key findings from my study and return to the question, “What does it take to be a teacher leader who remains steeped in the work of mathematics teaching?” Finally, I recommend some potential applications of the research findings to various audiences, discuss limitations of the study, suggest areas for further research, and add some concluding thoughts.
Chapter 5: Discussion and Conclusion

Introduction

I never consciously set out to become a teacher leader, yet I found myself on the precipice of teacher leadership because of a series of meaningful professional development experiences. Those experiences pushed me to the edge of my knowledge of teaching and facilitated my transformation to a teacher leader.

As I stepped into the unknown world of teacher leadership, I frequently struggled with uncertainty about how to be a teacher leader. Once I began understanding the challenges novice leaders face, I was able to find ways to work toward building a community of practice in my school that reinforced continuous learning. It was because of the many challenges during such an arduous process that I eventually emerged from the abyss with an increased understanding of leadership and know how to be a teacher leader.

Although I started the process as a reluctant leader, I now see myself as a capable, empowered mathematics teacher leader. Through the process of engaging in leadership, journaling about my experiences, and then analyzing the journal I kept, I came to truly “know” leadership. This autoethnographic retelling of my story allowed me to embrace my role as a novice teacher leader and helped me grow into a stronger, more effective leader in the school setting where I now work.

The purpose of this study was to examine as well as better understand the development process of a mathematics teacher leader. In this final chapter, I restate the research questions posed in Chapter 1 and review the methods used to gather and analyze the data. I then offer a discussion of the key findings of the research related to each of the
research questions with the integration of additional research. This discussion is followed by a conclusion that takes us back to the question, “What does it take to be a teacher leader who remains steeped in the work of mathematics teaching?” Finally, I provide recommended applications, limitations of the study, suggestions for further research, and concluding thoughts.

Summary of Research Questions and Methodology

This qualitative study helps fill the gap in the research of using the voices of teachers to articulate a clearer understanding of the practices and purposes of teacher leadership—how it can be cultivated, why it emerges, or what influences it can have on a school (Lambert, 2003; Murphy, 2005; Lieberman & Friedrich, 2010). Teacher leadership has been difficult to articulate because teacher leaders develop as leaders in multiple ways and in a multitude of contexts.

The following questions provided a lens for exploration in this autoethnographic study: (1) In what ways did my view of myself as a teacher leader change over the year? (2) What dilemmas and feelings arose because of developing as a teacher leader? (3) What experiences and factors supported and hindered the process of becoming a teacher leader?

Data for this study were primarily derived from my personal journal entries. A secondary source of data was the transcribed focus group interview conducted with a group of teacher leaders. The coding process used with the journal data was a two-cycle process using several coding strategies. Of the three research questions, two were analyzed longitudinally. To describe the data, codes were sorted into categories and summarized in narrative format.
Discussion of Key Findings

The job of teacher leadership is a difficult one. A teacher leader must learn to negotiate the complex culture of a school system, relationships with peers, and administrators. Rost (1993) contended that the relationship between leaders and followers is based on “interactions that are vertical, horizontal, diagonal, and circular” (p. 102). Through this research, I gained a greater understanding of the complicated and delicate negotiation of roles, responsibilities, and changing beliefs in the efforts to influence the teaching practices of my colleagues.

At every turn, I felt as though I should know more—about how to lead, about mathematics content, and about facilitating transformative experiences for others. Such uncertainty about my leadership skills led to feelings of my being an imposter. Imposter feelings are related to what Dweck (1986) described about intelligence being viewed as a stable trait. Langford and Clance (1993) claimed mistakes are believed to be from personal failure and inadequacy. In the end, I concluded that to deal with my feelings of inadequacy, I needed to admit my uncertainties to my colleagues. Such authenticity built trust with colleagues and ultimately moved my teacher leadership practice forward. That same strategy was also shown to work for the teacher leaders in the focus group. After decades of research, Bennis (2009) concluded that leaders do not necessarily set out to be leaders, but rather becoming a leader is the process of becoming a fully integrated human being—it’s about authenticity.

The dual roles of colleague and teacher leader proved to be problematic. I believe the root of the external and internal conflicts was the result of my position somewhere between a formal and informal leadership role. While I never “applied” to be a Studio
teacher or an MTF, those positions were offered to me—and I accepted. In some ways the opportunities put me in a formal leadership role with higher visibility, yet I had no title or authority over my colleagues. Danielson (2007) described informal leaders as those emerging from teacher ranks as a result of their pedagogical expertise, extensive content knowledge, or ability to establish collegial relationships. In addition, they volunteer for projects, share their expertise, bring fresh ideas to the forefront, and assist colleagues in carrying out their practice (Leithwood & Jantzi, 1997; Patterson & Patterson, 2004). So, in that sense, I was an informal teacher leader. I believe the lack of a defined role coupled with increased leadership opportunities—and high visibility—attributed to the tension I felt from my colleagues.

