

# The Role of Gestures in Storytelling

## Abstract

Story telling is an important aspect of early childhood education. Research generally studies the role of such literary experiences through examination of the oral language used in story telling. Much less studied is the role of gestures in such research. In this study, I analyze one episode from a story telling classroom, which allows me to support three assertions: (a) Gestures enhance the verbal communication, giving visual dimensions not available in the narrative mode; (b) gestures communicate an intended message which deviate from the intention of the verbal utterance, allowing the communicator to portray multiple messages simultaneously; and (c) gestures are used as the sole means of communication, without the need of verbal accompaniment. I end with conclusions that pertain to the role of gestures in early storytelling experiences.

## Introduction

Anyone who watches a young child at play will see them effortlessly move between drama, writing, gestures, image, and song, to explore meaning. Students choose from, transform, and integrate the multiple modes available to them in order to construct and communicate their intended message. Children are surrounded by multiple modes of representation; in the technology they use which incorporates sound, speech and animation, in the socially and culturally embedded uses of gesture, gaze, body posture, and intonation and in the literature they read which integrates visual and written modes to create abstract ideas. Unfortunately, written and verbal modes of communication are favored as the only appropriate means of communication in current classrooms, and therefore the only modes encouraged and assessed in

classrooms. Today's children are surrounded by multiple modes of communication, making them successful multimodal communicators, therefore it is imperative that schools begin to encourage, teach and create the space needed for students to explore learning and communicate their learning in multiple ways.

In this paper, I look at Vivian Paley's storytelling story acting teaching method as an example for the ways in which teachers can create the appropriate space and opportunities for students to use multiple modes. In this case, I look particularly at the ways in which both the teacher and the students use the mode of gesture in order to communicate their intended messages in the literary classroom.

### Background

#### Storytelling Story Acting

Vivian Paley is an exemplary teacher in many ways. She taught Kindergarten for 37 years, and received numerous awards including the McArthur Fellowship in recognition of her outstanding work with, and books about, young children. Paley's method of storytelling story acting was a way of including all members of the class and exploring the issues most pertinent to her young students. Paley would scribe the stories told to her by her students, and then have the class act the stories out during circle time at the carpet. The student author of the story would take on a role, as well as be encouraged to help choose the remaining actors, and direct the actors by contributing more details as to what the scene looked like, and how their characters would have acted. The story would then be acted out by the actors on the stage (the center of the carpet surrounded by seated children) while Paley narrated the scribed story.

## Gestures

The word gesture in its most general definition refers to movement of any part of the body including facial expression. However, only voluntary gestures which are used to express thoughts are considered when researching the use of gesture in a learning context. To further identify gestures when researching and relating gesture to learning, many researchers have broken gestures down into categories. Goldin-Meadow (1999, p.422) described McNeill's four types of gestures; deictic (where the speaker points out an aspect to which they are referring), iconic (visual representation of the feature it's relating to), metaphorical (visual representation of a metaphor) and beat (independent signs which contain meaning through social context, e.g. a wagging finger).

Research has overwhelmingly found that people use communication to portray their thoughts and knowledge, and often use gestures in isolation or in combination with speech in order to do so. From this notion, many researchers believe that gestures therefore provide a unique insight into people's thoughts. Gestures are found as a precursor to speech in young children. Infants will use gesture to communicate (often by pointing) well before the appropriate language follows (Goldin-Meadow, 1999, p.423). Further studies have shown that when learning new concepts in math and science, students will correctly display the knowledge through the use of gestures "sometimes weeks" (Roth, 2000, p.1685) before the correct discourse was adopted. Other studies have shown that gestures are used in synch with language showing that the author produced the gesture and speech together (Kendon, 1997, p.110). Most of the current research has focused on showing the deep ties gestures have to cognition. Gestures are culturally based, cognitively linked and important in meaningfully extending children's ability to tell and comprehend literary activities.

## Method

The data analyzed in this paper was from a video which filmed Vivian Paley's storytelling and story acting in a preschool classroom. The video used was one of three created by The Child Care Collection, which is part of Ball State University in Muncie, Indiana. Vivian Paley was invited to visit a Preschool in Muncie, Indiana, where she was filmed for two days working with the children. The footage from the two days was used to create three films; the film used in this paper was *The Boy who Could Tell Stories*. In the video, footage of Paley working with the children, scribing their stories, and the children acting out their stories using her method of storytelling story acting was seen. The video was a combination of the footage with the children, and interviews with Paley where she comments on her methods and the ways in which they are good for children.

