

Chapter 5. Cross-case Analysis

The cross-case analysis reported in this chapter is built upon the situationality elements and instructional methods found in the specific case analysis reports.¹⁹ In this study, cross-case analysis refers to analysis and findings that relate the situationality elements and instructional methods found in specific cases to those found in other cases.

When I first encountered the sheer volume of data found in the case analysis reports (143 specific conditions tied to 106 methods, 44 goals, and 34 values), I decided to create a classification scheme to group similar situationality elements²⁰ and instructional methods together. Besides the volume of data, I also realized that many of the values, goal statements, instructional methods, and conditions identified in one case were very similar to the situationality elements found in other cases. For example, the learning goal “Students learn how to control the design and content of their learning” (Cifuentes, Murphy, Segur, & Kodali, 1997) is similar to “Students learn how to control part of their learning process” (Poole, 2000). When comparing these two goal statements, there does not seem to be any significant difference between the two. Likewise, many similar relationships exist among discrete elements for each type of situationality. These relationships are explained with the situationality classification schemes below.

In addition to reporting the situationality classification schemes, this chapter describes several basic patterns found within the categories of situationality elements. (A comprehensive discussion of the relationships among different categories of situationality elements is reported in Chapter 6, along with the description of an overall situationalities

¹⁹ Case analysis reports are explained in Chapter 4.

²⁰ The “Effectiveness” situationality element was not classified because its primary contribution to this research study is to identify and clarify instructional conditions. Hence, it did not seem useful to classify Effectiveness situationality elements.

framework.) Lastly, this chapter concludes with a summary of feedback, comments, and suggestions gathered from case authors (during interviews and surveys) that is relevant to cross-case analysis.

Classification Schemes

The classification schemes presented here were developed from the data contained in the case analysis reports completed for this study. As such, they are conceptual classification schemes based on similarities between existing data elements, rather than theoretical classification schemes based on a particular instructional (or learning) theory or group of theories. These schemes are significant because they help reveal relationships that exist among the situationality elements in multiple cases and establish the basis used to create the situationalities framework (presented in Chapter 6).

A separate classification scheme was developed for each type of situationality element and for instructional methods independently as the data from case reports were collated and analyzed. Two of the classification schemes are single-level (or flat) and two schemes are multi-level (or layered). Flat classification schemes group all elements of one type of situationality into one level of category only. Layered classification schemes group the elements of one situationality type into multiple sets of categories based on different types of criteria.

For each type of situationality element, I describe the classification scheme I created, list the categories in the scheme, and provide examples as necessary to explain each category. Finally, I discuss some of the major challenges and important decisions I made during the classification process, and report basic summative findings.

Values

The fundamental values about social interaction in online learning and instruction reported in the case studies are classified into six major groups: collaboration, community, interactive dialogue, learning theory, support, and virtual classroom. These groups were generated from a list of the values found in each case study.²¹ While most cases reported only one fundamental value about learning, two cases mentioned several different learning values at different places in the case report, associating each particular value with a specific learning goal or instructional method that supported that value. Appendix F contains a comprehensive listing of values, grouped by classification category. Table 3 presents the value categories and the cases associated with each category.

Table 3. Values and Cases

Values about learning	Cases
Collaboration	C101, C103, C107, C112, C113, C116, C119, C120, C121, C122, C125
Community	C102, C105, C108, C115, C123, C124
Interactive Dialogue	C106, C109, C110, C117, C118, C126, C127
Learning Theory	C104, C107, C128, C129, C130
Support	C111, C114, C126
Virtual Classroom	C126

²¹ Appendix E contains all case-specific data, organized by case.

Next, each value classification category is explained and exemplified.

