

## ● THE MAJOR MIXED METHODS DESIGNS

---

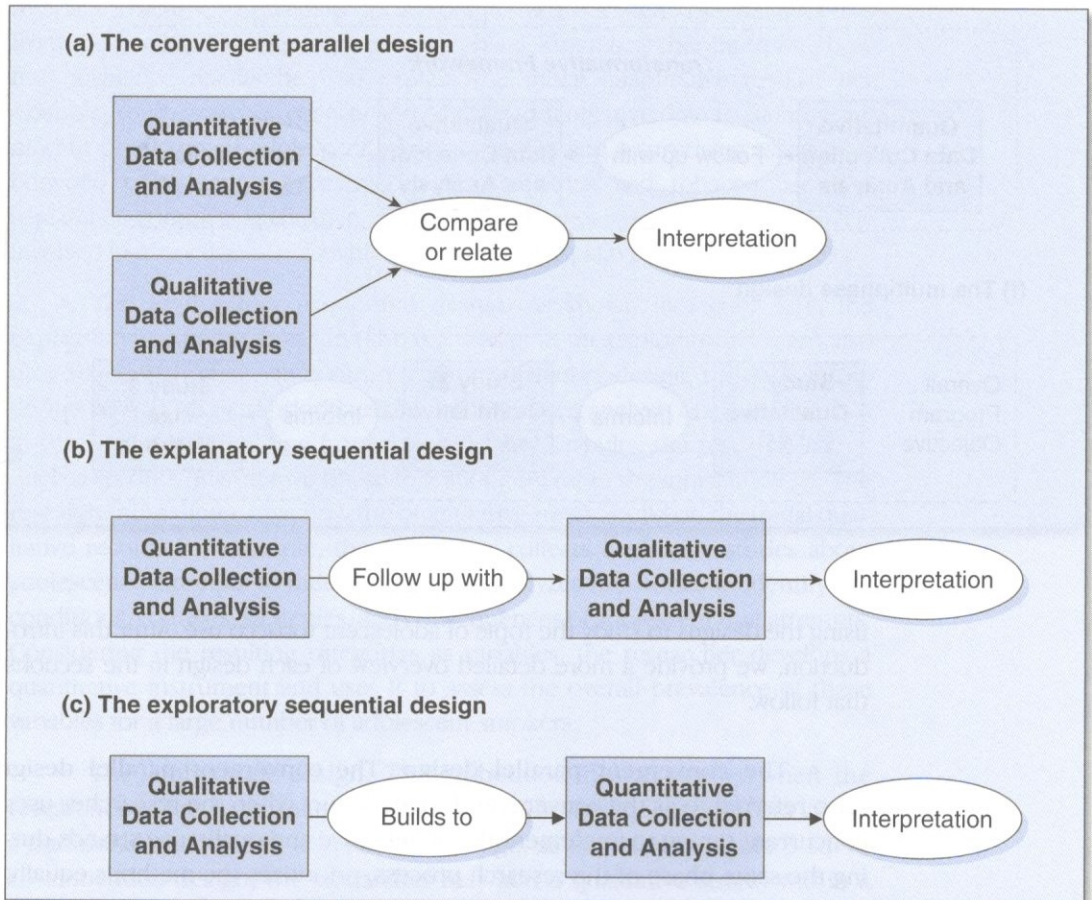
A mixed methods researcher thinks through these decision points and selects a design that reflects interaction, priority, timing, and mixing. As we will show, the various design options vary on these decision points. We include here the design options that are most commonly used in practice, and we advance a parsimonious and functional classification. Thus, we recommend six major mixed methods designs that provide a useful framework for researchers working to design their own studies. We urge researchers to carefully select a design that best matches the research problem and reasons for mixing in order to make the study manageable and simple to implement and describe. In addition, by selecting a typology-based design, the researcher is provided with a framework and logic to guide the implementation of the research methods to ensure that the resulting design is rigorous, persuasive, and of high quality.

The four basic mixed methods designs are the convergent parallel design, the explanatory sequential design, the exploratory sequential design, and the embedded design. In addition, our list of major designs includes two examples of designs that bring multiple design elements together: the transformative design and the multiphase design.

