The Theory of Performance defines the core components of a performance as identity, learning skills, knowledge, context, personal factors, and fixed factors. This theory provides the basis for analyzing performance, defining performance criteria, and developing meaningful performance measures.

Defining Performance

As Process Education was increasingly clarified as a performance-based philosophy (Academy of Process Educators, 2007), it became more critical to determine what we mean by *performance*; to define a performance, determine how to analyze a performance, formulate criteria for a performance, and consider how a performance can and should be measured.

Figure 1 shows the relationship between performance, performance criteria, and performance measures. It almost goes without saying that we have expectations for learning. In a performance-based environment, those expectations are phrased as *performance criteria* and it is upon the basis of these that performance measures are set (Figure 1 should help clarify the relationship between the two). Only when performance expectations are clearly set and stated can performance be improved. For example, if we say, "Do X better," we necessarily have some idea of what constitutes "better" and are able to visualize the level of performance desired. The more clearly we understand what the target performance looks like (as described by the performance criteria), the more surely we can work to perform to that level. Once we are clear about what the target is, we can create measures for determining where a current performance falls in relation to the targeted performance.

The Components of Performance

Within Process Education, when we say, "Do X better" what we mean is, "Improve your performance of X." In order to keep this from being purely theoretical or

Figure 1 Performance, Performance Criteria, and Performance Measures (Pacific Crest, 2009)

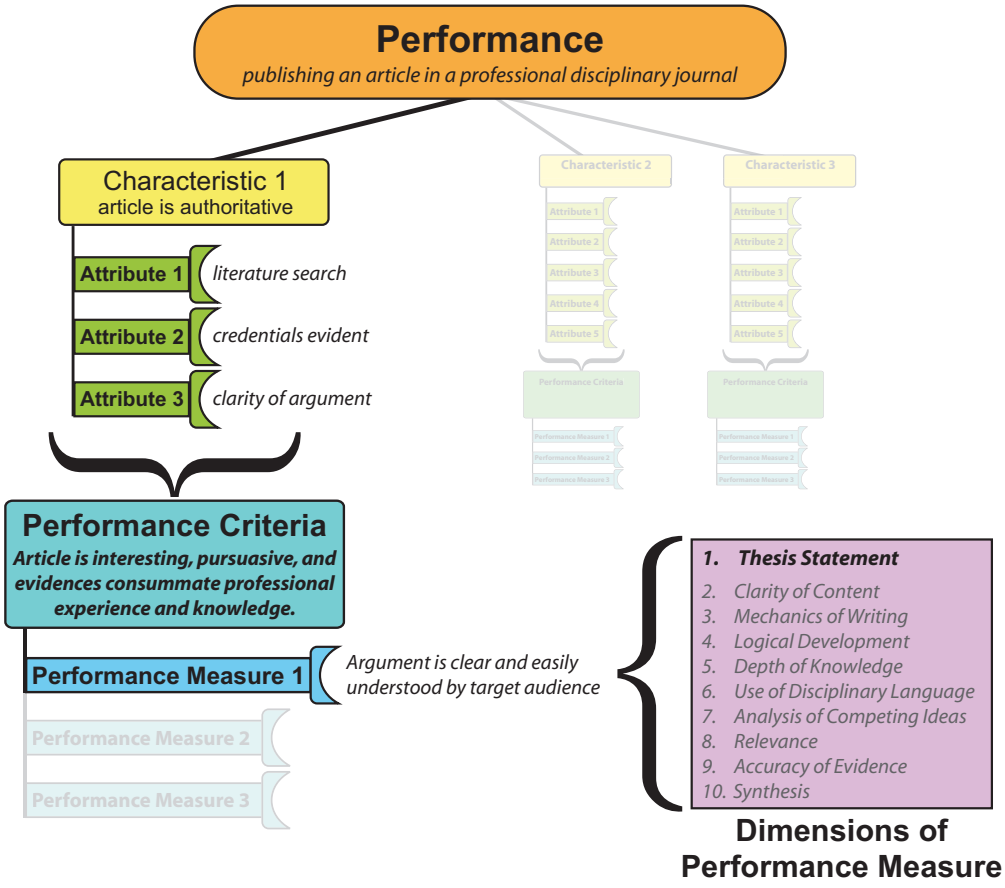
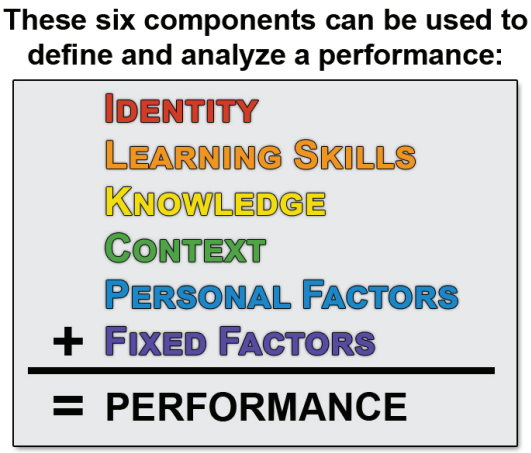


