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## WHAT THE RESEARCH SAYS

# Museums as Contexts for Transformative Experiences and Identity Development

Joanna K. Garner, Avi Kaplan and Kevin Pugh

### ABSTRACT

Museum educators and exhibition planners commonly anticipate and leverage visitors' background, beliefs and goals to promote meaningful experience and learning. In this article, we propose that such visitor characteristics are themselves worthy targets of design with potentially desirable effects on visitors' experience and identity change. We describe a conceptual continuum that extends the goals of visitors' learning to transformative experiences and identity exploration. From the continuum we derive three exhibit design principles: re-framing informational content as powerful, self-relevant ideas; as a visitor, re-seeing the environment and one's role and action choices within it; and, as a visitor, re-enacting new ways of conceiving of one's role and capabilities. We present strategies that map onto each principle and brief examples to illustrate the approach.

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Identity; transformative experiences; museum learning; visitor engagement; life-span; museum education

Museums, historical sites, zoos and botanical gardens are often described as *informal learning environments*, underscoring the conviction that one of the major contributions of such institutions to society is to educate visitors.<sup>1</sup> In recent decades, a great deal of effort has been devoted to understanding how museum visitors learn and how exhibit design can promote learning. One robust finding in the literature is that although some learning does take place in relation to most exhibits, visitors benefit greatly from the inclusion of deliberate prompts and interventions that support and prolong engagement.<sup>2</sup> A second finding is that visitors' purposes for engagement and the meaning they derive from their visit are diverse and influenced by what they already know *and* who they believe themselves to be at the time of the visit.<sup>3</sup>

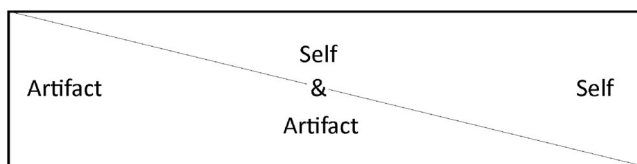
However, museum staff may feel greatly challenged to design and develop exhibits for gains in specific knowledge while accommodating the great variety of visitor motivations and prior experiences. An alternative approach may be to consider such learning within a more comprehensive account of visitor's meaningful experience. This approach draws on the idea that deep learning takes place in different contexts across the lifespan<sup>4</sup> and involves an interplay among comprehension-related cognitive and emotion-related affective processes leading to changes in the self and one's identity – that is, in one's knowledge, self-perceptions, beliefs, assumptions, goals and behavioral intentions. From this broader perspective, museums can be conceived of as environments for visitors' personal development, and exhibit design and development as aiming at what we label *developmental engagement* – engagement aimed at enhancing the visitor's self-concept and worldview, regardless of age.

Considering museums this way calls for employing strategies that facilitate transformative experiences (experiences in which visitors come to see the world through the lens of new ideas) and identity exploration. This approach makes visitors' everyday experiences and personal narratives a subject of, rather than just a vehicle for, meaningful visitor experience and learning.<sup>5</sup> From this perspective, viable outcomes of a museum visit include new knowledge, but also valuable personal ties between museum and visitor that support the emergence of new perceptions, values, affiliations and behavioral plans. The museum visit aims not only at new insights into informational content but also at transformation of how the visitors perceive and interact with the world and view *themselves*; visitors themselves becoming objects for discovery, interpretation, critical appraisal and appreciation.

Meaning making in relation to oneself already occurs within museum visits. It can constitute a significant driving force behind individuals' movements and purposes for engaging with particular exhibits.<sup>6</sup> Museum visits also allow for the exploration and affirmation of interests, values, ideas, affiliations and self-perceptions.<sup>7</sup> Museum visitors' motivations often align with current and intended future self-conceptualizations and roles, such as amateur scientist, historian, local community member, hobbyist or art scholar, member of a certain social group or a citizen of a particular region or country. Museums are, therefore, one context for the life-long developmental "work" that individuals do when they construct their identities.<sup>8</sup> The question becomes: how might museum staff develop exhibits to prompt exploration, revelation and affirmation in regards to both artifact *and* self, in the context of limited resources and the constraints of collections?

