These materials and the accompanying videos were prepared as part of a project to increase the visibility of leading developmental scientists of color who have made critical research contributions and paved the way, through mentoring and advocacy, for younger scholars of color. We are grateful to the Doris Duke Charitable Foundation for financial support of the project and to Dr. Marisha Humphries at the University of Illinois at Chicago’s College of Education and the rest of the SRCD Teaching Committee for developing these materials. Please visit www.srcd.org to learn more about “Hidden Figures” in Developmental Science.
APPLYING A BIOECOLOGICAL FRAMEWORK TO THE CAREER DEVELOPMENT OF SCIENTISTS OF COLOR

TARGET “HIDDEN FIGURES” VIDEO
- Video 4: How Did I Get Here: My Journey to Developmental Science (Length: 4.33 minutes)

TIME REQUIRED
In-Class Activity: 60 - 75 minutes

GENERAL OVERVIEW
Students will learn to conceptualize developmental influences on the career development of scientists of color. After viewing Video 4, How Did I Get Here: My Journey to Developmental Science, students will first formulate their own conceptual models of career development in early adulthood that integrate common factors mentioned by the scientists. Students will then compare their models to a conceptualization using Bronfenbrenner’s bioecological model of development.

LEARNING GOALS
- Students will be able to practice formulating broader theoretical models of development based on individual experiences.
- Students will be able to investigate their understanding of Bronfenbrenner’s bioecological model of development by applying this framework to the experiences of scientists of color.
- Students will evaluate the strengths and limitations of using anecdotal data to inform or develop theory.

REQUIRED MATERIALS
- Activity Worksheet

TOPICAL AREAS/CLASSES
- Bioecological Theory
- Sociocultural influences on development

INSTRUCTIONS/DESCRIPTION
1. Introduction/Overview of Class
2. Video
   Go over the questions on the front of the Activity Worksheet before starting the video. Encourage students to think about these questions as they watch the video.
3. Activity Worksheet
   Give students 15 - 20 minutes to complete the worksheet, independently or in groups of 2-3. Then, have students find a new group of 2-3 to review and share answers to the front of the worksheet. On the back of worksheet, students should work together to sketch out a model representing the career development of scientists of color.
4. Share Out
   Ask for volunteers to share responses or models (e.g., draw on board). After the presentations, identify common components and/or features shared across the students’ models.
INSTRUCTIONS/DESCRIPTION (CONT.)

5. Bioecological Models of Development

Introduce Bronfenbrenner’s Contextual Systems (Individual, Microsystem, Mesosystem, Exosystem, Macrosystem, Chronosystem). Provide a definition for each system. Consider the following questions in class discussion:

- How would we apply this model to the stories we just heard? How did each of these systems play a role?
  - Provide students with examples for each system or give students time to come up with examples of their own.

- Individual level (e.g., interests, temperament/personality, perseverance, individual perceptions of science)

- Microsystem (e.g., undergraduate courses, family models of higher education [e.g., Dr. Hughes], experiences as a person of color)
  - (If not discussed in student responses) To what extent are these microsystem-level experiences typical/atypical of other young adults? What microsystem experiences can we add that reflect the experiences of the scholars of color in the video? Are there other experiences that we can add?

- Mesosystem
  - Although not directly mentioned in the video, what mesosystem-level factors may have played a role in the scientists’ career development?

- Exosystem
  - Although not directly mentioned in the video, what exosystem-level factors may have played a role in the scientists’ career development?

- Macrosystem (e.g., stereotype threat, educational opportunities, other structural factors)
  - Although not directly mentioned in the video, what macrosystem-level factors may have played a role in the scientists’ career development?

- Chronosystem
  - Individual stage of development: Why did so many of the interviewees indicate an undergraduate experience as being pivotal in their career trajectory?
  - Does the sociohistorical context impact their career development?

6. Optional: What are the uses and limitations of anecdotal data?

Pose the following questions as a class discussion OR assign as a post-lecture assignment.

- In today’s class, we first attempted to develop a theory of career development based on the personal experiences of seven developmental scientists. We then attempted to fit their experiences into an existing model of human development. What are the strengths/limitations of each approach? For example, what are the drawbacks of using “anecdotal” data to develop theory? Are there ways in which existing theoretical models are limited in the way they represent individual experiences?

- Use your own anecdotal life story to inform a model of career development.
ACTIVITY WORKSHEET

Consider the following questions as you watch the video, *How Did I Get Here: My Journey to Developmental Science*.

1. What are some of the common factors in these scientists’ career trajectories?
   
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2. Why do you think these psychologists first started off as pre-med? What individual, societal, or structural factors may have contributed to this initial goal?
   
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3. How do you think these individuals’ perceptions of “science” changed over the course of their undergraduate career?
   
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4. In what ways were these individuals’ experiences typical and/or atypical of other persons of color in the United States?
   
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5. Based on the experiences of these individuals, sketch out a model that could represent how a person could decide to pursue a career in science.
   
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“Hidden Figures” in Developmental Science

PREPARING THE MIND FOR CHANCE

TARGET “HIDDEN FIGURES” VIDEO

- Video 4: How Did I Get Here: My Journey to Developmental Science (Length: 4.33 minutes)

TIME REQUIRED

Out-of-Class Activity: 60 minutes

GENERAL OVERVIEW

Students will reflect on Pasteur’s comment about chance favoring the prepared mind. After watching Video 4, How Did I Get Here: My Journey to Developmental Science, students will discuss experiences the developmental scientists mentioned that may have prepared them (in both predictable and unexpected ways) for their subsequent work. Students will also reflect on their own experiences and discuss how they might prepare for future research and career opportunities.