Figure 2 The Performance Model



mathematical, let's substitute something real and familiar for X: bird watching. In the *Theory of Performance* (2007), Elger synthesized the scholarship and teaching practices regarding performance criteria, performance measures, and the culture of assessment and growth to analyze the nature of performance, itself. He offered a model of performance that delineates the components that contribute to the quality of a performance. These are identity, learning skills, knowledge, context, personal factors, and fixed factors (see Figure 2). A helpful learning object about the Performance Model and Theory of Performance is available at: www.pcrest2.com/LO/performance (Pacific Crest, 2012; see Figure 3 for a screenshot of this learning object). Table 1 offers a thumbnail definition for each of the components of performance, as well as an idea of what each component might look like for the performance of bird watching.

Supporting and Improving Performance

What is powerful about the Theory of Performance (and Performance Model) is that, with the exception of fixed factors, any of the components of performance may be targeted and improved in order to improve overall performance. (And though fixed factors cannot be altered, they can often be accounted and compensated for.) Existing scholarship addresses how each component not only affects performance, but can be improved. The *Life Vision Portfolio* (Mettauer, 2002) focuses on identity and how to clarify and strengthen it. Learning skills, more than any other component of performance, have been dealt with comprehensively elsewhere in this article (see the section **Classification of Learning Skills**, Apple, Beyerlein, Leise, & Baehr, 2007); it remains only to be noted that targeting learning skills in order to improve a specific performance area also improves other performance areas as well as the performance of learning itself. Bobrowski (2007) and Nygren (2007) offer a great deal of insight on knowledge and, more specifically, levels of knowledge and how to elevate them. The concept of context for performance is addressed by Quarless (2007) with "context" (conditional environment) and "way of being" (values and culture) as