The informal nature of my leadership role prompted questions from my colleagues about why I was taking on so many different responsibilities. In contrast, the teacher leaders in the focus group who held formal leadership positions—mathematics coach or mathematics specialist—said “acting like a leader” was not an issue because they had clearly defined job descriptions and their colleagues accepted them in their leadership role. Barth (2013) strongly noted “teaching is a very leveling profession” and “a teacher who takes on leadership can expect to be punished by fellow teachers” (p. 10). Barth (2013) also noted that teachers typically do not respect teacher leadership and can feel threatened by colleagues taking on leadership responsibilities.

The change in responsibilities associated with my teacher leader role also caused status dynamics to change within my mathematics team. As I was taking on more responsibility for my team’s learning, I began to outline collective tasks for the team to work on. While I did not encounter direct resistance to the collective work, my team
members did not always follow through with their commitments. According to Lieberman and Friedrich (2010), teacher leaders face a “ubiquitous conflict when attempting to make changes or build professional communities” (p. 53). Conflicts can arise from differing values and methods of teaching, gender differences, and differences in status—such as teachers and administrators (Lieberman & Friedrich, 2010).

Even with tensions (conflicts) with my colleagues, over time I was accepted as a teacher leader within the mathematics team. That type of legitimacy can only be granted by other teachers and not by a positional title (Katzenmeyer & Moller, 2009). I believe there was evidence that strong relationships with my colleagues were reinforced by traits such as humility, persistence, and trustworthiness. Those dispositions and traits allowed me to forge relationships necessary for my future leadership work. Donaldson (2007) stressed the importance of human relation skills. Further, Patterson and Patterson (2004) found that teacher leaders who were influential had the ability to forge relationships and connect with other colleagues. Those qualities, by themselves, did not cause changed instructional practices, but they did seem to be a necessary step in laying the groundwork for the intentional work done later in the year.

I was surprised about the loneliness I experienced by straddling the dual roles—classroom teacher (colleague) and teacher leader. Ackerman and MacKenzie (2006) mentioned the loneliness of teacher leadership when they explained how colleagues could act as barriers to teacher leadership. At the beginning of this process, I did not anticipate the challenges I would encounter because of my positioning between my teaching colleagues and my principal. Teachers who lead feel conflict and isolation as collegial relationships change from primarily horizontal to somewhat hierarchical (Danielson,
Throughout the entire year, although I attempted to fully identify as one or the other, I was, in fact, neither—yet both.

Early in the year, my journal writing represented a self-centered view of leadership. Later in the year, however, I wrote about wanting to make a lasting difference beyond my classroom by empowering others and taking responsibility for the team’s vision and collective goals. Such a change in views refers to Harris (2003) who stated, “Teacher leaders lead within and beyond the classroom . . . and accept responsibility for achieving the outcomes of their leadership” (p. 6). I realized I was the one who needed to be facilitating transformative experiences for my colleagues and that included widening my perception of leadership by creating a shared vision and common goals. That realization agreed with Printy (2008) who said “the extent to which leaders can reach shared understandings with teachers seems to be the critical piece to leading” (p. 199).

Because I was the closest to colleagues I was attempting to influence (that is, the mathematics team), I was in the unique position to influence my colleagues. I had been willing to be the first teacher in my school to expose my teaching practice for other teachers. Darling-Hammond (2003) stressed that teachers have an extraordinary opportunity to exercise leadership because they are the most powerful influence, next to students, on other teachers’ practices. As Barth (2007) stated, “Leading by example provides a constant, visible model of persistence, hope, and enthusiasm by the way they pursue worthwhile goals” (p. 24).

Through my public modeling of desired teaching behaviors, I gained credibility with my colleagues and provided a vision of reflective teaching practice. Leading by example was something I wrote about often and personally valued. “For teacher
educators, walking the walk is critical to teacher leadership with deep purpose, impact and transformative possibility” (Taylor, Goeke, Klein, Onore, & Geist, 2011, p. 928). While helpful at the beginning of the year, I found later that leading by example was not causing the desired changes in the teaching practices of my colleagues. I needed to do more.

Once I realized leading by example would not transform teaching in my school, I began to view leadership more like Lambert (1998), who found that teacher leaders needed to consider the processes, activities, and relationships in which they engage, rather than see themselves in a specific role. My role needed to expand for that change to happen. Lambert (1998) further described leadership as “the reciprocal learning process that enables participants in a community to construct meaning toward a shared purpose” (p. 18). The process of reciprocal learning that Lambert described required that the entire mathematics team learn and change together.

My journal data provided strong evidence that continuous learning, creating a supportive environment, and developing a community of practice strongly supported my growth as a teacher leader and allowed the mathematics team to learn together. When I focused on learning with my colleagues, I realized I could be more effective as a leader. That constructivist leadership stance (Walker et al., 2002), or “lead learner,” complimented my style of teaching and learning. Leaders must actively demonstrate their beliefs (Harris, 2003). If I wanted my colleagues to learn together, I needed to explicitly model that behavior. I came to realize leading was analogous to learning. Because informal teacher leaders maintain no positional authority (Danielson, 2007; Gabriel, 2005), they must foster a sense of collegiality in order to effect change or influence
colleagues (Harris, 2002; Muijs & Harris, 2003). In Fairman and Mackenzie’s (2012) look at the recent literature, they highlighted that many researchers view leadership as involving “the interaction of all participants working toward a shared vision of quality learning for all students” (p. 229). Focus group participants also emphasized the need to have collective goals for enacting the school vision for teaching and learning mathematics.