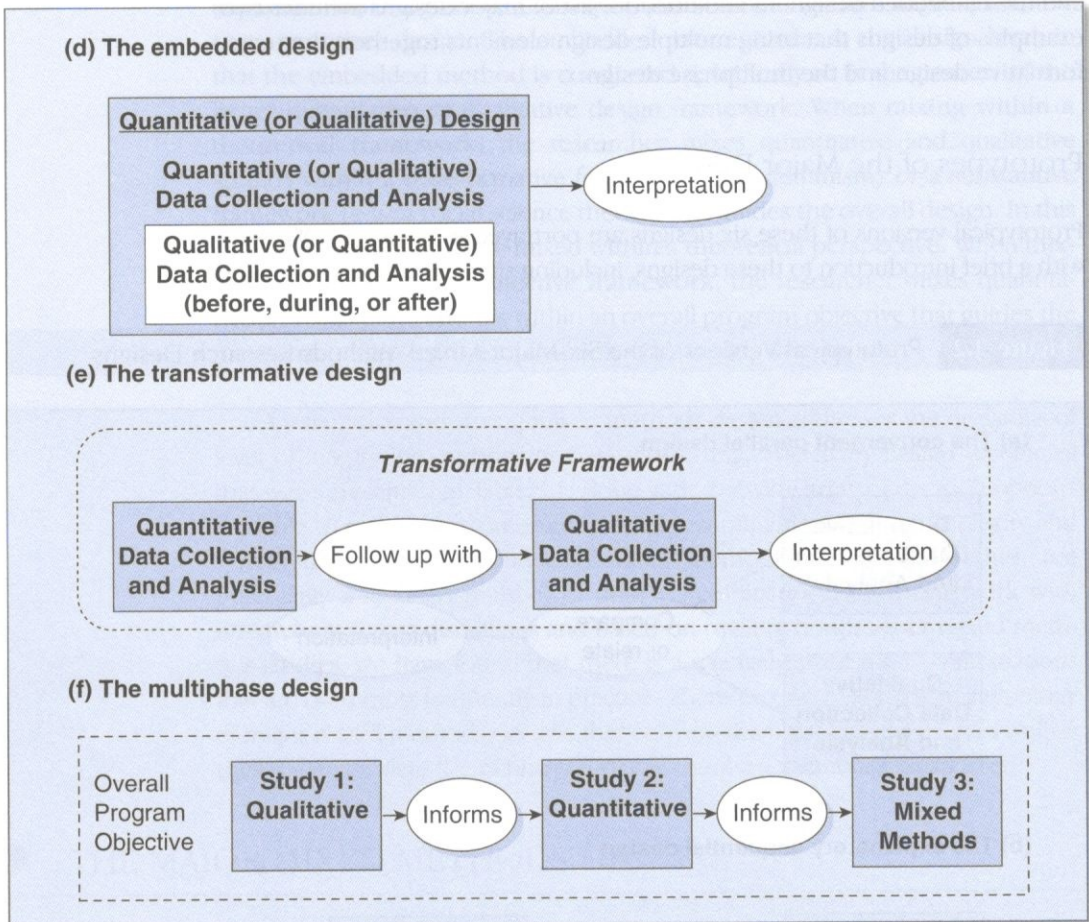
### Prototypes of the Major Designs

Prototypical versions of these six designs are portrayed in Figure 3.2. We start with a brief introduction to these designs, including simple examples of studies

**Figure 3.2** Prototypical Versions of the Six Major Mixed Methods Research Designs



(Continued)

**Figure 3.2** (Continued)

using the designs to study the topic of adolescent tobacco use. After this introduction, we provide a more detailed overview of each design in the sections that follow.

- **The convergent parallel design.** The convergent parallel design (also referred to as the convergent design) occurs when the researcher uses concurrent timing to implement the quantitative and qualitative strands during the same phase of the research process, prioritizes the methods equally, and keeps the strands independent during analysis and then mixes the



results during the overall interpretation, as shown in Figure 3.1a. For example, the researcher might use a convergent design to develop a complete understanding of high school students' attitudes about tobacco use. During one semester, the researcher surveys high school students about their attitudes and also conducts focus group interviews on the topic with students. The researcher analyzes the survey data quantitatively and the focus group qualitatively and then merges the two sets of results to assess in what ways the results about adolescent attitudes converge and diverge.

