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**A Case Study of the Experiences of Field-Dependent Students in a
Community College Learning Community and the Implications for
Curriculum**

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**A Case Study of the Experiences of Field-Dependent Students in a
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by

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Dissertation

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Dedication

To my parents, John and Paula Carroll, for making me the person I am today

To Carolyn Osborn for teaching me to dream

And to Carrie Keith for giving me the courage to do it all.

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A Case Study of the Experiences of Field-Dependent Students in a Community College Learning Community and the Implications for Curriculum

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Consider the reality that the traditional college curriculum works against community college students – think of the implications. It is no secret that community college students are the most disadvantaged in higher education, and their chances of succeeding in college are slim. Scholars have pondered this situation for years. Alas, consider if the problem is the structure of the curriculum itself. Specifically, research indicates that community college students tend to be field dependent and the traditional curriculum works against this type of student because it does not provide the type of community support these students require. One way the needs of these students could be met is through learning communities, which are conscious curricular structures that link two or more courses. This curricular tactic offers a way to fulfill the cognitive needs of community college students and enables them to succeed. To determine whether learning communities are an appropriate curricular tactic, the methodology of Interactive Qualitative Analysis (IQA) was used to understand the experiences of field-dependent

students. Through focus groups and individual interviews, this method helped to crystallize these common experiences and provide a voice for them. The results substantiated that learning communities provide the peer support, faculty interaction, academic involvement and collaborative learning environment field-dependent students need to succeed. Curricular tactics like learning communities can be utilized to meet the needs of community college students. Rather than employing the traditional curriculum, which works *against* community college students, curriculum needs to be tailored into applied models like learning communities, which work *for* them.

Table of Contents

CHAPTER I: INTRODUCTION TO THE STUDY	1
Introduction	1
Statement of the Problem.....	2
Specific Problem Area	2
Significance of the Problem.....	5
Definition of Terms.....	6
Purpose of the Study	8
Research Questions	8
Assumptions	8
Limitations.....	9
Conclusion.....	9
 CHAPTER II: LITERATURE REVIEW.....	 11
Introduction	11
Peer Support	11
Faculty/Student Interaction	14
Involvement.....	15
Students of Differing Abilities.....	17
Conclusion.....	19
 CHAPTER III: RESEARCH METHODOLOGY.....	 20
Introduction	20
Qualitative Methodology	20
Research Design.....	21
Pilots	22
Subjects.....	23
Data Collection and Analysis	24
Overview of the IQA Method.....	24
Identification of Factors	24
Identifying Relationships Among Factors.....	26
Constructing an Interview Protocol.....	28
Conducting Interviews	31
Interview Analysis	31
Composite Affinity Descriptions.....	33
Conclusion.....	34
 CHAPTER IV: FINDINGS	 35
Introduction	35
Pilot Results.....	35
Demographics.....	37
Composite Affinity Descriptions.....	39
Field-Dependent Affinity Descriptions.....	39
Field-Independent Affinity Descriptions.....	49
Development of the SIDs.....	58
Field-Dependent SID	58

CHAPTER V: IMPLICATIONS.....	119
Introduction	119
Comparison of Composite Affinities.....	119
Comparison of Relationships.....	123
Comparison of Drivers and Outcomes	139
Peer Support	145
Analysis of Cognitive Needs	151
Findings	151
Conclusions and Recommendations.....	152
REFERENCES	155
VITA	166

CHAPTER I: INTRODUCTION TO THE STUDY

Introduction

Consider the reality that the traditional college curriculum works against community college students – think of the implications. Community college students are the most disadvantaged in higher education, and graduation and completion rates are low (Blau, 1999, Rendon, 1988; Roueche & Roueche, 1998; Tinto, 1994). Scholars have pondered this situation for years; but consider if the problem is the structure of the curriculum itself. Specifically, research indicates that community college students tend to be field dependent, meaning they require more peer and faculty support as well as a more structured learning environment than the field independent, which is the cognitive style of most traditional college students (Luk, 1998). The traditional curriculum works against the field-dependent community college student because it does not support the cognitive needs of these students (Cross, 1979). Curriculum needs to be tailored to meet the needs of these students, so success can be a reality rather than an aspiration. One way to meet the needs of these students is through learning communities, which are conscious curricular structures that link two or more disciplines around the exploration of a common theme (Tinto & Russo, 1994; Garbowsky, 1995). This curricular tactic offers a way to fulfill the cognitive needs of the community college student and enable them to succeed.