1. Collaboration

Many cases (11 of 30) reported a fundamental value of collaboration between and among students, instructor(s), and other experts. Occasionally, the stated value included a modifier such as “authentic problem-based” or “learner-centered.” In these cases, the values were classified as “collaboration” since that seemed to be the definitive term in the value phrase. Specific examples of collaboration values include:

- Online collaborative learning (found in C101²², C103, C113, C116, C120, C121, C122, C125)
- Authentic problem-based collaboration (C112)
- Learner-centered collaboration (C119)
- Learner-centered collaboration in rich environments supporting active learning (C107)

2. Community

Many cases (6 of 30) reported a fundamental value of establishing a learning community among the participants in the learning environment. Sometimes this sense of community was focused on student relationships, sometimes on student-instructor relationships, and in other cases it was focused on student-external expert relationships. In each of these six cases, the case author used the language “online learning community” when describing fundamental values about learning. Specific cases that reported a fundamental value of community include:

- Online learning community (C102, C105, C108, C115, C123, C124)

²² C101 refers to case number C101. Formal case citations, indexed by case number, are located in Appendix A.

3. Interactive Dialogue

Many cases (7 of 30) reported a fundamental value of engaging students in interactive dialogue to facilitate learning. Sometimes this dialogue took place between pairs of students, among students in small groups, between students and instructor(s), or between students and external experts. Also, if a case reported “discussion” as a fundamental value, I classified it as an “interactive dialogue” value, since discussion and dialogue share many fundamental communication characteristics. (“Dialogue” and “discussion” are more similar than they are different.) In a similar sense, I classified a stated case value of “interaction” as “interactive dialogue” if it was clear that the primary means of interaction was discussion. Specific examples of interactive dialogue values include:

- Dialog and discussion (C106)
- Meaningful interaction and discourse (C110)
- Open discussion (C126)
- Peer-peer interaction (C127)
- Student interaction (C109)
- Student reflection (as facilitated by student-instructor dialogue) (C117)
- Student-centered dialogue (C118)

4. Learning Theory

Several cases (5 of 30) reported a fundamental value that can be described as a valuing a learning theory, such as “active learning” or “problem-based learning.” These values are grouped together because they seem to supercede the other value categories. For example, a stated value of problem-based learning might lead to the assumption that the case author (or educator) values discussion, collaboration, and the formation of

learning community as well, since these are often core features of problem-based learning environments. However, in the absence of the educator's own explicit statements about these other values, I did not make assumptions about secondary values, rather I created a category of values about learning theory.²³ Specific examples of values about learning theory include:

- Active learning (C129)
- Discovery learning (C104)
- Problem-based learning (C128)
- Rich environments supporting active learning (C107)
- Self-directed learning (C130)

5. Support

A few cases (3 of 30) reported a fundamental value that I classified as supporting students as they learn. This support could have come from the instructor, peers, technical support staff, or other sources. Specific examples of values about supporting students in their learning include:

- Individualized instruction (C126)
- Peer helping (C126)
- Peer-helping in a supportive learning environment (C111)
- Supporting the student experience (C114)

6. Virtual Classroom

One case reported a fundamental value of creating a virtual classroom experience, an experience complete with the key components of a traditional classroom, such as live

²³ In each of these cases, the learning goals reflected more useful values such as collaboration, discussion, and the formation of community.

(streaming) audio, video, presentation slides, and channels for immediate feedback from the students to the instructor.

- Virtual classroom (C126)

Challenges

The most significant challenge in creating the classification scheme for values about learning was deciding what to do about the five cases that expressed broad, learning theory values such as problem-based learning or authentic learning. In each of these cases, the stated learning goals reflected more functional values such as collaboration, discussion, and the formation of community. However, I did not try to determine what the author's use of the learning theory terminology meant (or implied) at a functional value level; I simply recorded the learning theory-type value the author reported in the case.

Goals

The goals reported in the case studies are classified into five major groups; collaboration, discussion, community, student control, and critical thinking. A final catch-all category labeled "miscellaneous" is used to group four "singlet" goal statements that do not fit well within any other category. The exact wording of learning goals varies within each category, sometimes substantially. However, even with varied terminology, the goals within each category are quite consistent. Appendix G contains a comprehensive listing of goals, grouped by classification category. Table 4 presents the goal categories and the cases associated with each category.

