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How images work: An analysis of a visual intervention used to facilitate a difficult conversation and promote understanding

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Abstract

This study centers on an intervention that uses visual methods to structure conversations among teachers about their undocumented Latino/Latina immigrant students living in the US. Given negative perceptions of undocumented immigrants and cultural misunderstandings, recent demographic shifts have challenged many communities, and presented issues especially relevant to majority-culture teachers who teach immigrant students. We describe an innovative intervention methodology that incorporates photographs with facilitated discussion using Visual Thinking Strategies to promote awareness, empathy, and understanding. This study uses qualitative data to identify the ways in which images function to facilitate difficult discussions; to determine the relationship between images, facilitated discussion, and attitude shifts; and to determine

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whether such attitude shifts are schema changes. Findings show images effectively engage participants in discussion, elicit openness and reflection, and increase empathy. Indications of schema change derive from participants' descriptions of shifts in awareness, perspective-taking, attitude change, and more complex thinking about Latino/Latina immigrants.

Keywords

Diversity training, intervention development, professional development, schema, visual methods

Introduction

Social work practitioners often need to facilitate difficult conversations that address, specific individuals in specific situations such as end-of-life decisions, child placement, or treatment choices. At the organizational level, difficult conversations might center on policies with which employees disagree, controversial leadership changes, or attitudes and biases held by agency members that are detrimental to clients. Conducting these difficult conversations is sensitive because the discussion taps into personal schemas, deeply held beliefs about and perspectives of how the world operates.

The concept of schema is found in disciplines ranging from psychology to visual sociology to political science (Bryan et al., 2009; Chang, 2009; Gregoire, 2003; Hajek and Giles, 2005; Levy et al., 1998; Nishida, 1999; Nussbaum and Dweck, 2008; Olson and Dweck, 2008; Sandelowski, 2000; Solso, 2003; Timperly and Robinson, 2001). In general, schemas are mental representations that an individual constructs over time through life experiences, and uses to organize social information into themes or idea clusters (Fournier, 2009). When a person encounters an individual, situation, or even a work of art, the novelty is not experienced uniquely; rather, the encounter is perceived through the lens of existing schemas, enabling the individual to quickly categorize the encounter based on prior experience (Solso, 2003). However, novel stimuli are so overwhelming that they may activate one schema over all others, keeping competing viewpoints from being considered. Some experts suggest schemas are responsible for impairments in cognitive, emotional, and behavioral functioning, which sometimes reaches the threshold for a diagnosable mental health condition (Nishida, 1999; Young et al., 2003). Even non-pathological schemas can color reactions to new information and usually remain constant. Further, social context shapes which schemas are activated at particular times. Social-environmental cues prompt individuals to respond to a new stimulus in ways consistent with experiences and expectations (Haidt, 2001). Difficult conversations on sensitive topics often activate schemas, and the activation of schemas tends to prevent individuals from incorporating new information about a topic, considering a different perspective, or behaving differently in response to new information (Gregoire, 2003; Hajek and Giles, 2005; Timperly and Robinson, 2001).

The intentions of many professional training programs (also labeled diversity trainings) are to facilitate difficult conversations with the goal of challenging, altering, or circumventing schemas. These efforts typically combine experiential and didactic strategies. Although widely used, little empirical evidence supports the efficacy of these programs (Bunch, 2007; Holladay and Quiñones, 2005; Paluck, 2006; Paluck and Green, 2009). Given the numerous sensitive topics that need honest discussion and consideration, it is essential that intervention researchers take schemas into account and consider and test new ways of accessing and altering schemas that might be incorrect or biased.

This article presents findings from a pilot study of an intervention that incorporated visual images in a training for middle-school teachers to foster awareness and empathy for immigrant Latino/Latina students in their classrooms. *Yo Veo (I See)* uses a series of photographs to elicit teachers' reflections and conversation about students' migration experiences and the implications of those experiences for the students' mental health, school success, and well-being. The photographs follow a young girl and her family during their migration from Mexico and integration into the US. This qualitative research addressed two research questions: (1) When using images to facilitate difficult conversations, in what ways do those images function over and above elicitation? Further, what types of conversation are elicited in response to images? (2) What is the relationship between images, facilitated discussion, and attitude shifts some may describe as schema change?