Facilitating interactions allowed me to gain trust and respect from my colleagues, not because of a role, but rather, because of the way I was facilitating our on-going interactions. Our mathematics team had worked together for years. I began to understand that our “shared history of learning” (Wenger, 1998, p. 103) was crucial to the development of our community of practice. Wenger stated that practice does not exist in the abstract. It exists because people are engaged in actions whose meaning they negotiate with one another. Practice is not necessarily in the books, structures, or tools; instead, it resides in the community of people and the relations of mutual engagement (Wenger, 1998).

Late in the year—with expanded awareness—I started sharing my leadership responsibilities with colleagues. I also realized that becoming more explicit and transparent in my leadership actions would support our on-going work. My colleagues needed to learn more about my leadership practices so leadership capacity could flourish within the team. Wenger (1998) along with Talbert and McLaughlin (2006) stated that capacity building is crucial for long-term school improvement. My research showed I held the belief that we needed to involve those teachers we were trying to reach in leadership. Collaboration allowed leadership to thrive. I was able to accomplish this by
being more transparent about what I was learning and the specific leadership actions I was taking. The works of both Ronnerman (2008) and Collinson (2012) lead us to consider those informal leaders who “walk ahead,” model and facilitate learning and innovation, and develop relationships to extend their own learning to influence others. Collinson (2012) stated that teacher leaders learn first and become leaders second.

Late in the year, I recognized what was lacking in my leadership—transparency. Such a realization marked my ever-widening perspective about teacher leadership. I no longer thought of leadership as a defined role—but rather a set of actions (Fullan, 2004; Hargreaves & Fink, 2004; Leithwood & Riehl, 2003; Muijs & Harris, 2006, 2007).

Lastly, having opportunities to get into the classrooms of my colleagues helped support my development as a leader. Through my journal data and interviews with focus group participants, building school structures and practices seemed necessary to allow teacher leaders to learn more about leadership through classroom visitations. Lack of teacher access to one another has been cited as a challenge to teacher leadership work (Katzenmeyer & Moller, 2009; York-Barr & Duke, 2004). An additional finding from my research was ensuring that the classroom visits did not become evaluative.

At the end of the year, I began talking about using my leadership voice to empower teachers and be a catalyst for change. Larner (2004) stated teacher leaders are “catalysts for change . . . who are never content with the status quo, but rather always looking for a better way” (p. 32). I believe that was an indication I was feeling stronger about my identity as a teacher leader so I was able to create situations to empower my colleagues. With conviction, I started using my leadership voice outside of the school as well, and was able to bring attention to the work that had been done by my mathematics
Using a leadership voice was also a theme identified in the focus group. The feeling of being an imposter had been replaced with the feeling of empowerment. I was using my leadership voice to influence mathematics instruction at the school, reinforce the vision for teaching, and facilitate changing school culture. Taylor et al. (2011) described how teacher leaders begin to find agency. “Once teacher leaders discovered their professional voices, they realized they have knowledge, skills, and expertise to act as change agents beyond their own classrooms.” They went on to say “they became the public face of their initiatives” (p. 925).

The results of my research support the idea that leading is learning. My team had long been engaged in examining teaching practices through Studio and in our daily work of teaching. I was gaining awareness about how to lead this type of work. Through the work with my colleagues, I “learned” how to be a leader. “Becoming an exemplary teacher and then a teacher leader appears to represent a continuously evolving process of learning and refining ideals the teachers admire or think important. They are learners first; leadership occurs as a by-product of learning” (Collinson, 2012, p. 264). In order to learn, we must have experiences that shape our understanding. My research supports Collingson’s idea of having to experience leadership to understand it. “They have learned from everything . . . and they have learned to lead by leading” (Bennis, 2009, p. 105).

I came to realize that I was a different leader at the end of the year than at the beginning. The transformation of my thinking occurred during the year of my study as I came to “know” what teacher leadership meant for me. I moved from the naive view that leadership is simply a role for certain teachers to one of a participatory set of behaviors
meant for all. Kegan (1994) observed that transformative learning happens when someone changes “not just the way he behaves, not just the way he feels, but the way he knows—not just what he knows but the way he knows” (p. 17).

I began asking questions about how to be an effective leader by “empowering teachers” and “coaching” others. That same pattern of development has been seen in several studies. First, teacher leaders focus on their own learning and classroom practices through informal efforts. Later in their careers, teacher leaders expand to more collaborative efforts, school-wide change, and more formal leadership when they felt more solidly grounded in their beliefs and practices, more self-confident to share their ideas, and were trusted and respected by their colleagues (Fairman & Mackenzie, 2012; Lambert et al., 2002a; Little, 1990).