Statement of the Problem

When one considers that the dominant cognitive style of community college students is field dependency, then curriculum needs to be adjusted to meet the needs of this style (Cross, 1979; Luke 1998). When comparing the cognitive needs of field-dependent students and their proven strengths, then it is theorized that the needs of these students can be met through learning communities (Tinto & Russo, 1994; MacGregor, 1991; Matthew, 1993). This study will seek to answer the following questions:

1.) What are the experiences of field-dependent students in learning communities at Illinois Community College? 2.) How do learning communities address the cognitive needs of the field-dependent community college student at Illinois Community College?

Specific Problem Area

First of all, when examining the issues of field-dependent community college students, one must have a basic understanding of this population. The students served in the community college environment are significantly less advantaged in all aspects compared to their counterparts at four -year institutions. Roueche and Roueche (1993) address this issue,

The average age of 28 for their community college counterparts
[compared to student at four -year institutions]. At community colleges,
the freshman class is more likely to include greater numbers of returning

women, minorities, and foreign-born students than would the university class. The older the group of students, the more likely that family-support responsibilities will exacerbate the difficulties in balancing work and school commitments. Community college freshman typically work 20 to 30 hours a week and are in tight economic situations, where frequently decisions between work and academic responsibilities result in decreased hours of available study. They are critically insecure economically; it is estimated that one-third of community college students live below the poverty line. Also, these students enter higher education institutions with less academic preparation than students in four-year colleges and universities. (p. 67)

In essence, the “typical” community college student is one who is academically underprepared and faced with a myriad of disadvantages that complicate his/her academic life. Specifically, about one-half of all first-time community college students are underprepared for college-level courses and programs (Roueche & Roueche, 1999).

Typical community college students are termed by Cross (1979) as New Students because these students are new to higher education. These are students who would not have been able to access higher education without an open-door policy. When examining these students, they tend to have a different cognitive style than traditional students. Traditional students tend to be field independent, while New Students tend to be field dependent, meaning they require more peer and faculty support as well as a more structured learning environment than the field independent (Cross, 1979). This is

important because traditional curriculum is shaped for field independent or traditional student, meaning the standard curriculum fails New Students. In Accent on Learning, Cross (1979) describes the cognitive style of New Students and the effect of traditional curriculum:

I suspect that field dependents are over represented among New Students now entering college under open-admissions policies. I also suggest that traditional education has been geared more to the style of field independents than to the style of field dependents, giving field independents the advantage in school situations (p. 122).

Not only are traditional higher education admission policies geared for traditional students to be admitted, the curriculum is also designed to favor them.

In addition to the curriculum failing New Students, so does the college environment that serves them.

In my data (Cross, 1971), New Students, more than others, were likely to say that their most important experience in college was learning to get along with different kinds of people — despite the fact that New Students were more likely to attend commuter colleges without dormitories, extensive student activities, and the other opportunities for social interaction that characterize residential campuses (Cross, 1979, p. 125).

It is important to understand the environment community college students experience, which is inadvertently failing them. Matthews (1994) describes this environment,

As commuter institutions, community colleges cannot assume that

students will interact with each other in lounges, snack bars or dorm rooms, but rather that other responsibilities are more than likely to pull them away from college campus. The classroom is often the only arena for offering students a sense of academic community (p. 53)

This problem is shared by institutions that serve a large student population (Kuh, Schuh, & Associates, 1994; Tinto 1997).

Significance of the Problem

These issues matter when one considers the poor retention rates of community colleges nationwide. Only about one-third of all community college students complete their program when they enroll as full-time students, less than one-fourth will attain their academic goals, and they are 10 to 18 times more likely to drop out than students enrolled in universities (Blau, 1999; Rendon, 1988; Roueche, 2001; Tinto 1994). This points to an alarming need that to develop strategies to increase retention numbers. The low success rate creates a paradoxical problem for community colleges. Community colleges are referred to as democracy's college, but how egalitarian is an environment where the curriculum is not structured for student success? Consider this reality juxtaposed to Gillett-Karam's (1991) description of community colleges as a symbol of freedom,

The community college is much like our symbolic image of the Statue of Liberty. Just as the Statue has become the image attached to immigrants' journey to freedom, the community college has become the image attached to the journey toward another freedom: the freedom provided by educational opportunity. The Statue of Liberty symbolizes open access to

all immigrants; the community college symbolizes open access to all who seek higher education. Where opportunity has been denied, both the statue and the community college symbolize home for a new beginning.