Two episodes of storytelling story acting were transcribed from the video to include verbal and gestural actions. Initially, only the gestures of the children were analyzed, in order to examine the use of gestures to represent ideas or concepts. However, there was not enough evidence to support this line of exploration in these few episodes. I therefore moved on to analyzing both episodes using conversational analysis, in order to examine patterns in the discourse between the teacher (Paley) and the preschool children. This line of examination proved most interesting as it became obvious that gesture was the most frequently used mode of communication in both episodes. Three distinct patterns emerged: gestures used to enhance verbal communication, gestures used to communicate a message different from what is being communicated verbally, and gestures used to communicate without verbal communication present. For the purposes of this paper, I have shown and analyzed the transcription, in the results section, of only one of the two episodes from the video.

## Results

Gestures play a significant role in the communication between the teacher and the children in Vivian Paley's story telling story acting method, which we observe in the video. In this section, I show how both the teacher and the children all communicate with gestures, to (a) enhance what they're saying, (b) to communicate something that the speech is not saying or (c) to communicate solely through gestures without the accompaniment of speech. The majority of the speech used in this video clip is not substantial enough to communicate an intended message alone; it is often the gesture which clarifies the intended message. I begin by presenting the transcript, then move to a description of the episode and then analyze the transcript/episode.

### Data (story 2)

(21:45)

01. Paley- Would you be the house?

*Pointing to Becky*

02. Becky- *Stands up in the circle*

03. Paley- Sandra how would you like your house to look?

04. Sandra- *Puts arms out to the side of her body*



05. Becky- [*Puts arms partially out to the side of her body*]



06. Paley- [Okay, would you be the little boy?]  
*Points to Henry*
07. Sandra- *Turns body to look at Henry*
08. Henry- *Stands up in the circle and chews on his hands*
09. Paley- I go to the house  
*Points to Sandra*
10. Sandra- *Walks towards the house*
11. Paley- Then I saw a boy in the house. *Points to Henry.*  
And would you be the mommy? *Points to Emma.*
12. Emma- *Stands up in circle*
13. Paley- And my mommy said he could come in.  
*Looks at Emma*
14. Emma- He could come in.

### Description

Vivian Paley invites children to share a story with her, and while they tell her their story she scribes the story for them. When she has the class sitting in a circle at the carpet she then acts as director and narrator and invites the other children to act out the particular child's story. She

encourages the child who told the story to help the other children act the story out in the way the child envisioned it.

In this piece of video which is transcribed above, Paley is narrating Sandra's story who is already standing in the circle ready to play the role of the 'little girl' from her own story. Paley invites Becky to play the role of the house, and Becky accepts this invitation by standing up and entering the center of the circle (turn 01). Paley begins to involve Sandra in the directing of her own story by asking her to show Becky how she should act in order to be the house (turn 02). Paley asks Sandra, "Sandra how would you like your house to look?", Sandra responds by changing her body stance to reflect her idea of how her house should look, "*puts arms out to the side of her body*", and Becky acknowledges this as the action Sandra (the author and director of the story) would like her to perform, by changing her body to resemble the form that Sandra took, "*puts arms partially out to the side of her body*". Paley acknowledges Sandra's action and Becky's change in body stance as a satisfactory response to her question of how Sandra wanted her house to look, and the house looking that way, by moving on in the directing of the story by asking Henry if he would like to play the role of the 'little boy' (turn 06). Henry accepts the role by standing up and entering the circle (turn 08), and Paley acknowledges his acceptance of the role by beginning to narrate the story (turn 09).

Paley begins the narration of the story one line at a time, accompanied by gestures which are used as directions to assist the children with their role in the story. Paley reads the first line of the story "I go to the house" and points to Sandra (turn 09), who then responds to this direction by walking towards the house (turn 10). Paley continues the story with, "then I saw a boy in the house" as she points to Henry who is playing the role of the boy in the story, and with, "and would you be the mommy" pointing to Emma, a little girl sitting in the circle (turn 11); as

the role of the mommy had not yet been assigned. Emma responds to this request by standing up and joining the circle (turn 12). Paley accepts Emma as having taken the role of the mother by continuing the story, “and my mommy said he could come in” and encouraging Emma’s participation by pausing and looking at Emma (turn 13). Emma takes this as direction for her turn to act as the role of mommy in the story by repeating the mommy’s line of “he could come in” (turn 14).