Figure 3

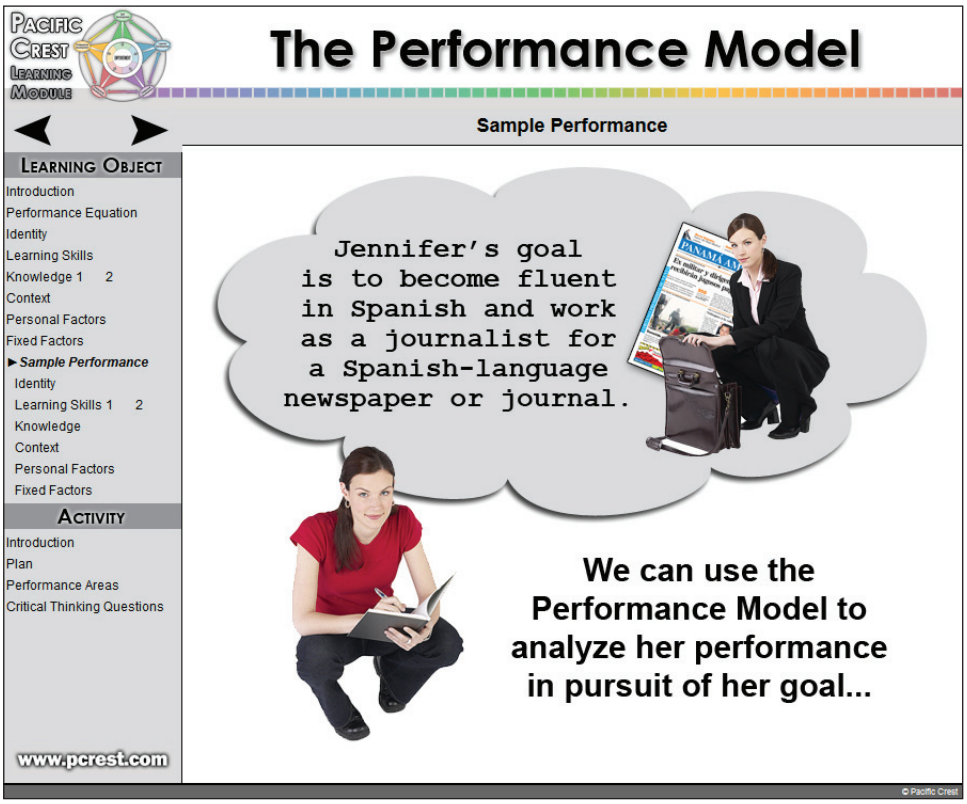


Table 1 Components of Performance with a Performance Example of Birdwatching

Component	Definition
Identity	*As individuals mature in a discipline, they take on the shared identity of the professional community while elevating their own uniqueness.*
example	While a birdwatcher may start by wearing certain clothes and carrying a camera, binoculars, and a notebook, taking on the shared identity of a birdwatcher might include joining a club, 'birding' with others, etc. The identity is as a 'birder' or 'birdwatcher.'
Learning Skills	*Specific actions/abilities that are transferable across contexts and allow individuals to improve their mastery of subject matter*
example	Learning Skills for bird watching would include: **cognitive**: observing, recording, predicting, categorizing, searching, validating completeness, strategizing, selecting tools, identifying missing knowledge **social**: illustrating, sharing knowledge, belonging, collaborating, planning, documenting, valuing communities **affective**: being curious, being active, persisting, responding to failure, managing resources, being self-disciplined, preparing, trusting self, valuing nature, being patient
Knowledge	*Knowledge involves facts, information, concepts, theories, or principles acquired by a person or group through experience or education.*
example	Learning types of birds in an area, their habits, how to identify them, interpret behavior, etc., are all potential aspects of birding knowledge.
Context	*This component includes variables associated with the situation in which the individual or organization performs.*
example	While one might perform bird watching alone, one might also perform bird watching in the context of a group outing or as part of a club. Bird watching in a wetlands environment is also a different context from bird watching in a forest or desert.
Personal Factors	*This component includes variables associated with the personal situation of an individual.*
example	If a birdwatcher has limited funds, travel to exotic environments would be prohibited. Perhaps a birder lives in a region with a smaller assortment of bird types or is unavailable to go bird watching during the morning hours, when many birds are active.
Fixed Factors	*This component includes variables unique to an individual that cannot be altered.*
example	If a birdwatcher is deaf, for example, he or she cannot use birdsong or calls to help identify birds and must rely purely on visual cues or input from others.

forms of knowledge. Horton helpfully speaks to personal factors, the vast majority of which are personal rather than fixed, in Identifying At-risk Factors that Affect College Student Success (2015). Put in terms of performance, Horton identifies personal factors that can jeopardize the successful performance of college students.

While the goal of educators is to help students improve their educational performance, Process Education recommends shifting ownership of learning to the learner. For this reason both the Theory of Performance and Performance Model are included in *Foundations of Learning* (Redfield & Hurley Lawrence, 2009) a text aimed at students; Chapter 1 is titled, "Improving Performance." It gives students the opportunity to dissect the performance of a model student, working with each of the components of that student's performance, as they learn to appreciate their own performances as students. Once they can identify the components of performance, they can begin to target those components and improve their overall performance. Beyond this direct engagement with the learner, the design of *Foundations of Learning* also uses the Performance Model as a guide for the development of each chapter. The chapter begins with a description of the

performance area (knowledge), shares a profile of a high quality performer in that area (identity) and lists specific learning skills that support performance in that area. For most student examples (performer profiles), context, personal factors, and fixed factors are shared as well. In addition a performance measure is usually offered, giving students the opportunity to see performance measurement in action, to measure sample performances, and learn to measure their own performances.