Possible image mechanisms

Many images within fine arts and journalistic traditions are designed to create *visual dissonance*, which is 'a state of psychological tension caused when one experiences a disparity between what one expects to see and what one actually sees' (Solso, 2003: 235). An individual experiencing such tension has three paths available toward resolution. First, the importance of the image can be denied, such as questioning the image's authenticity, moving to another image without significant contemplation, or minimizing the image's importance in some other way. Second, the viewer can try to make meaning of the image by acquiring information about the image, including asking questions about the image, researching the creator or the topic of the image, or discussing thoughts and feelings evoked by the image. Finally, the viewer can try to resolve the tension by suggesting revisions to the image, such as focusing on technical details that could be changed to make the image less threatening or foreign (Solso, 2003). When images are used to prompt a difficult conversation, the desired goal is to have viewers choose the second path in which the image creates a desire for additional information and conversation that will enable individuals to understand and evaluate the image.

In the literature, visual objects and images are primarily used as projective, elicitation, or priming devices (Carawan and Nalavany, 2010; Sandelowski et al., 1993; Schafer, 1954; Ungar et al., 2011). When used as a projective device, the visual object must be neutral, allowing viewers to put their own ideas forward

without the object or information from an outside source influencing their thinking. A classic projective device is the Rorschach test (Schafer, 1954), in which an ambiguous image is shown to an individual, who then describes what he or she sees in the image. The clinician uses that description to better understand the person's perception of the world. Similarly, unambiguous images are used to learn about participants' perceptions (Sandelowski, 2000) by asking individuals to describe what they believe an artist or photographer is trying to communicate with a particular image. Through this process, researchers might learn whether a participant focuses on threatening aspects, concentrates on aspects that are clear versus complicated, persists in trying to understand or gives up in response to something that is foreign or removed from personal experience.

A second primary use of visual objects is elicitation; specifically photo-elicitation or the process by which photographs help individuals talk about issues that they find too difficult to discuss in a traditional interview (Carawan and Nalavany, 2010; Ungar et al., 2011). The images used in photo-elicitation can be chosen by the researcher (without any particular relationship to the viewer) or the images can be photographs taken by the viewer and discussed with the researcher (Sandelowski et al., 1993). In both cases, the image is used to begin a conversation about the topic of interest to the researcher (Carawan and Nalavany, 2010; Sandelowski et al., 1993; Ungar et al., 2011).

A third use of visual objects is as priming devices. Often used in social psychology, researchers provide participants with a brief look at an image to activate a subconscious set of assumptions that might be considered an indication of an individual's schema (Schafer, 1954). Political science has shown that images can prime individuals to view public policy choices or candidates favorably or unfavorably (Bryan et al., 2009).

In the current study, we designed an intervention that uses visual images to help teachers broach the difficult subject of undocumented immigration. Our investigation sought to understand how the visual intervention functioned and influenced the participants.

Intervention methods

Project background

Yo Veo is an extension of a six-year initiative in a rural North Carolina (US) school district that provided school-based mental health services for immigrant youth and their families (see Chapman, Hall and Sisler, in press). Between 1990 and 2010, North Carolina's Latino/Latina population increased by 943 percent (US Census Bureau, 2011). In particular, rural areas experienced dramatic demographic shifts, requiring response to myriad challenges accompanying such changes. Teachers have had to learn to work with immigrant students suffering from traumatic experiences related to migration, which often translate into classroom-behavior problems. This behavior can be misinterpreted as lack of motivation, or disrespect and

the result of poor parenting, leaving these students further alienated from their school community. The *Yo Veo* intervention was delivered in a middle school with a nearly 70 percent Latino/Latina student population, of whom almost half were eligible for the free or reduced-price lunch program (a typical proxy for income at or below the federal poverty threshold; North Carolina Department of Public Instruction, 2011).

Like many rural communities that have become immigration destinations, community members in the study school's area had strong opinions and biases toward newcomers (Donnelly, 2005). For example, the study community has experienced anti-immigrant sentiment ranging from open rallies led by Ku Klux Klan members to road blocks set up by the local police on Parents' Night at the school in the hope of identifying undocumented parents. Members of the school advisory board relayed statements made by community members denigrating the school, the teachers, and the student body because of the students' undocumented status.

Prior pilot training work with the school helped us understand the importance of the social context surrounding the study school. Faced with an equally important need for communication strategies that would address teachers' perceptions and promote engagement with the educational aspects of the training, we were entering a difficult conversation: A conversation about diversity, prejudice, politics, inclusion, and parenting. These issues were not only intensely personal and potentially inflammatory but also the issues the teachers were confronting daily when teaching Latino/Latina students from undocumented or mixed-citizenship families.