### A conceptual continuum for developmental engagement

We propose a conceptual continuum in which the target of visitors' attention and engagement varies along two dimensions – the artifact and themselves (Figure 1). Typically, museum education research has focused on ways to increase the sophistication of visitors' thinking about artifacts and topics. This is represented by the left side of the diagram. The right side of the continuum refers to a sole focus on the self, such as on personal history, experiences and interests, and possible future roles and activities. Facilitating such attention to the self has been considered a strategy for leveraging engagement in order to promote learning about the artifacts. We propose that the reverse can also occur; artifacts can be leveraged to promote self-exploration and understanding.<sup>9</sup> Moreover, exhibit



**Figure 1.** A conceptual diagram of targets of visitors' engagement within a museum exhibit. The left side of the continuum reflects exploration that is targeted towards understanding of an object, artifact or phenomenon and does not explicitly address the self. The right side of the diagram reflects exploration targeted towards the self and one's beliefs, assumptions, goals and courses of action. It minimizes learning about an artifact for its own sake. In the middle lie, the integration of the dimensions, which aims at transformative experiences that support spontaneous, meaningful "re-seeing" of the world in service of self-relevant, personal growth-oriented activities.

development need not be construed as involving forced choice between attention on the artifact or on the self. Rather, conceptualizing these as two independent dimensions helps to view attention to artifact and self as a dynamic process of shifting the foreground: from artifacts to the self and vice versa, allowing eventually an integrated focus on both. The context of the museum can provide opportunities for meaning making that is fluid along the continuum.<sup>10</sup>

### ***Artifact-focused engagement***

Artifact-focused engagement can represent a beginning point for developmental engagement. Learning about artifacts that represent events, cultures, time periods, human tasks, scientific or natural processes, or artistic or industrial techniques is an unquestionably important part of the museum experience. Most exhibits prompt visitors' attention to concepts using artifacts with some description. In these settings, the goal is to increase visitors' knowledge.<sup>11</sup> Reflecting this, the left side of the continuum represents the strategy of using objects or artifacts to increase visitors' knowledge and understanding of a specific concept. Exhibits often deploy tactics to create artifact-focused engagement. Prompts may include questions and opportunities for hands-on exploration or manipulation. Carefully engineered progressions through exhibit spaces can shift visitors' thoughts and actions from superficial identification to analysis and critical appraisal of artifacts and their features.<sup>12</sup> Typically, however, attempts are not made to support the construction of personal meanings around artifacts.

### ***Self and artifact: transformative experiences***

Moving from left to right along the diagram represents increasing attention along the other dimension of personal growth of the visitor. The mid-point in the diagram represents the intersection of the two dimensions of attention to artifact and to the self, what education researchers Scott Paris and Melissa Mercer call a transactional relationship between the content of the exhibit and the visitor, where visitors understand artifacts in relation to their own histories and their anticipated futures.<sup>13</sup> Most educational experiences are designed to impart concepts, principles, or otherwise teach new information.<sup>14</sup> Less common are educational experiences designed to transform the way people perceive and experience the world. We propose a specific form of transactional relationship for the museum visitor based on Kevin Pugh's definition of *transformative experience*, in which individuals actively apply concepts in their everyday lives and use them to see aspects of the world in meaningful, new ways.<sup>15</sup> Specifically Pugh, one of the authors of this article, has defined three characteristics of transformative experience:<sup>16</sup> (1) *motivated use*, or application of a concept in a context where such use is not required or called for;<sup>17</sup> (2) *expansion of perception*, which involves using science concepts to see aspects of the world in new ways and (3) *experiential value*, a particular type of task value in which people come to value content for the way it transforms their perception and experiencing of the world.