Table 4. Goals and Cases

Learning goal	Cases
Collaboration	C101, C102, C103, C104, C106, C111, C112, C119, C120, C121, C122, C123, C125, C126, C127, C128, C129
Discussion	C102, C105, C106, C110, C116, C118, C121, C124, C126, C129, C130
Community	C105, C107, C108, C113, C115, C124, C129
Student control	C101, C102, C114, C124
Critical thinking	C109, C116, C117
Miscellaneous	C107, C125, C126

Next, each goal classification category is explained and exemplified.

1. Collaboration

More than half of all cases (16 of 30) include the goal of student collaboration at some level, either student-student, student-instructor, or student-outside expert.²⁴

Collaboration goals are stated approximately 16 different ways. Four examples are included here.

- Students learn how to become actively engaged in regular small group learning interactions (C129).
- Students develop shared meaning (C103).
- Students learn how to collaborate as they complete a project (C112).
- Students learn how to collaborate on learning activities with their peers (C120).
- Other cases reporting collaboration goals include C101, C102, C104, C106, C111, C119, C121, C122, C123, C125, C126, C127, and C128.

²⁴ The instructional method classification scheme takes into account the level of interactivity (student-student, student-instructor, etc.).

2. Discussion

Many cases (11 of 30) include the goal of student discussion, either student-student, student-instructor, or student-outside expert. Goal statements that specifically address dialogue are classified in the discussion category, since dialogue and discussion are essentially the same in this setting. (As with values, the goals of “dialogue” and “discussion” are more similar than they are different.) Discussion goals are stated many different ways, too. Only four examples are included here.

- Students learn how to use course discussions to help them learn course content (C116).
- Students learn how to contribute freely and openly to class discussions (C105).
- Students learn how to learn through dialogue with each other (C110).
- Students learn how to engage in dialogue with their peers and the instructor (C106).
- Other cases reporting discussion goals include C102, C111, C118, C121, C124, C126, C129, and C130.

3. Community

Many cases (7 of 30) include the goal of establishing or enhancing a sense of learning community. Additionally, goal statements that specifically address supporting each other, sharing personal insights, and similar ideas are classified as community goals, since achieving these goals results in an increased sense of community. As with the goal categories, community goals were stated many different ways. Once again, four examples are included here.

- Students learn how to become part of a thoughtful online learning community (C108).

- Students learn how to build trusting and caring relationships with each other (C115).
- Students learn how to become part of a learning community that extends beyond the formal class members (C129).
- Students learn how to form connections to the established community of practice in a content area (C107).
- Other cases reporting community goals include C105, C113, and C124.

4. Student Control

Several cases (4 of 30) include the goal of allowing students to retain some level of control over their own learning process(es). In each of these cases, the author specifically stated that one of his or her goals was to encourage students' control over their own learning. Goal statements that specifically address ownership are classified as student control goals as well, since ownership usually implies control. Specific student control goals include:

- Students learn how to retain some control over the design and content of their learning (C101).
- Students learn how to control the manner in which they access learning material (C114).
- Students learn how to control part of the learning process (C102).
- Students experience "ownership" of group discussions (C124).

5. Critical Thinking

A few cases (3 of 30) include the goal of building critical thinking skills in students. Specific critical thinking goals include:

- Students will develop critical thinking skills (C109).
- Students learn how to think critically about course content (C116).

- Students learn how to reflect thoughtfully about their own learning (C117).

6. Miscellaneous

Finally, there were four goal statements that did not fit well with any other statement, and were only reported in a single case each. These goals were classified together as miscellaneous. Miscellaneous goals include:

- Students learn how to ask for and utilize individual help from the instructor (C126).
- Students learn how to resolve conflicts of opinion among their peers (C125).
- Students learn how to be self-sufficient information users (C107).
- Students will experience a "virtual" classroom learning environment (C126).

Summary and Challenges

Overall, there were 44 discrete learning goals reported (in 30 cases). Of these learning goals, 16 were classified as collaboration, 11 were classified as discussion, 7 were classified as community, 4 were classified as student control, 2 were classified as critical thinking, and 4 were classified as miscellaneous. Eleven cases reported multiple goals together within the same case report. These combinations include: collaboration and student control (C101), collaboration, discussion, and student control (C102), community and discussion (C105), collaboration and discussion (C106), community and miscellaneous (self-sufficient users) (C107), critical thinking and discussion (C116), community, discussion and student control (C124), collaboration and miscellaneous (resolve student conflict) (C125), collaboration, community and discussion (C129), collaboration, discussion, and two miscellaneous (individual support and virtual classroom) (C126) .