(p. 5)

While these are touching sentiments, what is the point of being a symbol of freedom if the very system works against the students it is designed to “save?” These statistics are not a death sentence, nor is the dream of the community college dead. Learning communities are a proven remedy in increasing student’s academic involvement, which is what field-dependent students need (Tinto & Russo, 1994; MacGregor, 1991; Matthew, 1993).

Definition of Terms

In “The Relationship between Cognitive Style and Academic Achievement” Luk (1998) provides a definition of the terms **field dependent/field independent** based on 30 years of research in this area:

Field independent students tend to be more analytical, logical and better able to restructure and abstract subtle aspects of a problem, whereas field-dependent students’ social skills, attributes, perception, qualities and feelings are strongly influenced by their physical and social background.

This may explain why field-dependent students rely on others for information, guidance and maintenance of attitudes. Field-independent students appear to be less influenced by authority figures, social attachment and external standards and instead are guided by their own

needs, standards and values. Field-dependent students are likely to have a less defined sense of autonomy and independence. Moreover, they are unable to plan their own learning and have difficulty in maintaining their own direction. (Bamberg, 1981; Donnarumma, Cox and Beder, 1980; Dunbar, 1988; Hansen and Stansfield, 1982; MacGregor, Shapiro and Niemiec, 1988; Oddi, 1987; Oehnmacht, 1967; Peck and Whitlow 1975; Saracho, 1980; Swyter and Michael, 1982; Witkin, Oltman, Raskin and Karp, 1971) (p. 1)

Cross (1979) defines **New Students** in Accent on Learning as the following:

In the years since Beyond the Open Door was published, people have spoken of new students and, more recently, of nontraditional students as learners who were previously under represented in higher education: adults, students from lower socioeconomic levels, ethnic minorities, and women. And of course, these students are new to higher education and nontraditional in the sense that they differ demographically from traditional college students; however, I had a specific purpose in reserving the term New Students for students, who, for a variety of reasons, have difficulty with schoolwork. (p. 4)

According to “Learning Communities: Creating Connections Among Students, Faculty, and Disciplines,” a **learning community** is defined as the following:

Any one of a variety of curricular structures that link together several existing courses or actually restructure the material entirely so that

students have opportunities for deeper understanding and integration of the material they are learning, and more interaction with one another and their teachers as fellow participants in the learning enterprise. (Gabelnick, MacGregor, Matthews, & Smith, 1990, p.12)

Purpose of the Study

The purpose of this study is to understand better the cognitive style of community college students and how they respond to curriculum through a qualitative case study of a specific learning community at Illinois Community College. Specifically, this study seeks to understand how these experiences address the cognitive needs of field-dependent students.

Research Questions

1. What are the experiences of field-dependent students in learning communities at Illinois Community College?
2. How do learning communities address the cognitive needs of the field-dependent community college student at Illinois Community College?

Assumptions

There is an assumption in this study that Cross' belief that community college students tend to be field dependent is correct. However, her assumption of the cognitive style of community college students has not been backed by empirical research. Despite the lack of formal research in this area, it is a legitimate assumption upon which to build.

Cross' prestige and contribution to the field of higher education warrant academic exploration based on her beliefs. This study is based upon this assumption and seeks to further substantiate it with qualitative data.

Limitations

One limitation of this study is the research available in this area. The author was unable to find any research linking field dependency and learning communities, so the connection was created by matching the benefits of learning communities with the needs of field-dependent students. Another limitation of this study is the use of a case study. It limits the generalizability of the findings. Although the study will explain further the way community college students learn and respond to curriculum, the results are limited in their broad applications.

Conclusion

The traditional curriculum is failing community college students because it does not address the cognitive needs of these students. One proposed remedy to this dilemma is utilizing learning communities as an appropriate applied model. This study will examine further the cognitive style of community college students and seek to understand if learning communities are an appropriate curricular tactic. Through qualitative analysis,

this study will help others to understand better how community college students learn and what types of curriculum are most appropriate in supporting their cognitive needs.

CHAPTER II: LITERATURE REVIEW

Introduction

When examining the literature on the needs of field-dependent students and the benefits of learning communities, fascinating parallels exist. Learning communities provide increased peer support, structure, faculty/student interaction, involvement, and an ideal environment for students of differing abilities to succeed; all of which match the needs of field-dependent students. The following literature review will compare the needs of field-dependent students and the benefits of learning communities. This provides a fascinating rationale on why examining this relationship is warranted.