Intervention description

Crossings; Dream of the Rich North (Jarman, 2007) is a series of photographs chronicling the story of Marisol and her family over the course of 15 years, including their preparations to leave Mexico and their immigration journey to the US. The project began in 1996, when Marisol was eight years old. The first photograph is a portrait of Marisol, using the conventions of the Western honorific portrait (Woodall, 1997) in which the subject looks out in an upward-directed gaze, set against a neutral backdrop. These conventions signal the viewer that Marisol is the central character (Figure 1).

Jarman's depiction of Marisol's life resonated strongly with immigration-related issues, including family pressures, economic realities, daily challenges in a new country, legal concerns, and education. Jarman granted the first author permission to use her photographs.

The *Yo Veo* training introduced 33 teachers to eight photographs installed in an art museum's study gallery. The intervention team consisted of a social work researcher (i.e. the principal investigator), an art historian and visual studies scholar, and a Latina clinical social worker. A much larger group of teachers, administrators, and mental health professionals was involved in preparing and promoting the intervention. To establish a pattern for the day, the session began with a warm-up exercise using the painting, *Mending Socks* (Figure 2), an image unrelated to the training's



Figure 1. Marisol at garbage dump, waiting for another load of waste to arrive. Marisol, mother Eloisa, and siblings support themselves by selling recyclables harvested from dump. Source: reproduced with permission from Janet Jarman, 1996.



Figure 2. Mending Socks.

Source: reproduced with permission from the Burton Emmett Collection at the Ackland Art Museum at the University of North Carolina at Chapel Hill, Archibald J. Motley Jr., 1924.

topic. A museum educator trained in the Visual Thinking Strategies method (VTS; Housen, 2002; Yenawine, 1999) served as the facilitator. VTS is an instructional method that uses open-ended questions to promote participants' analysis of the image and their thought processes. Through engaging but demanding questions, VTS encourages participants to resolve the tension created by the image by sharing their own ideas while respectfully listening to others and learning from peers' ideas.

The VTS method involves open-ended questions: 'What's going on in this image?' 'What is it that makes you say that?' and 'What more can we find?' Throughout the discussion, the facilitator affirms a participant's contribution by repeating the observation, and then continues directing attention to the images as the site of reflections. Instead of acting as the expert telling participants how to interpret the image, the facilitator creates an opportunity for participants to voice their observations, and nurtures participants' willingness to share their found meaning while keeping the discussion on topic.

Following the warm-up exercise, participants were asked to view the Jarman photo series. Participants were encouraged to use the first five minutes to note as many details as possible. The facilitator allowed the group to choose the large portrait of Marisol (Figure 1) as the discussion starting point. For each image in turn, the facilitator used the VTS questions to elicit participants' observations and proposed interpretations that were based on visual information combined with personal reflection.

When the discussion reached a point where observation and speculation were no longer satisfying and participants asked specific questions about an image, the facilitator read the descriptive captions. In each case, the caption added an extra dimension to participants' understanding of the image. For example, when Marisol's portrait (Figure 1), was discussed, many teachers initially perceived it to be a picture of a happy child resting after play. However, another participant introduced doubts about this interpretation when, in a non-confrontational manner, she suggested the girl appeared curiously divorced from her surroundings. From the caption, the group learned that Marisol was waiting for another load of garbage to arrive at the dump where she and her mother worked gathering recyclables to sell as a source of family income.

The usefulness of allowing participants to form interpretations before providing factual details of the images was supported by the discussion of the image of Marisol and her mother sorting through garbage for recyclables (Figure 3). When participants considered only the photograph, their responses ranged from disgust with the conditions in which people were forced to live to speculation about the health consequences. When supplemented with the caption's harrowing detail that described an occasion when Marisol discovered a corpse in the dump, the combination of the image and the descriptive detail evoked not only empathy and concern for Marisol's well-being but understanding of why families like Marisol's choose to immigrate.

The discussion evoked varied perspectives, ranging from pity to questioning parental judgment. The photographs provided a bridge between extremes that



Figure 3. Marisol (R) and her mother, Eloisa search through the garbage dump.
Source: reproduced with permission from Janet Jarman, 1996.

enabled participants to consider a nuanced account of the realities of many immigrant parents' and children's lives, including respect for the determination to seek a different life.