When considering the classification scheme for learning goals, the number of goals in each category is skewed heavily towards the collaboration and discussion groups. This should not be surprising, since the cases these goal statements come from were specifically chosen for their focus on social interaction. Since most interaction involves a certain amount of collaboration or communication (discussion), many cases stress the importance of discussion and collaboration. This emphasis on collaboration and discussion is found consistently throughout the classification categories of each type of situationality element and the instructional methods categories as well.

Relationships between values and learning goals, and learning goals and instructional methods are reported in Chapter 6.

Methods

Instructional methods reported in the case studies are classified at three levels; synchronicity, interactivity, and activity. Synchronicity refers to the temporal relationship among participants during an instructional interaction resulting from the implementation of the instructional method, whether the temporal relationship is synchronous, asynchronous, mixed, or “other” (not applicable). Interactivity²⁵ refers to the participants in the interaction, whether they are students, instructors, or external experts. Activity refers to the instructional activity itself—what the interaction participants are actually doing.

Within each of these three levels, additional categories are used to further classify each method. After classification, each instructional method is assigned a three-level classification label, such as “Asynchronous | Instructor-student | Discussion.” Appendix

²⁵ I am using the term “interactivity” in the sense of Moore’s levels of interactivity: student-student, student-instructor, etc. (Moore 1989).

H contains a comprehensive list of all instructional methods, grouped by classification category, with specific case numbers included for reference.

Next, each instructional method classification category is explained and exemplified.

Synchronicity

The synchronicity level classifies instructional methods according to the temporal relationship between interaction participants. Categories of synchronicity include:

- Asynchronous – instructional method does not require the participants to interact at the same time. Example: Provide an online discussion space for small groups of students to use for collaborative activities (C125).
- Synchronous – instructional method requires participants to interact at the same time. Example: Provide chat as a tool for synchronous communication between collaborative pairs of students (C102).
- Mixed – instructional method requires (or allows for) both synchronous and asynchronous interactions among participants. Example: Provide several modes of CMC technology (discussion, chat, etc.) for small groups of 4-5 students to use as they complete a group project (C112).
- Other – instructional method does not address issues of temporal relationship among participants. Example: Assign students to study groups of six at the beginning of the course (C121).

Overall, there are 106 discrete instructional methods of social interaction reported in all case reports. Considering only the synchronicity level, 76 methods are classified as asynchronous, 20 methods are classified as synchronous, five methods are classified as mixed, and five methods are classified as other. Clearly, asynchronous instructional methods comprise the largest category at this level.

Interactivity

The interactivity level classifies instructional methods according to who is participating (or interacting) in the learning activity. Categories of interactivity include:

- Instructor-student – primary interactions occur between the instructor and student(s). Example: Instructor opens discussion with a question, and closes the discussion after a specified time with a summary post (C103).
- Student-student – primary interactions occur between (or among) students. Example: Allow students to create their own discussion topics or move an emergent thread into it's own discussion space (C105).
- Group members – primary interactions occur among members of a formally structured group of participants, usually comprised of students. Example: Collaborative groups develop a learning contract using synchronous (or face-to-face) communication modes (C123).
- Student-external expert – primary interactions occur between student(s) and experts or other resources outside of the “local” learning environment. Example: Provide global experts in the content domain as resources for students to use in completing projects (C107).
- Other – the instructional method does not focus on a determinable set of participants. Example: Provide multiple technologies (e-mail, listserv, web pages) to support online community (C107).

The instructional methods are fairly evenly distributed across the three major categories of student-student, instructor-student, and group (see Table 5 below).

However, if student-student and group interactions are considered together as a block of student-centered interactions – a reasonable consideration since the instructional methods that focus on group interactions do not usually include instructors as direct participants – 74 of 106 instructional methods, a large majority, fall into this “supergroup.”