Pugh and colleagues<sup>18</sup> use the example of students who "may learn all about astronomy in class but never look at the stars differently at night." But suppose an astronomy student decides to invite a friend to go stargazing. By choosing of his or her own volition to spend

time identifying constellations and other night sky objects, the student is engaging in motivated use of astronomy content. Further, this student may now see stars as nuclear explosions and atom factories, rather than seeing stars only as twinkling lights in the sky. Such re-seeing<sup>19</sup> is an illustration of an expansion of perception because astronomy concepts have become ideas that change the way the night sky is perceived. Finally, the student may develop an increased value for principles of astronomy and the night sky. The stars were always pretty, but now they are much more interesting and captivating. There is more of a story to the objects in the sky, and astronomy itself is valued because of the meaning it brings to the way the student is experiencing the night sky. This particular type of value is experiential value and the stargazing experience as a whole is a transformative experience. Through such experience, the students' relationship with others, and his or her connection to and identity within the world is changed in a small, but significant way.

Pugh and colleagues<sup>20</sup> proposed a model of teaching for transformative experiences in science that includes three general strategies: (a) framing the content as ideas; (b) scaffolding re-seeing and (c) modeling transformative experiences. Framing content as ideas involves first identifying important concepts and then crafting them as *ideas* – compelling possibilities that can be tried out in everyday experience. For example, the concept of *time* might be recapitulated as the big idea that geologic features hold the key to uncovering the past and predicting the future. The distinguishing feature of an idea, versus a concept, is the presence of anticipation.<sup>21</sup> Thus, framing content as ideas also involves explicit efforts to create anticipation about applying content in everyday experience. An exhibit may foreshadow the fascinating things individuals will be able to see about the past and future once they understand geologic principles. Scaffolding re-seeing refers to providing guidance and supports that help individuals see aspects of the everyday world through the lens of science content. For instance, an exhibit could help visitors to see organisms through the lens of principles of natural selection. However, the exhibit could also provide ways for them to share examples from their everyday lives of how organisms can be seen through this lens. The exhibit could provide examples that visitors may not immediately think of, such as the conditions that encourage speciation, where such conditions might be present today, and how to identify such conditions when traveling or learning about earth's processes. The visitor might be encouraged to observe their everyday environment for the presence, absence and natural or man-made causes of such conditions. This would promote further use of the information within the museum exhibit in everyday experience.<sup>22</sup> Modeling of transformative experience could involve a real or virtual docent demonstrating how they have done this, or more generally, how knowledge of geology or biology changes the way they see and experience the world, thereby bringing them greater meaning and excitement.

Museums are ideal but underutilized contexts for this type of transaction between the artifact and the self. Museum sites are not bound by the physical constraints, roles and expectations of the traditional classroom, and often have access to excellent real-world examples of concepts. Transformative experiences bridge subjectively separate worlds of the institution and everyday life, thus providing a vehicle through which museums can become, as museum director and author Nina Simon<sup>23</sup> has advocated, more culturally participative or audience-centered. Through transformative experiences, ideas become

connected to actions. Visitors can take the ideas beyond the museum context and use them in their daily lives.

### ***Self-focused engagement***

At the far right of the continuum in [Figure 1](#) lies engagement that supports identity development, a life-long process of (re)considering and incorporating information in relation to the self.<sup>24</sup> Central to identity development is the notion of exploration, a core developmental process that involves the process of questioning and affirming personal commitments, seeking information about oneself and one's environment, and processing self-relevant information in ways that synthesize old and new understandings.<sup>25</sup> It involves periodic affirmation and re-exploration of the values, ideas, experiences, goals and behaviors that a person is committed to, as well as the social contexts and group memberships in which values, experiences and actions may or may not be promoted or sanctioned.<sup>26</sup> When applied to museum experiences, identity exploration involves going beyond learning about artifacts or historic events. It involves motivated processing of information and ideas in relation to one's beliefs about the world, goals, self-perceptions and self-definitions, and future possibilities for action.<sup>27</sup> A focus on identity exploration positions the self as subject matter and uses the artifacts to trigger exploration. It emphasizes the exhibit content's self-relevance and the deliberation of ideas in relation to one's beliefs, goals and actions.