Before discussing the photograph of Marisol's mother (Figure 4), teachers discussed parenting choices, the importance of parental monitoring, and their choices such as not allowing certain freedoms and stating strongly that their students' parents should do the same. However, when confronted with the photograph of the exhausted mother, Eloisa, surrounded by her daughters, many teachers who were also parents recognized the fatigue of parenting after a long day at work. Moreover, the caption revealed that Eloisa suffered painful rashes caused by the pesticides used on the plants. The image depicting exhaustion and the caption's information elicited empathy among the teachers for Eloisa's situation, prompting the group to reconsider their earlier judgments.¹

Day 2 of the training took place at the teachers' school. The research team used slides of other images from Jarman's photo series as a catalyst for discussion, reflection, and an avenue for providing information on mental health, immigration, and classroom behavior.

Data collection methods

We used three forms of qualitative data collected after participants had completed the intervention: key informant interviews with participants who were school advisory board members; a focus group conducted three-months post intervention; and open-ended reflection forms completed immediately after the museum experience.



Figure 4. Exhausted after long days of harvesting strawberries, Eloisa (M) sleeps on the floor with daughters on either side.

Source: reproduced with permission from Janet Jarman, 1996.

Sample

The study site was selected using a purposive sampling strategy; specifically, because the school had the highest proportion of Latino/Latina students in the district. The data were gathered through three avenues of inquiry, listed above. Five members of the school advisory board were key informants and school leaders. All focus-groups participants had attended the entire training and expressed a willingness to provide feedback. The reflection forms were completed by 32 of 33 participants. These multiple sources of qualitative data not only allowed for data triangulation but also enabled a deeper, comprehensive understanding of the intervention process from the participants' perspective. To minimize social-desirability bias, the interviewer and focus-group moderator were not involved in the intervention delivery. Table 1 displays participant demographic characteristics grouped by data-collection type. Teachers were required to attend the training, but participation in data collection was voluntary. Before Session 1, participants were provided with verbal and written information about the data collection elements. Signed consent was obtained. Participants were assured they could withdraw their consent at any time or decline to answer individual questions. This study was approved by the Behavioral Institutional Review Board at the first author's university.

Measures

Key informant interviews. Separate post-training semi-structured interviews were conducted with five school advisory board members. The interview protocol included

Table 1. Participant demographic characteristics.

Participant Group	N	Gender		Race/Ethnicity			Age (in years) M (SD)
		Female	Male	White	Black	Latino/ Latina	
School Advisor Interviews	5	100%	0%	100%	0%	0%	32.8 (6.1)
Teacher Focus Group	9	88.9%	11.1%	88.9%	11.1%	0%	33.9 (12.7)
Teacher Reflections	32	84.4%	15.6%	90.6%	6.3%	3.1%	38.3 (11.8)

open-ended questions selected to assess the perceived efficacy of training activities (e.g. ‘Which training activities were the most effective at advancing teachers’ skills, knowledge, and attitudes about the mental health and culture of Latino/a students and their families?’), teachers’ receptivity to the activities (e.g. ‘How would you describe teachers’ receptivity to the training?’), and the effects of the training (e.g. ‘Has the training affected how you interact with students?’). In addition, several questions asked about the images: ‘How did people respond to the photographs?’ ‘Why did people respond to them?’ ‘What was it about the photos that was meaningful or influential?’ The 45-minute interviews were audio recorded and transcribed for analysis; participants received a \$10 gift card for completing the interview.

Focus group. All teachers who participated in the *Yo Veo* training were invited to participate in a focus group conducted during their lunchtime break; nine elected to participate. The focus-group moderator used a semi-structured guide designed to assess the participants’ perceptions of the efficacy of training activities, teachers’ receptivity to activities, and training effects. These questions mirrored those used with the school advisory board. The 45-minute focus group was audio recorded and transcribed for analysis. Respondents were given a meal during the discussion.

Reflection forms. Following the Day 1 museum session of the *Yo Veo* training (i.e. the photo documentary discussion), all participants were invited to complete an anonymous reflection form of four open-ended prompts: (a) ‘These photographs remind me of...’, (b) ‘The main emotions I am experiencing as I view these photographs are...’, (c) ‘These photographs make me want to know more about...’, and (d) ‘The connection I make between these photographs and my teaching is...’. Reflection forms were completed by all but one of the 33 participants.

Data analysis

The analytic approach integrated qualitative-content analysis (Mayring, 2000) and grounded theory (Corbin and Strauss, 2008). This integrated approach enabled us

to identify prominent themes and to derive a conceptual explanation of how the images functioned and influenced the teachers. To enhance rigor, our analysis used several types of triangulation referenced in the literature (Thurmond, 2001). First, the four authors (3 social workers and 1 art historian) coded and analyzed data (investigator triangulation), which reduces researcher bias. Second, we used literature on visual methods and schema from public health, psychology, social work, and visual studies to inform the analysis (theoretical triangulation). Third, the study data were gathered from three sources (i.e. individual interviews, a focus group, and reflection forms) collected at three different time points, giving us three types of data from which to draw (data sources and data collection methodology triangulation). Using multiple triangulation methods enhances the depth, comprehensiveness, and integrity of the data and findings (Thurmond, 2001).