Table 5. Interactivity Level Instructional Methods and Cases

Interactivity Level	Cases	No. Instances (total)
Group	C103, C104, C106, C112, C119, C120, C121, C122, C123, C124, C125, C128, C129, C130	35
Instructor-student	C101, C103, C104, C105, C106, C109, C110, C111, C114, C116, C117, C121, C126, C130	26
Student-student	C101, C102, C104, C105, C108, C109, C110, C111, C112, C113, C114, C115, C116, C118, C119, C120, C124, C125, C126, C127	39
Student-external expert	C107, C108, C114, C129	5
Other	C107	1

Activity

The activity level classifies instructional methods according to what the participants are actually doing. Categories of activity include:

- Discussion – participants discuss course-related topics. Example: Form discussion groups with a mix of student discipline backgrounds (Computer Science and Biology) (C129).
- File Exchange – participants share or exchange files. Example: Students use shared web pages to construct a group project online (C112).
- Collaboration – participants collaborate to complete instructional tasks. Example: Provide team workspace for on-line discussions, chat, and file sharing (C124).
- Review and Feedback – participants review each other’s work and provide comments and critique in feedback. Example: Provide weekly feedback to each student regarding his or her participation in course discussions (C130).
- Virtual Classroom – participants engage in instructional activity in a virtual classroom setting. Example: Use a virtual classroom session for instructor feedback and live, summative class discussion about project ideas (C126).

- Personal Communication – participants communicate one-one in “closed” communication. Example: Provide a method for synchronous personal communication between students such as chat, phone, or facsimile (fax) (C125).
- Social – participants interact with a non-content focus. Example: Provide an online forum dedicated to non-content-focused “social” discussion (C113).
- Technical Support – participants offer or receive technical advice and guidance. Example: Encourage and set the expectation for students to help each other with technical problems through e-mail dialog (C119).
- Other – activities that do not fit well within one of the above categories. Example: Instructor communicates weekly with all students as a group using the web-based "Instructor Communication Center" (C130).

The largest two activity categories are discussion and collaboration (see Table 6 below). This minor finding is consistent with the learning goal classification scheme finding that collaboration and discussion were the two most common goal categories.

Table 6. Activity Level Instructional Methods and Cases

Activity Level	Cases	No. Instances (total)
Discussion	C101, C102, C103, C104, C105, C106, C108, C109, C110, C111, C112, C113, C114, C114, C115, C116, C118, C119, C120, C121, C123, C124, C125, C126, C128, C129, C130	55
Collaboration	C101, C102, C107, C112, C121, C122, C123, C124, C125	14
Review and feedback	C108, C111, C116, C126, C127, C130	7
File exchange	C104, C112, C114, C125	5
Personal communication	C111, C121, C125, C130	5

Activity Level	Cases	No. Instances (total)
Social	C108, C113, C115	4
Technical support	C111, C114, C119, C120	4
Virtual classroom	C126	3
Other	C102, C104, C105, C114, C115, C116, C117, C122, C130	9

Challenges

Early on in the cross-case analysis of instructional methods it became apparent that creating multiple levels of classification would be a useful approach. In all, there are 106 discrete instructional methods identified in the case reports. Many of these methods share relevant similar characteristics with other methods, but at several different levels. For example, the method, “assign group projects to groups of four students” is similar to “provide chat rooms for collaborative groups to use during class activities”, in that the interactivity level for both methods is focused on groups. However, both methods are also very dissimilar, in that the first method is focused on asynchronous interactions, but the second method is focused on synchronous interactions. The main challenge was to choose classification levels that would allow appropriate grouping at one level (such as interactivity) without forcing inappropriate grouping on a different level (such as synchronicity).

The three levels of classification I settled on seemed to naturally emerge from the list of instructional methods recorded in the case analysis reports. In very informal terms, the three levels can be described as “when” (synchronicity), “whom” (interactivity), and

“what” (activity). Another question that might be asked is, “How?”²⁶ The classification scheme for instructional conditions provides a partial answer to this question.