Museum visitor research has shown that individuals make meaning from their visit and construct narratives that situate the visit within their ongoing construction of themselves.<sup>28</sup> Visitors bring not only curiosity about other times, cultures and places but also their own personal and social past, and if prompted, will draw on their own experiences to create narratives that reflect the objects *as they relate to* their identities.<sup>29</sup>

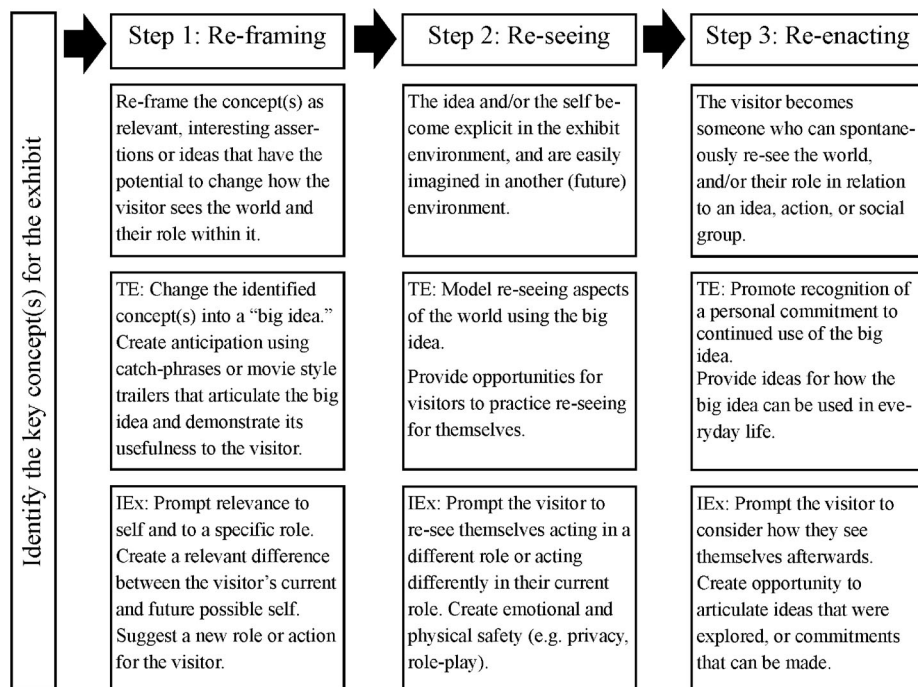
Based on studies with educators and adolescents in formal and informal educational settings, educational researcher and coauthor Avi Kaplan and colleagues<sup>30</sup> proposed principles for promoting identity exploration: (1) promoting perceived self-relevance – promoting the subjective experience that the content relates to one's background, experiences, beliefs, goals and interests; (2) triggering identity exploration – eliciting the subjective perception of a discrepancy between an aspect of the environment or experience and the person's current commitments or identifications, such that one becomes motivated to ask questions about these commitments and seek new information to form new ones; (3) facilitating a sense of safety – facilitating the subjective perception that the physical and social environment is non-threatening, non-judgmental, and is an appropriate environment for exploring new ideas and behaviors; (4) scaffolding identity exploration – providing guidance for engaging in information gathering, questioning, experimenting, deliberating and negotiating, through activities such as reflective questions, role-playing activities, writing assignments or modeling, which can inform self-perceptions, goals, beliefs and actions.<sup>31</sup>

### **Designing for developmental engagement**

Information design researcher Saul Carliner's<sup>32</sup> exploratory study of design and development steps taken by museum design teams suggests that the process begins with the

identification of a key concept for an exhibit. Carliner found that design teams' subsequent actions tended to focus on identifying key information to be conveyed by specific artifacts or objects and defining a single plot line or narrative to tell a specific interpretive story. However, following our concept of developmental engagement, we propose that once a topic area has been identified, the frame of reference can shift to include developmental goals as well as learning goals. These goals can be achieved through the application of strategies that explicitly and intentionally promote self-related and self-targeted meaning making. An exhibit's design-based narrative may be incorporated, but the interaction with the exhibit aims at multiple, visitor-created narratives and plot lines.