Using all data sources (135 pages of text), we grouped responses that spoke specifically about the visual aspect of the training. Each investigator independently read those responses, wrote memos, and open coded the transcript, labeling relevant segments of text. Next, our group compared notes, codes, and derived a final coding scheme. Our codes reflected concepts from the literature as well as themes that emerged from the data. Using the agreed-upon coding scheme, each investigator re-coded the data. Little dissention existed among the investigators' coding. During the coding, each coder independently tracked key words, phrases, and emotions that appeared frequently across data sources and informants. Moving into a content analysis framework, we produced counts of these impact words and emotion-based statements. After multiple iterations, we developed a diagram to illustrate the visual intervention process and its effects.

Results

Findings are grouped thematically corresponding to the research questions of how the images functioned during the intervention and how the relationship between images facilitated discussion and changes in schema.

Engagement and discussion

Participants reported the intervention was a novel experience, creating an environment in which they could express their opinions and learn from one another. One teacher described the Jarman photographs as 'an engaging hook' and another described the photo series as 'a really good book [that makes you] want more.' A school counselor explained the teachers' high engagement and receptivity, saying, 'The pictures really added a different element and people responded to that.' Another teacher commented on the way in which using photographs produced a discussion that allowed for both individual and group processing.

The quote also suggests that the intervention method promoted discussion without a presupposed 'right' answer:

Because it was more visual and people like to be involved, and I think that giving the people the opportunity to look at them [photos] first and kind of develop their own opinions and then be able to share their ideas.

All five advisory board members stated the intervention ignited discussion among the teachers. According to one,

Most importantly, [the visual aspect] started conversation . . . It encouraged some of those critical conversations that we haven't had before and those difficult conversations that we need to have but tend to make people feel uncomfortable.

Similar to the board members' comments, a focus-group participant stated the *Yo Veo* training, 'gave me the chance to get some meaningful discussion with my peers, which was valuable.'

Openness, receptivity, and awareness

Teachers described the images as mechanisms motivating the viewer to be open and receptive to new information about undocumented Latino/Latina immigrants and the issues they face. One educator commented the photographs made 'people more open.' In another interview, a participant stated '... [teachers were] receptive to what was happening and they were really reflective on the photos.'

Viewing the photographs inspired participants to reconsider the life situations of their Latino/Latina students:

When you look at photos, it makes it [immigration struggle] very real because I can [say] 'Well, this is what this is and this is what this is . . .' But when you're actually sitting there, seeing like 'Oh, this is this family in this situation' . . . I think that makes it more real for people.

The visual images served as an alternate route to penetrating participants' awareness. A participant commented saying, 'It's easier to actually see [immigrant students'] stories' or life experiences than to hear about them. In addition, participants used words indicative of openness and new awareness, describing the visual intervention as, 'a wake-up call,' 'a kick-start,' 'a reality check,' and 'eye-opening.' These statements support the potential of visual training to prepare participants for shifts in or activation of schema. A key informant stated,

I think the viewing and discussing the photos at the [art museum] . . . [was] helpful in getting people to think about the situations that our kids come from and . . . culturally what it is that they're dealing with and how.

Mental connections and emotional responses

Data also showed the photos not only evoked an emotional reaction in viewers but also elicited from teachers an emotional connection between Marisol and their Latino/Latina students. Table 2 displays the types and frequencies of emotional experiences reported by teachers on the reflection forms.

Reflection-form comments indicated the photographs functioned effectively to move teachers to thinking of the diverse experiences of immigrant students and to consider the obstacles their students continue to face. Although teachers reported a range of emotions, the most frequently mentioned emotions were sadness, sympathy, empathy, and altruism. The focus on Marisol helped teachers create an emotional connection between the photos and their students. One key informant explained,

... if you've been at this school for a long enough time, you'd know that kid. They can really make a connection between their own experiences with the students here and that girl [Marisol].

Similarly, a focus group participant commented on the emotional connection created by viewing the photo series:

When I was looking at some of them, I could put kids' faces right there, like kids that I've taught or worked with. I felt like I could really see them right there in that exact spot. It kind of hit home really hard, really quick...

Table 2. Summary of teacher reflection responses to the photographs (N = 32).