### Analysis

#### 1. Gestures used to enhance verbal communication

During the directing and narrating of the story, Paley enhances what she is saying verbally to the students through the use of gestures. Paley asks the question “would you be the house?”, in this question, Paley doesn’t specify which child she is posing the question to, but as she asks this question she gestures or points to one specific child, sitting in the circle, named Becky (turn 01). Paley doesn’t call Becky by name but solely by the use of gesture does Becky recognize that it is her Paley is referring to rather than the other students sitting in the circle. It is clear that Becky recognizes Paley’s gesture as referring to her, as we see Becky accept Paley’s invitation with the body movement/gesture of standing up and joining Sandra as an actor in the circle (turn 02).

We see this same use of gesture when Paley invites Henry to play the role of the little boy by saying “okay, would you be the little boy?” (turn 06), again she does not call on Henry verbally, but through the use of gesture, by pointing directly at Henry she specifies the particular child she is speaking to. We see Henry acknowledge the gesture as referring to him when he stands up and joins the other actors in the circle stage. The third instance of gesture used to



enhance what is said verbally is used in turn 11 where Paley asks “and would you be the mommy” and then gestures or points to Emma, who acknowledges Paley’s gesture by joining the circle (turn 08).

In each instance, the request is stated verbally, but the specific person being asked to participate is stated through the use of gestures. We see in the student’s responses (of the correct child responding rather than multiple children or no children at all responding) to Paley that they recognize the gestures as a satisfactory means of communication. In fact, without the use of gestures in these instances, the intended communication (speaking to a particular child) would have been lost.

## 2. Gesture used to communicate a message different from what is verbally communicated

There are instances where the gesture that Paley uses, communicates a different message from the message of the speech used. For instance, Paley begins to narrate the story with the line “I go to the house”, but she uses the gesture of pointing to Sandra, to communicate to Sandra that it is she who goes to the house at this point in the story (turn 09). Paley did not communicate this direction to Sandra verbally by saying, please go to the center of the carpet, but relayed these directions through the use of gestures while she verbally narrated the story. Paley continues to use gestures to give children directions in the story where she narrates a part of the story and while narrating, gestures toward the child playing that character, giving them directions to act out their part in the story. We see this again when Paley invites Emma to speak her line in the story simply by looking at Emma and waiting for her to say the line which she narrated as “and my mommy said he could come in” (turn 13). In this instance, as in the one noted earlier, Paley does not give Emma oral directions that it is her turn to play her part in the story, she simply uses the

gesture of looking at Emma, and Emma responds to Paley's gesture by saying her line "he could come in" (turn 14).

In each of these instances the message that is communicated verbally is significantly different from the message communicated through gestures. The oral communication is meant to narrate the original story, the point being to communicate the content of the story to the audience. The gestures, however, were used to communicate directions to the actors in the story. Here to, we see the students respond appropriately to the gestures by following the intended directions of the gestures, indicating that the gestures alone were substantial enough to communicate meaning apart from the accompanying speech.

### 3. Gestures used to communicate without verbal communication present

There are many occasions, especially between the children, where they communicate with each other only through the use of gestures without any verbal communication present. This was seen in almost every response made by the children to Paley asking a question or narrating the story verbally; each response by the children was done solely through the use of gestures. For instance in the first line of the story when Paley asks Becky "would you be the house" (turn 01), Becky responds with the body movement/gesture of standing up and entering the circle to join Sandra as an actor in her story (turn 02). Beck doesn't respond by saying 'yes I would like to be the house', she responds by simply standing up and joining Sandra in the circle. Paley shows the students that Becky's gesture alone was a suitable response by moving on in the story and asking Sandra how she would like her house (now played by Becky) to look (turn 03).

This use of gesture as communication is seen again when Paley points to Henry and asks "would you be the little boy?" (turn 06). Henry responds by standing up and entering the circle

(turn 08), and Paley acknowledges his acceptance of the role by continuing to narrate the story (turn 09). Paley narrates part of the story and gestures to Sandra who is the actor for that sequence (turn 09), Sandra responds by doing the designated action, by walking to the house (turn 10), when Paley narrates “I go to the house”. In each of these instances the gesture is a response to a verbal request, and the gesture stands alone as the response, without the aid of verbal communication.