We define three principles to guide the process of exhibit design that aims at the intersection of the artifact and the self: re-framing; re-seeing and re-enacting. These principles are presented in Figure 2. For the design team, *re-framing* focuses on the reconfiguration of the relationship between visitor and content through the deliberate integration of cognitive and affective targets for visitors' engagement. In applying the design principle of re-framing, the team aims to prepare the visitor for the possibility that, through trying out new ideas or new ways of thinking, acting and labeling oneself, he or she might be changed as a result of the museum visit. It orients the visitor to the possibility of engaging in transformative experience and identity exploration during the visit. Once the visitors have re-framed their purpose for the visit to include the possibility of personal transformation, applying the principle of *re-seeing* aims to prompt them to re-see the world and themselves differently while they are engaged with the exhibit. Through re-capitulating content



**Figure 2.** Design principles for encouraging object- and self-based visitor engagement. From left to right, decision points within the broader design process are specified. Transformative experiences and/or identity exploration prompts can be included depending on the designers' goals.



as big and powerful ideas, visitors' perception is expanded. Design for re-seeing supports the visitor in practicing this expanded perception in the context of the exhibit. Importantly, re-seeing refers to expanded perception of the content, the visitor's everyday world, and the self. Regarding the latter, the aim is to trigger identity exploration through experiences of discrepancies between the visitors' current identities and their experience with the exhibit, promoting re-seeing of one's past, present or future, or considering a new role for oneself. The agent in transformative experience and identity exploration is the visitor him- or herself; however, support for re-seeing may be key; a docent or text-based prompt may be needed to model re-seeing of the world and the experiential value that it brings about. In addition, for identity exploration to occur, emotional and physical comfort and safety are needed, and can be provided through opportunities for private contemplation of ideas, or private exploration of action possibilities in response to dilemmas that may be presented in the exhibit. Finally, the design principle of *re-enactment* aims to go beyond the common goal of designing for visitor's action within the museum to action after leaving the museum. Often, the goal of many object and experience-focused exhibits is to promote interaction that shows, reveals, demonstrates or has the visitor discover something about an object, process, work of art or time period. The self-focused approaches we advocate for also call for the visitor to behave in a particular way during their interaction with the exhibit – to explicitly see or reflect upon themselves as they do so – but also to be prepared to continue to act, think or perceive in a new way when they leave the museum and resume their normal lives. Thus, the principle of re-enactment aims to promote new thinking, perceiving or acting that the visitor may do in other areas of the museum, or at other time points after their first attempts at re-seeing.