The lack of meaningful communication with the administration hindered the process of becoming a teacher leader. I felt strong communication was necessary to develop a shared understanding about the work we were not only doing in Studio but also in our community of practice and in our daily teaching. At the time, I wondered if the disconnect was the result of questions about the legitimacy of the work, differing priorities, or tensions between the (all female) mathematics team and the (all male) administration (Schmuck & Schubert, 1995). Regardless of the reasons, I later realized our lack of communication had gotten in the way of my growth as a leader. Ideally, based on a discussion in the focus group, teacher leaders and administrators should form a partnership, learn together, and share decision-making related to mathematics instruction. The finding supports Sergiovanni’s (2005) model where teachers and administrators work as partners to encourage communication between various constituencies in the school
As new as it was for me, supporting teacher leadership was just as new for my principal. In my research, there was evidence suggesting my principal did not know how to support the leadership work in which I was involved. According to Birky et al. (2006), principals can either reinforce or weaken teacher leadership, and teacher leaders are seldom effective without the support and encouragement of their administrators. An important part of my teacher leadership role was to be able to collaborate with my principal on matters related to mathematics instruction, yet I struggled with that for the entire year. Donaldson (2007) revealed the intricacies of teacher leaders in between position by explaining teacher leaders experience pushes and pulls of their complex roles, located somewhere between administrative leadership and classroom instruction.

In retrospect, I wonder if the principal and I had more explicit conversations about how to lead, and if I had shared my leadership challenges with him, perhaps we might have been able to learn about teacher leadership together. York-Barr and Duke (2004) found “the development of solid relationships between principals and teacher leaders was dependent on effective communication and on intentional tending of the relationship” (p. 275).

Many of the questions about my beliefs resulted from my expanded leadership role. Once I branched out from my mathematics team and into the School Leadership Team (SLT) and into different schools, I began encountering more opposition and vast differences in beliefs about teaching. Sergiovanni (2005) stated that teacher leaders cannot work in schools that are not learning organizations. I went into the new situations expecting to enact what I had learned within the context of my mathematics department,
but I was not seeing the results of my leadership in the new contexts. I realized the new contexts did not have the same culture developed within the mathematics team, and that limited what I could do in a different context. Lambert (2003) stated, “Since leadership is defined as a reciprocal, purposeful learning in community, such ‘work’ embraces a shared vision, inquiry, dialogue, reflection and a focus on learning.” She goes on to say “a learning community is at the heart of a high leadership capacity school—they are parallel constructs” (p. 426).

There was not a strongly developed learning community in my larger school community, and I had no way of knowing about the learning culture of other schools in the district. Also, my middle school teaching colleagues outside of the mathematics department may not have recognized my leadership actions. I had not built the trust and credibility within this group of teachers. Although mathematics teachers knew me outside of my school, we had not built a common vision of teaching and learning together. Without having day-to-day teaching interactions I had no way of reinforcing the work of Studio and continuous learning. Consequently, my leadership influence could not have been the same as it was within the mathematics team community. “The success of teacher leadership depends largely on the cooperation and interaction between teacher leaders and their colleagues” (Yarger & Lee, 1994, p. 229).

My research highlights “knowledge is always forming and can never be truly whole or complete, both because teaching is a continually challenging and surprising enterprise and because knowledge itself evolves” (Stokes, 2005, p. 35). Likewise, leadership knowledge, which is intimately connected with knowledge of teaching and learning, can never be complete (Lieberman & Friedrich, 2010). So, my story continues.
Conclusion

Writing my story has been one of the most difficult endeavors I have encountered as an educator. At the beginning of this process, I was a reluctant leader and would not have predicted that my identity as a teacher leader could have changed so drastically in one year. In writing my story, I hoped to have given a voice to classroom teachers who, by choice or otherwise, have found themselves in a position of leadership. I wanted to tell my story of change and empowerment, with all its struggles, challenges, and growing pains, as well as moments of insight, joy, and excitement.

I go back to the question that began this autoethnographic study: “What does it take to be a teacher leader who remains steeped in the work of mathematics teaching?” I believe I have learned enough through my research to begin to shed light on this question—at least as it relates to my situation. Even though my research was in the context of mathematics teaching, I believe the factors identified have implications for teacher leaders in any content area.

I have divided this response into four areas: factors in which one has control over and are directly related to self, factors directly related to one’s work with colleagues, factors involving administration, and factors that are more structural in nature.

Factors over which one has control directly related to self:

- becoming comfortable with ambiguity and loneliness around the dual roles of teacher and teacher leader
- overcoming feelings of doubt about new leadership roles
- leading by example to provide a vision of reflective teaching practice
- recognizing and trying to equalize status issues with new colleagues in your role
- believing in and modeling continuous learning
- embracing the idea that you have to experience leadership to become a leader
- developing and using one’s leadership voice as an advocate for students, colleagues and administration
Factors directly related to one’s work with colleagues:

- negotiating complex relationships with colleagues and administrators
- building trustworthy and authentic relationships with colleagues
- engaging in reciprocal learning with colleagues in the context of a community of practice
- growing leadership capacity by sharing leadership responsibilities and being transparent

Factors directly related to one’s work with administration:

- pressing for administrative support—financially, structurally, and emotionally
- maintaining open communication with administration
- developing clear guidelines regarding expectations around one’s leadership roles
- partnering with one’s principal in all aspects appropriate to the leadership role

Factors that are structural in nature:

- a school culture that shares a common vision and goal and is a learning organization. (If one does not have this, help make it happen.)
- time and structure that allows one to work with colleagues and administration

**Recommended Applications**

In order for teacher leadership to be a positive, viable, and reliable force in schools, educational leaders must more fully understand teacher leadership and how to harness its potential. The findings in this study offer considerations for professional development leaders, administrators, teaching colleagues, and teacher leaders working in the context of an informal or formal leadership role.