In one instance the gestured response of the student is a response to a request communicated using a gesture rather than with speech. When Paley asks Sandra, “how would you like your house to look?” (turn 03), Sandra responds with the gesture of putting her arms out to the side (turn 04). Paley’s question was eventually meant to communicate to Becky, who was playing the role of the house, a direction for how she should act as the house. Becky responds to Sandra’s gesture by mimicking the gesture and putting her arms out to the side. Neither the teacher nor the story teller directly asked Becky to put her arms to her side (turn 05), but Becky clearly responded this way through the use of gestures after seeing the gestures communicated by Sandra. In each of these examples, Paley clearly accepts the students’ gesture alone as a satisfactory response because following each gestural response of the student, Paley moves on to the next part of the story.

### Discussion and Conclusion

Multimodality is pertinent to current classrooms because of the extensive exposure of children to multiple forms of representation in the technology that surrounds them, in the intricate ways authors combine multiple modes (such as in postmodern picture books), and in the ways their individual cultures utilize various modes of representation. The diverse ways of

representation influence the ways in which children themselves represent concepts in their literary experiences. Previous research has shown that gestural modes in particular, are not simply aesthetic additions to verbal language, but rather, are cognitively linked, and purposefully used to communicate meaning. The claims established in this paper continue to demonstrate that gesture is a significant and substantial mode of communication. Close examination of Vivian Paley's storytelling story acting teaching method revealed the complex ways in which gestures were used to interpret and communicate intended messages: gestures were used to enhance verbal communication, gestures were used to communicate a message which differed from the intention of the accompanying verbal communication, and gestures were used as the sole mode of communication.

Both the teacher and students chose from, and engaged with the communicational advantages the modes available to them provided. Using gestures as a mode of communication in the storytelling story acting activity, enabled the communicator to execute a specific purpose that the use of verbal communication couldn't have afforded. Gesture allowed the communicator to portray wordless intentions. The teacher was able to communicate to specific students through gesture, while still engaging the whole class in the activity, give directions to a specific student while still narrating the story to the whole class; as well, students were able to accept roles, direct movements and act their parts without interrupting the flow of the story, simply by using gesture as the means of communication. To look only at language denies the meanings carried in other modes and the complex interplay between modes in the social interaction of literary experiences.

Schools tend to be strongly focused on monomodal representation in literary experiences. However, as we've seen in Paley's storytelling story acting activities, the children as well as the teacher use multiple modes, including gesture, to communicate their intended messages. Since

multimodal responses, and in particular, the mode of gestures, are cognitively linked and culturally based, are the schools, which focus on monomodal pedagogies, disconnected from the children they are serving; are they doing these multimodal communicators a disservice?

It seems logical that opportunities for multimodal representation in literary experiences be provided for in the classroom. Vivian Paley's storytelling story acting teaching method, which has extensively been proven an exemplary practice in a child centered literacy classroom, has proven in this case to be an exemplary method to create space in a classroom for multimodal literary representation as well. A multimodal approach recognizes the different meanings that can be communicated and which are currently being used to communicate by both teachers and students. It is important that teachers consider their own practice in the ways they use other modes to communicate with their students, and to recognize and value the purposeful ways in which their students are communicating through modes other than language.

### References

- Goldin-Meadow, S. (1999). The role of gesture in communication and thinking. *Trends in Cognitive Sciences*, 3(1), 419-428.
- Kendon, A. (1997). Gesture. *Annual Review of Anthropology*, 26, 109-128.
- Roth, W. M. (2000). From gesture to scientific language. *Journal of Pragmatics*, 32, 1683-1714.
- Vivian gussin paley and the boy who could tell stories*. The Child Care Collection (Director). (2002).[Video/DVD] Ball State University.

### Additional Readings

Bearne, E. (2009). Multimodality, literacy and texts: Developing a discourse. *Journal of Early Childhood Literacy*, 9(2), 156-187.

Bezemer, J. (2008). Displaying orientation in the classroom: Students' multimodal responses to teacher instructions. *Linguistics and Education: An International Research Journal*, 19(2), 166-178.

Bezemer, J., & Kress, G. (2008). Writing in multimodal texts: A social semiotic account of designs for learning. *Written Communication*, 25(2), 166-195.