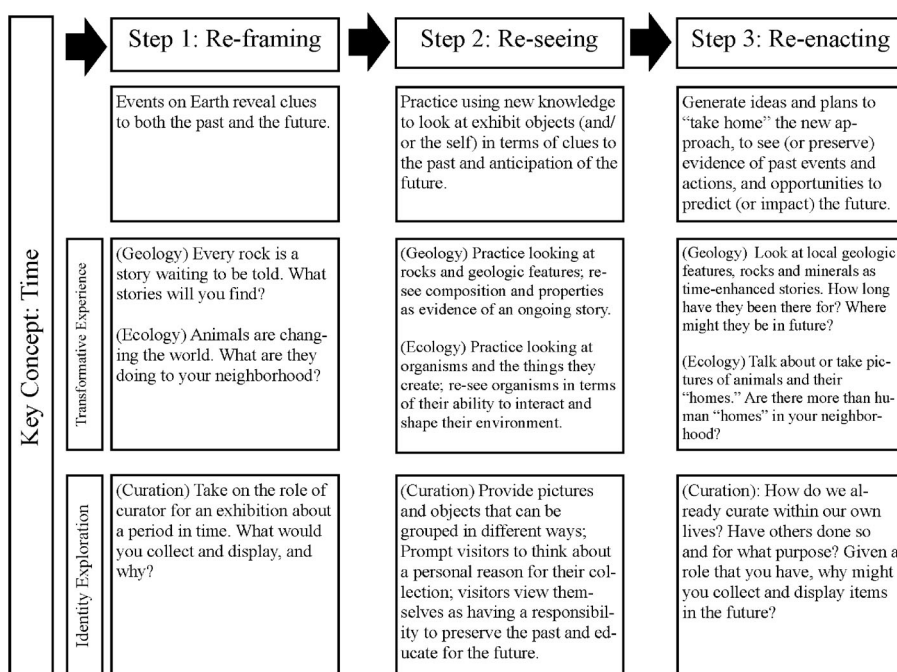
### **Brief examples**

Figure 3 builds on Figure 2 and provides brief examples for the application of the design principles arising from the concept of *time*. One example relates to transformative experiences and illustrates how the natural environment changes over time through Earth's geologic processes or activities undertaken through the life-cycle of living organisms. An additional example, which relates to identity exploration, focuses on the idea of collecting and curating what is important to individuals and their communities. In both cases, developmental engagement can be enhanced by relatively simple aspects of exhibit design, such as the inclusion of questions or examples that promote reflection or discussion among visitors.

### **Developmental engagement as a means for aligning stakeholders' needs**

Planning for developmental engagement involves integrating exhibit-driven learning goals with visitor-driven affective and motivational characteristics for building enjoyment, engagement, personal meaning and experiences of change from museum visits. Although the examples we present lean towards science museums, we believe that the design principles can be applied to other types of learning or educational goals in other domains such as art or history. The approach is designed to be responsive to the views and demands of multiple groups of stakeholders. From the perspective of government agencies and other





**Figure 3.** Examples of how design principles can be used to promote transformative experiences (TE) and identity exploration (IE) in regard to the topic of time as it applies to geology and curation respectively.

civic groups, museums serve preservationist and educational goals. For individuals, visits to museums offer opportunities to learn within a socially meaningful group of family and friends as well as the chance to explore or solidify membership in a group that is united by a common interest. According to visitor feedback, museum visits allow for exploration of content, facilitation of others' experiences, learning and solace from everyday life.<sup>33</sup> Visits also contribute to the ongoing work of constructing and refining one's identity, including one's membership in particular social groups, and one's commitment to particular ideas, goals, beliefs and self-perceptions.<sup>34</sup>

The ideas we propose are sympathetic to the diverse and competing demands made on museums and their staff by different constituent groups. Museum staff often experience a battle over the hearts, minds and pocketbooks of their patrons.<sup>35</sup> Needs and goals of curation and preservation, along with notions of content-driven learning, are reflected in the traditional artifact-focused dimension. Needs and goals of satisfying diverse audiences and their use of museums as self-paced spaces for constructing coherent personal narratives about individual and social identity, can be accommodated by the self-focused dimension. Exhibits charged with changing the way visitors think about specific concepts or issues are most directly supported by the intersection of these two dimensions. Rather than isolate and separate the processes of learning and life-long development, the concept of developmental engagement and the continuum of learning and exploration foci promotes an interplay among them, thereby allowing opportunities for designers and visitors to discover, learn and personally grow through traditional learning, transformative experiences, identity exploration, or ideally, a combination all three.