LEARNING GOALS

- Students will be able to describe the educational and career paths of developmental psychologists in the video.
- Students will be able to identify several experiences that may have contributed to the career choices, challenges, and successes of developmental psychologists in the video clips.
- Students will be able to reflect on the ways they have already prepared for possible future academic and career directions.
- Students will be able to identify additional experiences that could also prepare them for possible future academic and career directions.

REQUIRED MATERIALS

- Video
- Activity Worksheet

TOPICAL AREAS/CLASSES

- Identity Development
- Research Method and Design
- Career Development
INSTRUCTIONS/DESCRIPTION

In an 1854 lecture, French biologist Louis Pasteur said, “Dans les champs de l’observation le hasard ne favorise que les esprits prepares.” One English translation of this statement is “Chance favors the prepared mind.” This writing assignment requires students to apply Pasteur’s idea to the developmental scientists of color in Video 4 and to themselves.

First, watch the video, How Did I Get Here: My Journey to Developmental Science. Make notes about the experiences and challenges each scientist describes that ultimately led them to their careers in developmental psychology.

Second, answer the following questions:

• How are the paths of these scholars similar to each other? In what ways are they different?
• For each scholar, discuss whether it was clear earlier in their lives and educations what careers they would ultimately have. Do you think that they always knew which experiences would ultimately be important or impactful?
• For each scholar, discuss the way that one experience or challenge may have ultimately contributed to that person’s career choices and successes. For example, think about skills, knowledge, motivation, and opportunities.
• Reflect on the ways that you have already “prepared your mind” for possible future academic and career directions. For example, think about what the scholars in the video clips said, as well as your unique experiences, challenges, skills, and motivations.
• What additional experiences could help prepare your mind for possible future academic and career directions? Consider, for example, psychology and non-psychology courses, paid or volunteer work, or internships. Explain what functions those experiences might serve. What are the resources or supports that you might need in order to have these experiences?
ACTIVITY WORKSHEET

1. How are the paths of these scholars similar to each other? In what ways are they different?
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2. For each scholar, discuss whether it was clear earlier in their lives and educations what careers they would ultimately have. Do you think that they always knew which experiences would ultimately be important or impactful?

Dr. Margaret Beale Spencer
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Dr. Gustavo Carlo
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Dr. Cynthia García Coll
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Dr. Suzanne Randolph Cunningham
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Dr. Hirokazu Yoshikawa
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Dr. Natasha J. Cabrera
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3. For each scholar, discuss the way that one experience or challenge may have ultimately contributed to that person’s career choices and successes. For example, think about skills, knowledge, motivation, and opportunities.

Dr. Margaret Beale Spencer
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4. Reflect on the ways that you have already “prepared your mind” for possible future academic and career directions. For example, think about what the scholars in the video clips said, as well as your unique experiences, challenges, skills, and motivations.

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5. What additional experiences could help prepare your mind for possible future academic and career directions? Consider, for example, psychology and non-psychology courses, paid or volunteer work, or internships. Explain what functions those experiences might serve. What are the resources or supports that you might need in order to have these experiences?

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DEVELOPMENTAL SCIENCE FOR ALL CAREERS

TARGET “HIDDEN FIGURES” VIDEO

• Video 4: How Did I Get Here: My Journey to Developmental Science (Length: 4.33 minutes)

TIME REQUIRED

In-Class or Out-of-Class Activity: 15 - 20 minutes

GENERAL OVERVIEW

Students will have the opportunity to explore how personal experiences impact their academic and career interests. They will have the opportunity to compare their experiences to the experiences of the developmental scholars of color from the video. Students will explore how developmental science can have implications for other areas of study.

LEARNING GOALS

• Students will be able to identify the experiences that lead them to their majors or careers.
• Students will be able to describe how developmental science can inform other majors or careers.

REQUIRED MATERIALS

• Video
• Activity Worksheet

TOPICAL AREAS/CLASSES

• Child Development and Policy

INSTRUCTIONS/DESCRIPTION

After viewing the video, have students complete the attached Activity Worksheet. This can be an individual or small group activity.
ACTIVITY WORKSHEET

1. What motivates your current academic and career interests?
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2. Think about the types of experiences you’ve had over the years. List the experiences that have shaped your academic and career interests.
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3. Developmental science has the possibility to be important for many career paths. How might your academic or career interests be explored through developmental science? (For a definition of developmental science see, for example, https://www.mcgill.ca/psychology/research-0/developmental-science.)
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DEVELOPMENTAL SCIENCE FOR ALL CAREERS

TARGET “HIDDEN FIGURES” VIDEO

- Video 4: How Did I Get Here: My Journey to Developmental Science (Length: 4.33 minutes)

TIME REQUIRED

In-Class Activity: 60 minutes

GENERAL OVERVIEW

To allow students the opportunity to learn about the early experiences that lead individuals to choose developmental science, create an experience panel. Invite faculty members and advanced graduate students to discuss their pathways into developmental science.

LEARNING GOALS

- Students will be able to describe different career paths in developmental science.

REQUIRED MATERIALS

- Video
- Volunteer faculty members and advanced doctoral graduate students in developmental science

TOPICAL AREAS/CLASSES

- Research Designs in Development
- Developmental Theory Overview

INSTRUCTIONS/DESCRIPTION

Develop panel discussion questions that will allow the faculty members and graduate students to share the experiences that lead them to developmental science.

Potential Panel Questions:

- Introduce yourself and your current area of study or focus.
- What was your undergraduate major?
- Describe your path to developmental science?
- What led you to developmental science?
- Was there ever a time that you felt that you did not belong? If so, how did you handle that feeling or the environment that supported that feeling?