**Professional Development Leaders**

The findings of this study have a number of important implications for future practice. Professional developers can learn through this study by being realistic regarding the hindrances and constraints placed upon novice teacher leaders, and the ways in which they can support the development process. Thought needs to be given to the specific
school context and leadership development—including both principal and teacher leader—designed to fit the situation.

Supporting teachers in a community of practice can provide learning opportunities that engage teachers in a shared examination of their practice. Within this learning environment, professional development leaders need to be transparent about the reasoning behind their leadership practices. By explicitly talking about their own teaching moves related to mathematical learning, professional development leaders can make the in-the-moment decision-making process clearer to teacher leaders and other instructional leaders within the school. This can also help the novice teacher leader develop facilitation skills.

Ideally, administrators should work hand-in-hand with professional development leaders to transform mathematics instruction, not simply in individual classrooms but also across the school, by changing the culture of professional learning within the whole school.

Administrators

There are a number of important changes that should be made in schools to identify supports and structures that assist in advancing the leadership work of teachers. Administrators can do a great deal to support and develop teacher leaders within their district and schools. Decisions about how time can be restructured to create space for leadership work must be made, as well as decisions about which resources could be tapped to assist developing the knowledge and skills of teacher leaders for their designated leadership functions. The functions must be clearly identified and renegotiated, as necessary, between the principal and teacher leaders.
In traditional hierarchical schools, this means creating a clear and open path to teacher leadership, including how administrative gatekeeping will operate within the organization. It also means fostering creation and maintenance of structural aids such as norms, funding, and scheduling for the release time for teachers to engage in sharing teaching practices, develop communities of practice, and action planning to create and maintain a shared vision and goals. Such opportunities need to build strong learning communities among colleagues within schools and districts.

Principals need to develop the knowledge and expertise required to effectively support high levels of teacher leadership within their schools. In a sense, principals should as well be supported in their role of supporting teacher leaders.

**Teaching Colleagues**

Positive collaboration, communication, and continuous learning centered on student learning must become the norm in school-wide efforts. To move teacher leadership work forward and build leadership capacity, teachers should not only build but also fully participate in a community of practice. Teaching colleagues need to adopt an attitude of continuous learning and remain open to sharing leadership responsibilities with colleagues. The collective strength of the team is dependent upon the capability of the individual members of the team. Work together to continuously improve teaching practices—this one action has the potential to positively affect the school culture and student learning.

**Teacher Leaders**

My research brings to light the conflicted feelings that occurred because of working in the space between colleagues and administrators. The findings suggest several
courses of action for teacher leaders. For both teachers and administrators, it is crucial that the fears of emergent teacher leaders are recognized and handled proactively and in a safe environment. If teacher leaders can anticipate those feelings and dilemmas then actions can be taken to minimize situations that may hinder teacher leadership—actions that should be supported by professional development leaders, administrators, and colleagues.

The work of teacher leaders should be structured to maximize positive effects on teaching and learning, addressing such issues as maintaining a clear focus on instructional improvement and providing opportunities for job embedded work.

Lastly, I would encourage reluctant teacher leaders to take that first step beyond their classrooms. This can be done informally and with the following steps. (1) Adopt an attitude of continuous learning; (2) Enlist your colleagues and learn together; (3) Partner with your principal; (4) Find your voice; and (5) Understand it will not be easy, but the learning of your students and your colleagues depends on that first step.

**Limitations of the Study**

As with all studies, limitations were prevalent in this one. The decision to include only teacher leaders involved in the MTF program is a limitation for this study. All of the teachers selected for the fellowship had reached a certain level of expertise, which was why they were recruited to participate as MTFs. Had I widened the selection of teacher leaders, the data may have reflected a differing view of teacher leadership, what supported and hindered leadership, and the feelings and dilemmas that resulted from leadership.
Additionally, because I focused on my own journey toward teacher leadership, the results are based on my own interpretations of my reflective journal entries throughout the year. As I was interpreting and analyzing my data through the retelling of my story, certainly my perception about what is necessary to become a teacher leader was affected by my current beliefs. Although this research is mainly an autoethnographic study of one teacher leader, I do believe implications exist for the development of future teacher leaders on a broader scale. The reporting of my struggles and triumphs in that one year informed my current view of leadership. It is up to the readers of this study to determine if the findings of the study “make sense” within their own context and are therefore transferable to different settings.