These photographs remind me of...		The main emotions I am experiencing as I view these photographs are...	
Theme	<i>n</i>	Theme	<i>n</i>
Students	18	Sadness	15
Immigration	5	Empathy/Sympathy	9
Family	4	Altruism	7
Poverty	4	Hope	5
Cultural differences	4	Helplessness	3
Cross-cultural experiences	3	Gratitude	3
Locale of the school	3	Reminiscence	3
		Pity	2
		Curiosity	2

Another key informant asserted the emotional connection overcame biases or prejudices against undocumented Latino/Latina immigrants:

It's like anything else; once you put a face to something and people are with those children – even the ones [teachers] who...make negative remarks about immigration...really stringent ideas about immigration, but it's still,...hard to spend every single day with a person and not have some sort of emotional attachment to them...so I think those photos really just hit that emotional connection for them.

Empathy

Empathy was a common theme in the interview data. A key informant commented on the effects of the training:

[Participants] have a deeper level of empathy. I think [teachers with anti-immigrant bias]...it's not so much like, 'You haven't done your homework, why aren't you doing this and why aren't you doing that?' Now they take a step back and they're like, maybe there's something else going on and maybe I need to change the way that I'm thinking about dealing with this family. Maybe I need to put myself in their position,...I think it's making them not only more empathetic to the students and their interactions with them, but also with the parents...more understanding with the challenges that they face.

Three of five advisory board members said the photos inspired them to take the perspective of their undocumented Latino/Latina students. One board member commented:

[The training] made us stop and...truly consider, even if they [Latino/Latina students] were born here in the United States, their parents' culture is in another country and the torn feelings of like where do we really belong,...it definitely brought some students to my attention. They've...graduated and they were great students. They're not citizens and the thought of going to college is almost impossible for them. But yet, they can't go back to Mexico because they're not...from there, technically. It's like there's this lost group of kids. I don't know what the answer is to help them, but I want to.

Changes in attitudes and behavior

The above quote moves from empathic perspective-taking into motivation for changed behavior. Post training, teachers reported thinking about their students and their families in more complex ways:

[The training] has helped us stop and think about where our students... come from, I don't necessarily mean country; I mean their experiences... what they've been

through. That's opened up the way a lot of students are treated [by teachers]... You can see a little bit more patience with some people and...that kind of thing that wasn't there before.

In the focus-group, a teacher said, 'You take from [the training] that you do need to refocus. And, before you freak out and scream at the students in the hallway, you think, maybe there was something else going on when they didn't do their homework.' Similarly, teachers' interview comments indicated the training produced persistent positive effects on faculty attitudes and particular teacher's behaviors toward immigrant students: '...some teachers... are being nicer and... are stopping to think about where the students are coming from.' Another teacher commented on changes in one teacher's interactions with immigrant students:

I've seen some differences... especially in one teacher. I've noticed that she was like, 'What's going on at home? Do you need to talk to somebody?' Where before it was 'Rar, rar,' ... and now it's more, 'What can we do to fix it,' rather than 'Why can't you fix yourself?'

Criticism of the intervention

When asked what should be different about the training, those participants that had suggestions were anxious to take the training as a starting point upon which to build. They asked for follow up in the way of specific strategies and interventions in their classrooms and wanted other school constituencies, such as staff members, to be included in the training since parents and students interact with staff on a regular basis. In fact, we had proposed that staff be included and the decision for them not to attend was not ours. We are working on follow-up modules that focus on specific classroom situations in response to these suggestions.

Discussion

These findings provide beginning answers to the questions guiding this study. First, our findings demonstrated that images in this intervention primarily act as elicitation devices. Yet, the images used in *Yo Veo* went far beyond eliciting general discussion by evoking engagement, openness, receptivity, awareness, connection, emotional responses, empathy/perspective-taking, attitude and behavior change. The discussion included personal disclosures, indicating the viewing experience prompted participants to revisit their own lives.