- **The explanatory sequential design.** The **explanatory sequential design** (also referred to as the **explanatory design**) occurs in two distinct interactive phases (see Figure 3.1b). This design starts with the collection and analysis of quantitative data, which has the priority for addressing the study's questions. This first phase is followed by the subsequent collection and analysis of qualitative data. The second, qualitative phase of the study is designed so that it follows from the results of the first, quantitative phase. The researcher interprets how the qualitative results help to explain the initial quantitative results. For example, the researcher collects and analyzes quantitative data to identify significant predictors of adolescent tobacco use. Finding a surprising association between participation in extracurricular activities and tobacco use, the researcher conducts qualitative interviews with adolescents who are actively involved in extracurricular activities to attempt to explain the unexpected result.

- **The exploratory sequential design.** As shown in Figure 3.1c, the **exploratory sequential design** (also referred to as the **exploratory design**) also uses sequential timing. In contrast to the explanatory design, the exploratory design begins with and prioritizes the collection and analysis of qualitative data in the first phase. Building from the exploratory results, the researcher conducts a second, quantitative phase to test or generalize the initial findings. The researcher then interprets how the quantitative results build on the initial qualitative results. For example, the researcher collects qualitative stories about adolescents' attempts to quit smoking and analyzes the stories to identify the conditions, contexts, strategies, and consequences of adolescent quit attempts. Considering the resulting categories as variables, the researcher develops a quantitative instrument and uses it to assess the overall prevalence of these variables for a large number of adolescent smokers.

- **The embedded design.** The **embedded design** occurs when the researcher collects and analyzes both quantitative and qualitative data within a traditional quantitative or qualitative design, as depicted in Figure 3.1d. In an embedded design, the researcher may add a qualitative strand within a quantitative design, such as an experiment, or add a quantitative strand

within a qualitative design, such as a case study. In the embedded design, the supplemental strand is added to enhance the overall design in some way. For example, the researcher may want to develop a peer intervention to help adolescents develop strategies for resisting pressure to smoke. The researcher begins by conducting a few focus groups with adolescents to learn when pressure is felt and how some adolescents resist. Using these results, the researcher develops a relevant intervention and tests it with a quantitative experimental design involving students at different schools.

- **The transformative design.** The transformative design is a mixed methods design that the researcher shapes within a transformative theoretical framework. All other decisions (interaction, priority, timing, and mixing) are made within the context of the transformative framework. The important role of the theoretical perspective is highlighted by the dotted line in Figure 3.1e, which depicts the possible methods that may have been selected within a transformative design. For example, the researcher using a feminist perspective may utilize a transformative design to quantitatively uncover and then qualitatively illuminate how the stereotypes of female smokers have served to marginalize them as “at risk” students within their school context.

- **The multiphase design.** As shown in Figure 3.1f, the multiphase design combines both sequential and concurrent strands over a period of time that the researcher implements within a program of study addressing an overall program objective. This approach is often used in program evaluation where quantitative and qualitative approaches are used over time to support the development, adaptation, and evaluation of specific programs. For example, a research team may want to help lower smoking rates for adolescents living in a particular Native American community. The researchers might first start by conducting a qualitative needs assessment study to understand the meaning of smoking and health from the perspective of adolescents in this community. Using these results, the researchers might develop an instrument and assess the prevalence of different attitudes across the community. In a third phase, the researchers might develop an intervention based on what they have learned and then examine both the process and outcomes of this intervention program.

With this brief introduction to six common mixed methods designs in hand, we now discuss each design in more detail. The detailed discussions address the history, purpose, reasons to use, philosophical assumptions, procedures, strengths, challenges, and variants of these mixed methods designs. We will examine examples of the major designs in depth in Chapter 4, but here we focus on the basic characteristics of the designs. These characteristics are also summarized in Table 3.3.