Finally, as the inquirer in this qualitative study, I was the primary instrument for data collection and analysis and all data were mediated through me (Merriam, 1991). I kept a reflective journal for the entire school year so I was able to keep memory data to a minimum. The audiotape transcriptions from the interviews of focus group participants did provide for accuracy in the record of that data. However, there is no doubt that my experiences, assumptions, and biases influenced what I saw in the data. As a result, I may have failed to observe data that were present or may have interpreted data in a way that others would not.

**Recommendations for Further Research**

Using the groundwork from this research, I would recommend pursuing research that broadens this study to include more participants—beyond teachers who were MTFs. I would also recommend pursuing research that included teachers from differing content
areas to confirm, or refute, my findings that imply teacher leadership would develop similarly in a different content area than mathematics.

Because I did not interview my principal in this study about his perspective on supporting teacher leadership, I do not know his viewpoint on teacher leadership. I think studying and including principal perspectives has the potential to increase the understanding of how to best support developing teacher leaders from within a school context.

The last area of research that I would recommend is to study the role professional development plays in helping support and develop teacher leaders. What connection does long-term professional development have on generative leadership? What is the connection between long-term professional learning and the development of leading capacities and what are the conditions that support that development?

**Concluding Thoughts**

The journey of self-exploration through autoethnography has been an exciting, yet tedious, one. I discovered strengths I never knew I had. When I started the process, I held many naive ideals that strongly influenced my perception of teacher leadership. I found myself critical of my administrative team because they knew little about cultivating teacher leadership. At that point, I too knew very little about the influences and impacts surrounding and shaping the teacher leadership role.

This study begs the question, “Knowing what I know now, what would I have done differently?” I feel fortunate to be able to look back and reflect about my development as a teacher leader. In retrospect, through my examination and reflection about teacher leadership over the course of the year, I would do several things differently.
First, I would be patient with myself as I was learning new roles and responsibilities. I would ask for clearly defined parameters for my teacher leadership role—allowing for progression over time. I would not let self-doubt about my “in between” position stop me from moving forward with creating a shared vision of teaching and learning, not only throughout the department, but also the school.

Second, I would forge a collaborative relationship with my principal. I would encourage a reciprocal relationship between teacher leader and principal in which they support one another in work and share responsibility for the results.

Third, to prevent isolation as a teacher leader, I would relentlessly promote collaboration, support, and teamwork among teachers to create a school culture where all members share a strong sense of community and collective responsibility for student success. I would advocate for this being done as an entire school, not simply at the department level.

Finally, I would strongly advocate for sufficient preparation time, and support for teacher leaders and colleagues to work in teams to engage in job-embedded professional learning—based on observation of instruction, analyzing student work, and assessment using data.

Through the autoethnographic study conducted, I became increasingly aware of what it takes to be a teacher leader. Those ideas have only just begun to allow me the freedom to search and grow in becoming a stronger, more effective leader in my school and district. This was merely the beginning of a lifelong journey that I will continue to pursue. I am appreciative of the learning that occurred because of my research, and I appreciate all the people who have helped me along the way—in particular, my
mathematics team. My hope is that I have gained a better and stronger understanding of leadership and can share that learning with other people who are influential in developing teacher leaders, and even help support teacher leadership capacity within the schools in which I am personally involved.

As other teachers, principals, and professional development providers read this account and bring their own perspectives and understandings to it, they may ask, “How does this context relate to my own situation as described in the research study?” Qualitative research invites personal interpretations of research. It is my hope that readers can construct meaning for themselves through my experiences. Further, I hope that my story might influence practice and efficacy for current and future teacher leaders.
REFERENCES


Barth, R. S. (2013). The time is ripe (again). Educational Leadership, 71(2), 10-16.


Lincoln, Y. S., & Guba, E. G. (2000). The only generalization is: There is no generalization. *Case Study Method*, 27-44.


No Child Left Behind Act, Public Law 107-110 (2002).