We propose a prism metaphor (Figure 5) to depict the relationship of image use and shifting schemas. This model is consistent with the dissonant-cognitive processing invited by images (Solso, 2003), but larger than models in the literature. A prism bends light, revealing its complexity. In our model, the interaction of photographs, setting, discussion, and new information acts as the prism that

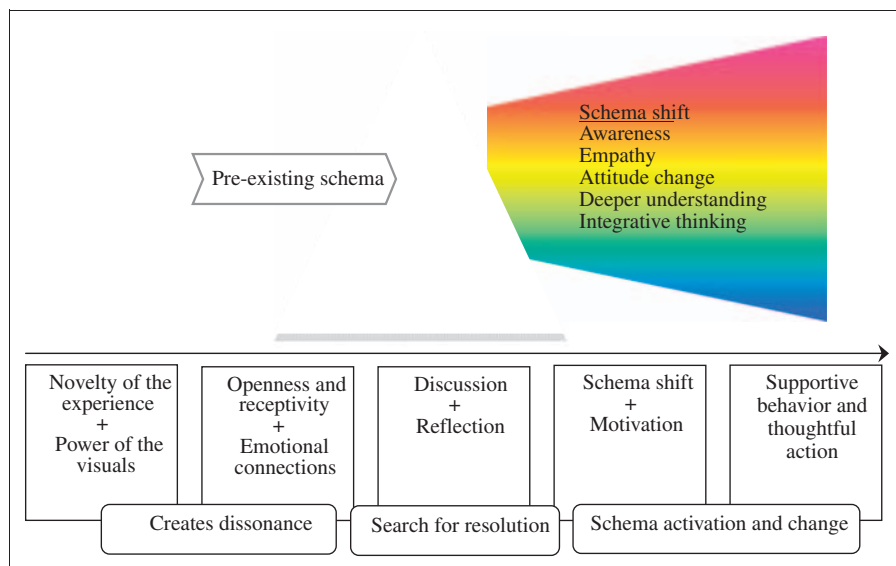


Figure 5. Prism model of the visual intervention process.

creates dissonance and promotes new ways of looking at difficult issues and schema change.

Yo Veo participants moved beyond mere interest or being moved by Marisol's story, and actively put their students in Marisol's place, comparing her circumstances to their own with new knowledge and understanding. Participant feedback indicated they were making meaning from new information; such as they could see their 'students' faces in the face of Marisol.' Active mental engagement with images is a process in which a person aligns what he or she sees (nativistic perception) with what he or she knows (directed perception) about what is being perceived (Gombrich, 1960; Solso, 2003). The point at which participants made a connection between the images and their students was an important stage in the participants' attitude shift. Cognitively replacing Marisol with their students prompted by the dissonance between existing attitudes or schemas and the reality depicted in the photographs.

This engagement with the visual image demonstrates image choice is a critical aspect of visual intervention planning. In designing the study gallery installation, we chose eight photographs of the larger series that approximated Marisol's story. We combined particularly powerful images with those showing daily life to create a balance between dramatic moments and a familiar family routine that can transcend national origins and culture, creating a link with participants' experiences. For Day 2 of *Yo Veo*, we grouped images by themes to highlight different story aspects and to examine continuity and change. In their minds, the teachers might have linked the compelling nuanced and complex material in the photo series to schemas related to teaching Latino/Latina immigrant youth and undocumented

immigrant families, therefore creating a new web of associations for the immigrant experience.

Like a prism, the photographs provided a means for the ‘colorless light’ of unexamined beliefs and preconceived notions to take on richer nuance and subtlety. In the prism, the visual information of the image and the primary schemas participants hold about immigrant students interact, laying a foundation for shifts and changes in schemas. We presume the intervention evoked shifts in schemas for some, and for others, the training activated particular schemas more beneficial to students. The photographs may have created dissonance that motivated viewers to seek information to resolve that tension. Future research is needed to refine and verify this model.

Most training experiences provide little space for genuine conversation and instead focus on delivering information. Participants move from exercise to exercise, often using the format of small groups reporting to a larger group. Although this format precludes conflict, it also precludes real conversation and real resolution. Similar to small group exercises, the photographs in *Yo Veo* provide a focus for discussion and a way to move participants forward when needed. On the other hand, discussion of images using VTS methods is not predictable, and stands in marked contrast to the traditional structured, small-group approach. The VTS endeavor is risky because the facilitators do not control the content; however, VTS methods create a forum for honest dialogue. For example, in one encounter, a teacher opined, ‘Not all of these kids can go on to college.’ Another participant interpreted the comment as meaning that Latino/Latina students had low aspirations, leading the participant to accuse the colleague of not having high expectations for Latino/Latina students. In the discussion that followed, the teacher clarified, suggesting the group consider alternatives to college as positive outcomes. Later, the person who had misinterpreted the colleague’s statement publicly apologized, producing a resolution without training leader intervention.

Limitations

This study has several limitations, including the findings’ generalizability. Although site selection was intentional, self-selection bias is possible in the focus group findings given that only nine participants volunteered to participate in the focus group. The key informants were possibly more invested in the training, and therefore, more biased in their responses. However, over time with our involvement with the study school, we have received positive and negative feedback on other initiatives, which leads us to trust these findings. Further, the high completion rate of the reflection forms allowed us to evaluate information from the ‘universe’ of possible participants.