Bourne, J., & Jewitt, C. (2003). Orchestrating debate: A multimodal analysis of classroom interaction. *Literacy*, 37(2), 64-72.

Bruner, J. (1996). *The culture of education*. Cambridge and London: Harvard University Press.

Cole, M. (1985). The zone of proximal development: Where culture and cognition create each other. In J. V. Wertsch (Ed.), *Culture, communication and cognition: Vygotskian perspectives* (pp. 6). Cambridge: Cambridge University Press.

Colletta, J. -. (2009). Comparative analysis of children's narratives at different ages. *Gesture*, 9(1), 61-96.

Cooper, P. M. (2005). Literacy learning and pedagogical purpose in Vivian Paley's "storytelling curriculum". *Journal of Early Childhood Literacy*, 5(3), 229-251.

Cooper, P. M. (2009). *The classrooms all young children need: Lessons in teaching from vivian paley*. Chicago and London: The University of Chicago Press.

Explore the laureate legacy. (2006, Kappa Delta Pi). Message posted to

<http://www.kdp.org/meetourlaureates/laureates/vivianpaley.php>

Fawbush, V. (2007, Lewis and Clark College). Education leader vivian gussin paley to speak at

135th commencement. Message posted to [http://legacy.lclark.edu/cgi-bin/shownews.cgi?news\\_item=1177966500.0](http://legacy.lclark.edu/cgi-bin/shownews.cgi?news_item=1177966500.0)

Gay, G. (1993). Building cultural bridges: A bold proposal for teacher education. *Education and Urban Society*, 25, 285.

Haan, D. M. (1999). *Learning as cultural practice: How children learn in a mexican mazahua community*. Amsterdam: Thela Thesis.

Heath, S., B. (1983). *Ways with words: Language, life, and work in communities and classrooms*. Cambridge, UK.; New York, USA.; Melbourne, Australia; Madrid, Spain: Cambridge University Press.

Heath, S., B. (2000). Seeing our way into learning. *Cambridge Journal of Education*, 30(1), 121-132.

Jewitt, C. (2008). Multimodality and literacy in school classrooms. *Review of Research in Education*, 32(1), 241-267.

Koshewa, A. (2002). Interview with vivian paley. *Talking Points*, 14(1), 7-9.

Mercer, N. (1992). Culture, context and the construction of knowledge in the classroom. In P. Light, & G. Butterworth (Eds.), *Context and cognition* (pp. 28). New York, London, Toronto, Sydney, Tokyo, Singapore: Harvester Wheatsheaf.

Ohles, F., Ohles, S., M., & Ramsay, J., G. (1997). *Biographical dictionary of modern american educators*. Westport, CT: Greenwood Press.

Paley, V. G. (1979). *White teacher*. Cambridge: Harvard University Press.

Paley, V. G. (1984). *Boys and girls: Superheroes in the doll corner*. Chicago and London: The University of Chicago Press.

Paley, V. G. (1991). The heart and soul of the matter: Teaching as a moral act. *Educational Forum*, 55(2), 155-166.

Paley, V. G. (1992). *You can't say you can't play*. Cambridge, Massachusetts, and London, England: Harvard University Press.

Paley, V. G. (1986). On listening to what the children say. *Harvard Educational Review*, 56(2), 122-31.

Paley, V. G. (1995). *Kwanzaa and me. A teacher's story*. Cambridge, Massachusetts, and London, England: Harvard University Press.

Rasberry, G., W. (1996). The classroom as living room and laboratory: Appreciating the work of Vivian Gussin Paley. *Curriculum Inquiry*, 26(2), 203-210.



Roth, W. M. (2001). Gestures: Their role in teaching and learning. *Review of Educational Research*, 71(3), 365-392.

Smith-Maddox, R. (1998). Defining culture as a dimension of academic achievement: Implications for culturally responsive curriculum, instruction, and assessment. *The Journal of Negro Education*, 67(3), 302-317.

Van der veer, R. (1996). The concept of culture in vygotsky's thinking. *Culture Psychology*, 2, 247-263.

Vygotsky, L. S. (1978). In Cole M., John-Steiner V., Scribner S. and Souberman E. (Eds.), *Mind in society*. Cambridge, Massachusetts and London: Harvard University Press.