Conditions

The conditions reported in the case studies are classified into five main areas of focus; student, instructor, technology, resources, and content. Within each focus area, detailed categories such as motivation, values, and time are used to further classify each condition. During classification, each condition is classified first according to its area of focus, and then according to which detailed category it fits within best. After classification, each instructional condition is assigned a two-level classification label, such as “Student | Skills and Ability.” Appendix I contains a comprehensive list of all instructional conditions, grouped by classification category(ies), with specific case numbers included for reference.

Next, the focus level and detail level categories are listed, explained, and exemplified.

Focus level

The focus level categories indicate who or what is the focus of the instructional condition. This distinction is important since a specific instance of a common instructional condition (e.g., amount of time) that is significant to one type of participant (e.g., instructors) may not be directly relevant to another type of participant (e.g., students). The categories in the focus level include:

- Student – instructional conditions that are focused on the characteristics of the student, or the student’s environment and circumstances. Example: Non-

²⁶ The classification scheme for learning goals discussed earlier in this chapter helps answer the related question of “Why?”.

participating students must be willing to respond to e-mail or phone messages (C121).

- Instructor – instructional conditions that are focused on the characteristics of the instructor, or the instructor’s environment and circumstances. Example: The instructor must be willing and able to establish a high degree of trust with each student (C117).
- External resource – instructional conditions that are focused on the characteristics of instructional resources outside of the “local” environment, such as global experts, videoconferencing labs, or classes at other universities. Example: International students with a common language are willing and able to participate in the learning community (C115).
- Technology – instructional conditions that are focused on the technology used to carry out the instructional methods in a case.²⁷ Example: Reliable network audio technologies (server, software, hardware, and technical support) must be available and accessible (C126).
- Other – instructional conditions that are focused on other elements of the learning environment, such as class size and course content. Example: This method requires a large class size (C114).

Across all 30 cases, there are 143 discrete instructional conditions. Considering the focus level of classification only, these conditions are grouped as presented in Table 7.

²⁷ These conditions do not address specific software programs or network arrangements. Instead, they address general issues that are likely to be relevant across many technology platforms and installations. Also, since the rate of technological change is very fast, technology-focused instructional conditions of a general nature may be more useful for a longer period than conditions tied directly to specific technologies.

Table 7. Focus Level Instructional Conditions and Cases

Focus Level	Cases	No. instances (total)
Student	All <i>except</i> C114	95
Instructor	C101, C102, C104, C109, C111, C114, C117, C121, C123, C130	13
External resources	C107, C108, C112, C114, C115, C120, C129	10
Technology	C103, C105, C111, C112, C114, C120, C121, C123, C124, C125, C126, C127, C129	19
Other	C107, C109, C110, C114, C122	6

Clearly, the vast majority of the instructional conditions in this set of cases are focused on student characteristics.

Detail level

The detail level categories indicate the specific details of the instructional condition. It is not enough to simply say, for example, that the student is the focus of a particular instructional condition. It is important to describe “what” about the student’s characteristics is directly relevant. In other words, the detail level classification answers the question, “What are the details about the student’s characteristics that impact the effectiveness of the instructional method?” The categories in the detail level (with examples from various focus level categories) include:

- Motivation – instructional conditions that relate to a participant’s motivation, or willingness, to interact as an instructional method requires. Example: Students are motivated by grades (C127).
- Values – instructional conditions that relate to a participant’s values about learning that affect the effectiveness of a particular instructional method. This detail category is closely related to the motivation category, but differs in that the emphasis is on the participant’s values, which are consistent over time, rather than

just the participant's motivation, which may change from moment to moment.

Example: There must be a trusting relationship between the student(s) and the instructor(s) (C101).