Notably, this article does not discuss immigrant resiliency. Immigrant experiences are defined by sacrifice, struggle, and resilience. However, our intervention goal was to foster more resilient teachers – teachers who are reflective and empathic

toward newcomer students. Some immigrant students are highly resilient to migration stresses and some are not. Globally, only three percent of people in the world migrate to another country (United Nations Population Fund, 2005 <http://www.unfpa.org/pds/migration.html>). Choosing to immigrate is a choice to take on huge challenges in language acquisition, negotiating a new culture, and often doing without the support of extended family and friends. Immigrating takes incredible strength. Paradoxically, in illustrating hardships associated with immigration, *Yo Veo* highlights the strength required of those who undertake it. The facilitated discussion also focuses on student and family strengths as well as the ways teachers can support immigrant students. We hoped to use Marisol's story to encourage teachers to consider the complexity of immigrants' lives in which resilience and vulnerability coexist. When teachers are willing to see both resilience and vulnerability they can support their students' strengths without ignoring real difficulties. Because the training contextualizes the particular immigrant experience depicted in Jarman's photographs in a wider story of migration, teachers are able to consider both the hardships migrants may suffer as well as the incredible strength they bring to their new homelands.

Third, we are limited by our ability in this study to definitively measure schema change. Because we did not do pre- and post-intervention interviews, we do not have concrete evidence of baseline schema. In our current expansions of this work, we are actively working with qualitative and quantitative implicit measures that might better demonstrate schema change over time.

A final critique is that the images contained in the Jarman photo series could be considered 'problem images.' With some exceptions, the images depict Marisol and her family in difficult situations. By selecting this set of images, our intervention may reinforce stereotypes, and fail to show the fullness of immigrant experiences. This limitation is a real and possible danger that we are confronting as we develop the intervention to make it replicable. Yet, the intervention's potential power lies not only in the images but in the sensitively facilitated discussion, which enables discussion of stereotypes or deficits that viewers might initially see in the images. Because *Yo Veo* is led by three professionals, each bringing distinctive training, skills, and disciplinary approaches, we hypothesize that we are able to counter a 'problem-only' focused narrative. The hypothesis will have to be fully tested as the intervention develops. In addition, we will have to consider how to construct facilitation teams or train trainers in ways that bring the skill sets of the three current facilitators together.

Future research

To date, the intervention has been implemented in one school and is in progress at another. We are seeking to widely replicate the intervention in schools experiencing similar demographic shifts to understand the mechanisms by which the visual intervention makes a difference and to prepare for manualization and wider testing.

Further, we are creating follow-up modules that focus on specific classroom strengths-based interventions that may be flexibly employed by teachers. Much work remains to be done to fully develop and test *Yo Veo*. Future research into the efficacy and effectiveness of *Yo Veo* will attend to measuring individual- and organizational-level schema, and documenting short- and long-term positive change.

Using the schema literature combined with specific theory about images and cognition provides new possibilities for testing whether visual interventions such as *Yo Veo* can actually change attitudes and behavior, facilitate difficult conversations in other domains, and be applied to other vulnerable populations. Schema literature, particularly as used by social psychologists, incorporates the social context that influences schema development (Chang, 2009; Hajek and Giles, 2005; Nishida, 1999). More individually focused developmental psychologists describe other constructs, which are influenced by and might impact schema (Levy et al., 1998; Olson and Dweck, 2008). Attachment theory, social information processing, and attribution bias are important components of these perspectives that generally focus on populations in which there are specific interpersonal difficulties such as aggression (Crick and Dodge, 1996). However, these formulations do not account for larger societal narratives that influence individual thinking and attitudes. Around the world migration poses challenges for new receiving communities. Dramatic demographic shifts might translate to rapid schema development based on one-time experiences, neighbor's comments, or media accounts, thus giving rise to a narrow categorizing of a diverse group of individuals. Just as a new pair of glasses fitted with an updated prescription, images combined with facilitated conversation and relevant information enable participants to see more than they did before. Armed with new ways of understanding familiar problems, participants are able to experiment with new attitudes and behaviors in an environment that is free from the judgment and guilt that often accompanies difficult conversations.

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Conflict of interest

The authors have no conflicts of interest to declare.

Note

1. Please note that all captions for the photographs in this article were written by the photojournalist who took them. In visual studies, the convention is to include the caption in its entirety.

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