APPENDICIES
## Longitudinal Qualitative Data Summary Matrix #2

**Data Time:** From 11/1/09 Through 12/31/09

<table>
<thead>
<tr>
<th>Increase/Emerge</th>
<th>Cumulative</th>
<th>Epiphany/Turning Point</th>
<th>Constant/Consistent</th>
<th>Idiosyncratic</th>
</tr>
</thead>
<tbody>
<tr>
<td>Connection to my research, specifically my methodology of autoethnography (#1910-1927, #2115-2123, 2141-2154, 2156-2157, 2184-2193)</td>
<td>Learning aspects of leadership (collecting classroom data) (#1811-1813, 1817, 1819)</td>
<td>Leading by example (leadership identity) despite the push back from colleagues (#1949-1955, 2968, 2983-2986, 3006-3009, 3019-3021, 3042-3044)</td>
<td>Feeling unsupported by administration (#1800-1803, 2188, 2359-2364, 2390-2393)</td>
<td>Work on the teaching routines/practices (#1957-1960, 2068, 2091-2095, 2107-2109)</td>
</tr>
<tr>
<td>Questioning my own teaching (#2030-2032, 2057-2059, 2077-2078, 2089-2090, 2450-2478)</td>
<td>Expecting all students to be accountable for learning (#2081-2087, 2089-2090, 3004-3005, 3042-3044, 3050-3052)</td>
<td>Questioning identity (#2136-2141, 2968, 2970-2971)</td>
<td>Feeling responsible for the teams actions (#1945, 2188, 2386-2387)</td>
<td>Students are working on reflecting about their own mathematical thinking (#1961-1962, 2068, 2091-2095, 2107-2109)</td>
</tr>
<tr>
<td>Shifting responsibility to understand to students (#2286-2290)</td>
<td>Offering ideas to better understand (#2292-2304, 2359-2364, 2390-2393)</td>
<td>Focusing on “non-important” aspects rather than teaching practices (#2189-2195)</td>
<td>Questioning my role as leader and colleague. Shared leadership. (#2364-2371, 2740-2748, 2955-2964, 2769-2778, 2746-2748, 2766-2769)</td>
<td>I am reinforcing and teaching students the idea of socio mathematical norms (#2010-2012, 2066, 2068, 2077, 2089-2090, 2450-2478, 2518-2520)</td>
</tr>
<tr>
<td>Lacking communication with administration (2424-2429, 2450-2478)</td>
<td></td>
<td>Questioning the idea of “shared leadership” with administration as a way to leverage influence. (3004-3005, 3042-3044, 3050-3052)</td>
<td></td>
<td>Changing my stance as a leader (#2157-2162)</td>
</tr>
<tr>
<td>Questioning the role of teacher leader vs. administrative leader (#2962-2964, 2983-2986, 3030-3034, 3050-3052)</td>
<td></td>
<td></td>
<td></td>
<td>Defining leadership as listening and being introspective (#2125-2134, 2157-2162)</td>
</tr>
<tr>
<td>Noticing issue of trust within the team (3006-3021, 3042-3044)</td>
<td></td>
<td></td>
<td></td>
<td>Defining leadership as “trust” (#2830-2835, 2955-2964, 3006-3009)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Utilizing data to make decisions (#2387-2392)</td>
</tr>
</tbody>
</table>

---

*Note: The original document contains additional text that is not fully transcribed due to the limitations of the display.*
Preliminary Assertions as Data Analysis Progresses

This could include questions, belief statements, and ideas about what may have triggered these things.

#1806-1801
“We have taken on this goal of a more rigorous math program, but nothing in the system has been adapted to help us do this.” I disagree with this statement now. I do believe we had the Studio professional development to help us do this. I also think that having personalized CMP support that first year was supportive. I wonder if this was really thought about by when was planning these things?

#1904-1927
I wonder if I am trying to convince myself about what I am writing about? Is this why I have a tendency to write about how I “feel” about things? has commented that I need to remove myself from my journal writing for the MTF project. I had a dual purpose with my journal.

#1955-1957
I actually think this is an incorrect assumption. If they even understand what is meant by your actions and how it may impact students. I think not that is has to be explicit, otherwise people will/may not make the connection. There are so many things that you may look at any given time you need some sort of framework, shared understanding, our context to make sense of things.

#2027-2028 and #2045-2046
Teaching dilemma:
1. When do you stop a student’s mathematical explanation?
2. How do you make students ideas accessible to all other during public sharing?

#2157-2158
Is this the trajectory of leadership? Reluctant leader to lead by example to explicit leadership moves? How do these ideas relate to my own questioning of my teaching? Do I model this behavior (sociomathematical norms) explicitly enough, for students to understand how to do this themselves?

#2165-2166
Does this idea apply to all aspects of my learning? You have to engage in the work to see if you can do it.

#2137-2141
What role does my perception of “differing values” play? Why do I think my values are different? Different than whom?

#2383-2384, 2426-2427,
Does this relate to what my vision of a leader is? Is this why I am so disappointed? If the actions do not match up with what is defined (for me) as a leader, is this root of the problem? What would I do in this same situation?

#2780-2815 Belief statement
This is a statement related to top down leadership. I am questioning the administration’s leadership and thinking about my own beliefs.

#3004-3005
Can we really leverage influence if we share different belief systems? Maybe what I think is “influence” is really nothing more than trying to get them to see things from our/my perspective? I wonder about this.

**Defining leadership as “trust” (#2830-2835,)**
I think this section refers to trust in people. Does this also bleed into our classrooms meaning that we trust our students to be mathematical thinkers and a participant in their own learning? Is this something that I believe and want for everyone?

#2970-2971
“My role is to improve my teaching, not teach someone how to be a leader.” I wonder where this comment is coming. Is this how I see myself as teaching leadership to someone/others? Who? I cannot recall who I may have thinking of, or what this might refer.

#3050-3052
“Can we become partners in this process or are we destined to be ‘us and them’?” This seems significant. I still have not worked this out. Is it the nature of the team or the nature of administration that gets in the way of moving forward and communicating? Is it a gender issue?
APPENDIX B

INFORMED CONSENT DOCUMENT

Project Title: A Voice from the Classroom: An Autoethnographic Study of a Mathematics Teacher’s Development to Teacher Leader
Principal Investigator: Dr. Karen Higgins
Student Researcher: Melinda Knapp
Version Date: 4/12/2012

1. WHAT IS THE PURPOSE OF THIS FORM?
This form contains information you will need to help you decide whether to be in this study or not. Please read the form carefully and ask the study team member(s) questions about anything that is not clear.