Wiltz, N. W., & Fein, G. G. (1996). Evolution of a narrative curriculum: The contributions of vivian gussin paley. *Young Children*, 51(3), 61-68.

### Personal Reflection

This has been a huge growing and learning experience for me! When we first began this class, I was eager to learn the research theories appropriate to the type of research that I'll be doing in the classroom in the fall. I did not, however, realize that I would begin to acquire the tools and skills necessary to carry out my future research. I had no idea of the usefulness and significance of the assignment we were being encouraged to engage with.

I was quite excited to use a video which filmed Vivian Paley teaching a preschool class using her storytelling story acting method. This was a perfect video for me to practice with since I will be using her method of storytelling story acting in my research in the fall, and in fact videoing, transcribing, analyzing and writing on this research. All the pieces were falling into place, I was taking a class on how to do research, and I was practicing the methods using video footage very similar to what my own research will look like. I happily transcribed the video (honestly enjoying every hour it took to pick out all the details). All was going swimmingly, until...

Upon analyzing the text, I became fixated on one particular event where a little girl in the first story used an odd gesture to represent her house, and then a different little girl in the second story used the same odd gesture to represent the house in her story. I wanted to know where the first girl was influenced to represent her idea of a house in such a way; did she live in an apartment or a house with a flat roof? And was the second little girl influenced by the first little girl's representation, and how would this influence the schema of a house for the second little girl? I had many questions. However, I did not have enough video, background, or experience with these children to explore any of my lines of inquiry. Yet I was stuck, I couldn't see anything

else of interest in the texts. I was most definitely a ‘fish in the water’, unable to see the water around me, too much a classroom teacher to see the intricacies of this classroom episode. So, I spent more hours, transcribing the video in other forms, and re-transcribing from the video, with no success. I immersed myself in literature related to cultural teaching, gestures and Paley’s methods. It was a long process, but eventually I evolved. I grew legs and walked out of the water.

I fell as though I began to look at the transcript with new eyes. I saw interesting things in each conversational turn, and many repeating patterns, all relating to the use of gesture in the classroom. I had been doing further readings about gesture in my other class because I was looking at multimodal student response to literature, and gesture was one of the multiple ways children create and represent their ideas. I was already convinced from those readings of the importance of multimodal response. But I was even more blown away when analyzing Paley’s video! Seeing how gestures were used by both the teacher and the students in every turn of conversation. Seeing how one responded to the others gestures and intended messages. Seeing how gesture was used with verbal language, to enhance it, with verbal language to communicate something completely different from the verbal utterance and used without verbal language to communicate meaning all on its own. The articles I read added to my new ideas on the significance of gesture by showing me that gestures are used as a precursor to speech in young children, that gestures are used by students to communicate new concepts learned before they’ve acquired the proper language to describe it, that gestures are culturally influenced and develop with age. I also learned that as an educator I can recognize children’s use of gestures to assess their acquired knowledge, to recognize mismatches which will signal appropriate times to teach

that student and finally I have become more aware of my use of gestures as a communicative tool when teaching my students.

I have forever been transformed, both as a classroom teacher and as a researcher. As a classroom teacher, I have a new definition of literacy and discourse in the classroom which includes multimodality. Learning, exploring and representing ideas in the classroom looks very different to me now. I greatly appreciate and see the huge need for multimodality in the classroom. I previously included multiple modes of instruction haphazardly in the classroom, having a vague idea that they benefited the diverse students in my care. However, now knowing the significant impact opening up multiple modes of communication has on the learning of my students will change my haphazard ways to become more deliberate in nature. I will also be more attuned to the use of my students gestures, not only by creating space for their use but also to be closely examining their function and use, like a small tool to look into the minds of my students. And as a researcher...well, now I actually see myself as a researcher. I've had a small taste of one aspect of research, and I absolutely love it! I surprised myself at how much I enjoyed each phase of the process: the transcribing, the analyzing and even the writing. I'm much more excited about my future research project and certainly more confident in my abilities to carry the project out. I realize that I'm in the right place, and that research is for me.

I'm very thankful for this experience. It was definitely an exercise in trust, trust in my professor and trust in myself, because at first, I couldn't see the light at the end of the tunnel. Now that I'm through the tunnel, I see how much I've grown and am thankful to have gone through this process, to have had a test run, and am now excited to start my own research. Thanks again, Michael.