## Notes

1. National Research Council, *Learning Science in Informal Environments*.
2. Schreiber et al., "Understanding Visitor Engagement and Behaviors" and Yoon et al., "Scaffolding Informal Learning in Science Museums."
3. Falk and Dierking, *The Museum Experience*; Dawson, "Not Designed for Us"; Falk, "Contextualizing Falk's Identity-related Visitor Motivation Model" and Vitalaki, "Museum Education as a Tool for Promoting School-wide Community and Family Cooperation in Elementary."
4. Banks et al., *Learning in and out of School in Diverse Environments*.
5. Singer, "Narrative Identity and Meaning Making Across the Adult Lifespan."
6. Falk, "Contextualizing Falk's Identity-related Visitor Motivation Model."
7. Falk and Storksdieck, "Using the Contextual Model of Learning to Understand Visitor Learning from a Science Center Exhibition" and Rounds, "Doing Identity Work in Museums."
8. Grotevant, "Towards a Process Model of Identity Formation."
9. Paris and Mercer, "Finding Self in Objects."
10. Singer, "Narrative Identity and Meaning Making Across the Adult Lifespan"; Rounds, "Doing Identity Work in Museums" and Rennie and Johnston, "The Nature of Learning and its Implications for Research on Learning in Museums."
11. Schreiber et al., "Understanding Visitor Engagement and Behaviors."
12. Feinberg and Crowley, *Museum Learning Collaborative Revised Phase 2 Proposal* and Feinberg and Leinhardt, "Looking Through the Glass."
13. Paris and Mercer, "Finding Self in Objects."
14. Pugh, "Newton's Laws Beyond the Classroom Walls."
15. Feinberg and Crowley, *Museum Learning Collaborative Revised Phase 2 Proposal*.
16. Pugh, "Teaching for Transformative Experiences in Science" and Pugh, "Transformative Experience." This is not to be confused with Mezirow's and Associates' concept of transformative learning in adult education as described in Mezirow and Associates, *Learning as Transformation*.
17. Girod et al., "Appreciating the Beauty of Science Ideas."
18. Pugh et al., "Motivation, Learning and Transformative Experience," See page 4.
19. Girod et al., "Appreciating the Beauty of Science Ideas."
20. Pugh and Bergin, "Motivational Influences on Transfer" and Pugh and Girod, "Science, Art and Experience."
21. Dewey, *How We Think*.
22. Pugh and Girod, "Science, Art and Experience."
23. "The Participatory Museum", Simon, accessed December 15th 2015, <http://www.participatorymuseum.org/read/>.
24. Dewey, *How We Think*.
25. Erikson, *Identity*.
26. Grotevant, "Towards a Process Model of Identity Formation"; Dewey, *How We Think*; Flum and Kaplan, "Exploratory Orientation as an Educational Goal"; Kaplan et al., "Design-Based Interventions for Promoting Students' Identity Exploration Within the School Curriculum" and Marcia, "The Ego Identity Status Approach to Ego Identity."
27. Meeus et al., "Patterns of Adolescent Identity Development" and Kaplan et al., "Teacher Role Identity and Motivation as a Dynamic System."
28. Vitalaki, "Museum Education as a Tool for Promoting School-wide Community and Family Cooperation in Elementary"; Falk and Storksdieck, "Using the Contextual Model of Learning to Understand Visitor Learning from a Science Center Exhibition" and Paris and Mercer, "Finding Self in Objects."
29. Vitalaki, "Museum Education as a Tool for Promoting School-wide Community and Family Cooperation in Elementary" and Oyserman, "Identity-based Motivation."
30. Flum and Kaplan, "Exploratory Orientation as an Educational Goal" and Kaplan et al., "Design-Based Interventions for Promoting Students' Identity Exploration Within the School Curriculum."

31. Kaplan et al., "Design-Based Interventions for Promoting Students' Identity Exploration Within the School Curriculum."
32. Leinhardt et al., "Talking to Oneself."
33. Carliner, "How Designers Make Decisions."
34. Falk et al., "Using Identity-related Visit Motivations as a Tool for Understanding Adult Zoo and Aquarium Visitors' Meaning Making."
35. Paris and Mercer, "Finding Self in Objects" and Leinhardt et al., "Talking to Oneself: Diaries of Museum Visits."

## Disclosure statement

No potential conflict of interest was reported by the authors.

## About the authors

**Joanna K. Garner** is a Research Associate Professor and Associate Director for Program Development at The Center for Educational Partnerships, Old Dominion University. Joanna's professional interests emphasize the integration of theory, research and practice in regard to teaching and learning, science education and lifespan development in traditional and non-traditional educational contexts.

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**Kevin Pugh** is a Professor of Educational Psychology at the University of Northern Colorado. His research concerns the development of a theory of transformative experience focused on understanding how science education can enrich everyday experience (and why it often fails to do so). Kevin investigates why some students undergo transformative experiences and others do not, the effects of transformative experiences on learning, and how transformative experiences may be supported through instruction. Recent work involves development and evaluation of the Teaching for Transformative Experiences in Science model.

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