- Skills and abilities (including technical, content, and other areas) – instructional conditions that relate to a participant's skills and abilities to implement (or participate in) an instructional method. Example: Students have debate skills or are willing and able to acquire debate skills. [More than one debate opportunity may be needed.] (C124)
- Background – instructional conditions that relate to participant background. This category is related to skills and ability, but addresses conditions related more to the historical experiences or some other categorization (such as academic program) of the participant(s) rather than any particular skills and abilities. Example: Instructors with more experience in using CMC found it easier to allow students to choose topics and moderate discussions than did instructors without much CMC experience (C101).
- Time – instructional conditions that relate to the amount of time that a participant has available to participate in the interaction(s) required by an instructional method. Example: Students must have the time available to contribute to discussions and meet other coursework demands (C110).
- Location – instructional conditions that relate to participant location. Example: Students must be able to meet either via videoconference or in-person (C106).
- Synchronicity – instructional conditions that relate to participants' temporal relationship with each other. Example: All students should be able to start the course at the same time (C105).
- Access – instructional conditions that relate to access to fellow participants or other resources, such as necessary technology. Example: Outside experts are available (C129).
- Technical Support – instructional conditions that relate to supporting participants as they use technology required by a particular instructional method. Example: A

knowledgeable person (support staff, instructor, peer, etc.) must be available to monitor and respond to questions asked in the conference (C120).

- Features – instructional conditions that relate to specific features of the course content or a resource such as collaboration software. Example: The system must be able to track student participation (C127).
- Class size – instructional conditions that relate to class size. Example: The number of students in a chat session must be small (4-5) (C104).

Considering the detail level of classification only, the 143 conditions are grouped as presented in Table 8 below.

Table 8. Detail Level Instructional Conditions and Cases

Detail Level	Cases	No. instances (total)
Motivation	C101, C102, C104, C107, C108, C109, C110, C111, C112, C113, C116, C117, C118, C119, C120, C121, C122, C123, C126, C127, C128, C129, C130	39
Skills and ability	C101, C103, C104, C106, C111, C112, C120, C122, C123, C124, C125, C126, C129, C130	21
Features	C105, C107, C108, C109, C110, C111, C114, C120, C122, C124, C125, C126, C127, C129	17
Time	C105, C109, C110, C111, C114, C115, C117, C119, C120, C121, C125, C128, C130	14
Values	C101, C102, C108, C109, C111, C113, C115, C121, C124	12
Access	C103, C108, C112, C115, C120, C121, C123, C126, C129, C130	12
Synchronicity	C105, C106, C111, C123, C126, C127, C128, C129, C130	11
Background	C101, C105, C107, C112, C121, C129	7
Class Size	C104, C114	4

Detail Level	Cases	No. instances (total)
Location	C106, C110, C112	3
Technical support	C111, C114, C120	3

The most common area of instructional condition detail is motivation (with 39), followed by detail areas of skills and abilities, features, time, values, access, and synchronicity (all with more than 10). Considering the results of a simple analysis like this is not sufficient to understand the relationships among categories of instructional conditions, and between the situationality elements as a whole. Chapter 6 includes a detailed analysis of the relationships among situationalities, including analyses focused on sets of instructional conditions.

Summary and Challenges

The greatest challenge in classifying instructional conditions is in keeping the number of categories small enough to be able to draw meaningful connections between the categories and the other situationality elements, yet allowing enough categories to avoid grouping instructional conditions together that are only marginally related to each other. The current classification scheme uses 10 categories at the detail level. Even though this is a large number of categories, I believe this number is needed to avoid grouping dissimilar conditions, such as those related to technical support or class size, together in the same category.

Another challenge is deciding what to do when a particular instructional condition can be classified into more than one category. For instance, several instructional conditions mention location as an important factor. When an instructional method calls for co-locating students for an activity such as teleconferencing (or optional face-to-face

tutorial sessions), the students must clearly be co-located. However, in order to participate in the activity, the students must also be present together at the same time, so there is also a condition of synchronicity. In cases such as these, I identified the most important or most meaningful condition category and grouped the condition in that category. In the case of co-location, I grouped the conditions together as a separate category (location) instead of including them in the synchronicity category, since co-location is often a more challenging condition to meet. In fact, it turns out that a condition of location implies a condition of synchronicity. Sets of conditions like this one are described in the last section of Chapter 6.

In Chapter 6, I report findings and answer the study questions.