The Theory of Performance was also integral in the development of *Learning to Learn: Becoming a Self-Grower* (Apple, Morgan & Hintze, 2013), with primary focus on the growth and development of key areas of performance: (as a) self-grower, master learner, self-assessor, time manager, problem solver, team player, reader, reflective practitioner, mentee, risk-taker and self-challenger, public performer, and self-motivated professional. These performance areas form the basis for the Profile of a Quality Collegiate Learner (Apple, Duncan, & Ellis, 2016).

Learning as the Performance

Apple and Ellis (2015) asked, "What happens if we treat learning itself as a performance, rather than as an integrated aspect of a disciplinary or general performance?" In their article, Learning How to Learn: Improving the Performance of Learning, they answer that question. As they explain,

> *The act of learning is usually thought of as something done preparatory to a performance; a student learns and then can perform on the basis of what has been learned. This article frames the act of learning as a performance in its own right, allowing the Theory of Performance to be used as schema for naming and exploring the various dimensions of the learning performance that can be improved. This paper's exploration is conducted with the future improvement of the learning performance very much in mind — learning how to learn.*

Table 2 offers the 13 aspects of performance that can be targeted in order to improve the performance of learning (divided into the usual components: identity, knowledge, learning skills, context, and personal factors).

As the authors explain, these pieces of a learning performance are interrelated and interdependent; most importantly, they are based on the concept that learning is a process and a performance that can be improved. The importance of this cannot be overstated; when we say, "Learn better," what we mean is, "improve your

Table 2 The 13 Aspects of Performance

Identity (as a Learner)
1. **Learner Efficacy**: Belief in oneself and one's capability
2. **Learner Ownership and Responsibility**: "I am responsible for my own learning."
Knowledge
3. **Levels of Learner Knowledge**: Elevating the level of learning
4. **Learning Process Methodology (LPM)**: Building awareness of one's own learning process
5. **Forms of Knowledge**: Aligning best learning practices with each type of knowledge
Learning Skills
6. **Cognitive**: Elevating thinking skills for processing information, constructing meaning, and applying knowledge
7. **Social**: Building social skills for producing effective team learning
8. **Affective**: Increasing emotional maturity to take risks, accept failures, and persist through to success
Context (of Performance)
9. **Immersion in a High-Quality Learning-to-Learn Experience** (Learning-to-Learn Camp/Course)
10. **Cooperative Learning**: Adapting the best learning practices from team members
11. **Active Learning**: Publicly performing the act of learning
Personal Factors
12. **Life Challenges**: Transforming past problems into opportunities for growth
13. **Making the Right Choices**: Making a better future

performance of learning." The model offered in Table 2 shows us exactly how to do that – by targeting the aspects of learning. Even greater, however, is the efficacy of the Theory of Performance when the performance in question is learning itself; "improving one component of the learning performance will improve other components of the learning performance" (Apple & Ellis, 2015). This means, for example, that as we accept greater responsibility for our learning, we are able to make better choices when faced with life challenges; and that as we elevate our level of learning, we have a greater sense of our own efficacy as learners.

Performance and Tools

The concept of performance is prevalent within Process Education; so much so that "PE" could also stand for "Performance Education." Because nearly any aspect of learning is both a process and potential performance, Process Educators have created and use a wide variety of tools that target performance. More than 50 such tools are available in the *Student Success Toolbox* (Pacific Crest, 2011). Between the text and its supporting web site, there are tools that support the analysis, planning, and improvement of performance in the following: learning, reading, writing, assessing, problem solving, collaborating, and communicating. Additional tools are available to support the analysis and improvement of any area of performance. These include, getting a handle on performance: the Performance Model, continuum of performance levels, performance analysis and assessment, performance assessment, and a preparation worksheet.

Improving Performance of and Within a Discipline

Performance at a disciplinary level can also be improved. The Performance Model suggests a schema for how that might be done or where the pertinent scholarship might focus:

- **Identity**: Develop a profile for the discipline's key areas of performance.
- **Knowledge**: Clarify/create performance criteria and measures in the discipline.
- **Learning Skills**: Identify and rank the critical learning skills for the discipline.
- **Context**: Challenge disciplinary performances in new and novel situations.
- **Personal Factors**: Develop strategies to address the discipline's most common risk factors (those factors that jeopardize success within the discipline).

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