2. WHY IS THIS STUDY BEING DONE?
This study seeks to understand teacher leadership through the lens of a secondary classroom mathematics teacher. The research will articulate the transformation process experienced and will describe changes that occurred in her teaching practices because of ongoing in-depth professional learning, and how that learning influenced others’ teaching practices.
The questions guiding my research are: (1) What experiences help and hinder the process of becoming a teacher leader? (2) What dilemmas and feeling arise as a result of developing as a teacher leader? (3) What does it takes to be a school leader who remains steeped in the work of mathematics teaching? (4) How are the changes in leadership practice influenced by the changes in teaching practices?
This study is being conducted by a student for completion of a dissertation.

3. WHY AM I BEING INVITED TO TAKE PART IN THIS STUDY?
You are being invited to take part in this study because you have been involved in the National Science Foundation (NSF) Noyce Master Teacher Fellowship and Master Teacher Project for at least one year.

4. WHAT WILL HAPPEN IF I TAKE PART IN THIS RESEARCH STUDY?
The study activities include participating in a focus group in August, 2012. By participating in this focus group you will help with the triangulation of data that has been gathered and analyzed from the researcher related to the Noyce Master Teacher Fellowship. The focus group should confirm, or contradict, the findings from the qualitative phase of the study. The researcher will ask members of the focus group to maintain the confidentiality of comments made during the discussion.

Audio Taping
By initialing in the space provided, you verify that you have been told that audio recordings will be generated during the focus group discussion. You may still participate in the focus group even if you opt out of the audio recording. Initial below if you would like to participate
in the focus group and agree to be audio taped. The audio tapes will be transcribed by the researcher or by a paid transcriptionist. Participant’s names will remain on transcriptions during the study and will be replaced with pseudonyms when writing of the research text begins. The audio tapes will be destroyed after they are transcribed to text.

__________ I agree to be audio taped.

Initials

We may contact you in the future for another similar study. You may ask us to stop contacting you at any time.

5. WHAT ARE THE RISKS AND POSSIBLE DISCOMFORTS OF THIS STUDY?
In the writing of the research, your confidentiality will be maximized through the use of a pseudonym. The researcher will attempt to maximize confidentiality by reporting results in a summarize manner to reduce the chance of being identified. We will ask members of the focus group to maintain the confidentiality of comments made during the discussion. However, there is still a risk that comments you make during the discussion may be shared outside of the group. Also, because of the limited number of subjects participating in this study there is a chance that you may be identifiable in research reports.
You may choose how much or how little you want to speak during the focus group. You may also choose to leave the focus group at any time.
We do not envision any significant risks related to participation in this study. Participants may feel some pressure to reveal feelings or experiences to the group. If participants share their experiences with colleagues and peers, they may also feel vulnerable during or after the focus group.

6. WHAT ARE THE BENEFITS OF THIS STUDY?
We do not know if you will benefit from being in this study. However, it is hopeful that participants will find benefit in the study in that it will provide a forum for them to develop a collegial relationship with others around their leadership work in their schools. Taking time to reflect about leadership actions may lead to personal and professional growth for the participant researcher.

7. WILL I BE PAID FOR BEING IN THIS STUDY?
You will not be paid for being in this research study. There will be no travel reimbursement for travel to the Focus Group session location because you (Master Teacher Fellow) will already be attending a meeting in the same location.

8. WHO WILL SEE THE INFORMATION I GIVE?
The information you provide during this research study will be kept confidential to the extent permitted by law. Research records will be stored securely and only researchers will have access to the records. Federal regulatory agencies and the Oregon State University Institutional Review Board (a committee that reviews and approves research studies) may inspect and copy records pertaining to this research. Some of these records could contain information that personally identifies you.
9. WHAT OTHER CHOICES DO I HAVE IF I DO NOT TAKE PART IN THIS STUDY?
Participation in this study is voluntary. If you decide to participate, you are free to withdraw at any time without penalty. You will not be treated differently if you decide to stop taking part in the study. If you choose to withdraw from this project before it ends, the researchers may keep information collected about you and this information may be included in study reports.

10. WHO DO I CONTACT IF I HAVE QUESTIONS?
If you have any questions about this research project, please contact: Karen Higgins at 541-737-4201 or by email at higginsk@oregonstate.edu, or Melinda Knapp at 541-224-2704 or by email knappme@onid.orst.edu. If you have questions about your rights or welfare as a participant, please contact the Oregon State University Institutional Review Board (IRB) Office, at (541) 737-8008 or by email at IRB@oregonstate.edu

11. WHAT DOES MY SIGNATURE ON THIS CONSENT FORM MEAN?
Your signature indicates that this study has been explained to you, that your questions have been answered, and that you agree to take part in this study. You will receive a copy of this form.

Participant's Name (printed): _______________________________________

________________________________________________________________________

(Signature of Participant) (Date)