Peer Support

One of the fundamental needs of field-dependent students is having a structured environment with strong peer support. In Accent on Learning, Cross (1979) describes the ideal learning environment for these students:

The research to date indicates that a promising approach to working with New Students would be to design clear, strongly structured learning tasks that can be pursued jointly by several students or by groups of students working together toward common learning goals. The clear delineation of the task plus the social support of other people seems to be a potentially powerful combination of forces for field dependents. (p. 131)

One benefit of learning communities is the strong peer support these communities provide, which makes them appropriate for field-dependent students. In Honored, but

Invisible, Grubb (1999) explains the effect of learning communities in the community college,

And they create a community of peers. As the instructor who complained about his college being a 'supermarket' noted: There is no, of course, dormitory life or on-campus life because of the fact that no one is resident at the school. And that means that many students are hungry or want some sort of experience that marks them as being part of a group. And they find that in the [learning community], which is often called a college within the college . . . our students find in the learning community the closest thing to a real college, and having a continuity with classmates. This comment is interesting for contrasting a community college with a 'real college' that incorporates continuity with classmates, and it highlights a substantial benefit of LCs [learning communities]. (p.127)

Through these curricular clusters, students are able to eliminate the anonymity that can exist in community colleges, which is particularly harmful to field-dependent students. Repeated studies have confirmed how learning communities aid in peer group development (Garbowsky, 1995; National Institute of Education, 1984; Tinto, 1987; Tinto & Goodsell-Love, 1993; Tinto & Russo, 1994; Walker, 2001). In What matters in College? Astin (1993) discusses the power of peer interaction for undergraduates,

The single most powerful source of influence on the undergraduate student's academic and personal development is the peer group. In

particular we found that the amount of interaction among peers has far-reaching effects on nearly all areas of student learning and development,” (1993).

The development of this peer group helps students become accustomed to the college environment. This is more than just forming friendships, it involves helping students become effective college students. In Creating Learning Communities, Shapiro and Levine (1999) discuss this phenomenon,

Learning communities provide a setting for students to become socialized to what it means to be a college student. Student interaction with peers reinforces the attitudes, values, and behaviors necessary to succeed as a peer group. (p. 7)

Thus, through the implementation of the program, the community college is able to be instrumental in the formation of the most influential aspect of an undergraduate's education by targeting the specific needs of his/her cognitive style. Providing a supportive peer group is an important element for all undergraduates, but this is especially true for community college students. Not providing a supportive peer group is, in effect, creating an environment for them to fail. In short, learning communities

provide the environment needed for field-dependent community college students and create a curricular model for success.

Faculty/Student Interaction

Not only do field-dependent students need a supportive peer group and a structured environment, they also need a supportive faculty/student relationship. According to Cross (1979), “That module size must be designed for the New Students, and the use of learning modules should be supplemented with considerable personal attention from peers and teachers” (p. 131). This is another fundamental benefit of learning communities — they provide students with increased student/faculty interaction. One student described the experience as: “This was truly an experience. I have taken other college courses, but the cluster linked each class with the other and made me feel like the teachers were close to the student. . .” (Sussman, 1994, p. 79). By enabling students and faculty to be a part of small classes that meet multiple times during the week, it enables closer relationships to develop between the two groups.

This is a powerful relationship being cultivated. In What Really Matters in College? Astin discusses the power of faculty student interaction,

Our studies show that, next to the peer group, faculty represent the most significant aspect of the student’s undergraduate development. Among other things, we found that the sheer amount of interaction between the

individual student and the faculty has widespread effects on student development. (p. 26)

The development of the faculty/student relationship is crucial to the success of the field-dependent students. Numerous studies have confirmed how learning communities positively influence faculty/student relationships (Tinto, 1987; Tinto & Goodsell-Love, 1993; Tinto & Russo, 1994; Walker, 2001). Learning communities offer a unique opportunity because they bring faculty and students closer together, which is another reason this curricular tactic is appropriate for the dominant cognitive style in community colleges.

Involvement

Another way learning communities support field-dependent students is through increased involvement. In order to get the support they need to survive, it is critical for field-dependent students to be involved with their college environment. Specifically, research on learning communities at community colleges indicates that students show greater involvement in a range of academic and social activities than did students in regular curricula (Tinto & Russo, 1994). In short, community college students in learning communities were more involved than those who were not. According to Astin (1993),

The first set of findings concerned what I like to call student involvement.

In a number of early studies we found that student involvement has generally beneficial effects on a wide range of developmental outcomes.

Basically, student involvement reflects the amount of physical and psychological time and energy the student invests in the educational process. . . Like earlier research, our study showed that almost any form of student involvement in the college experience benefits learning and student development. (p. 3)

In Handbook of Undergraduate Curriculum, Gaff and Ratcliff (1997) discuss the research pertaining to the positive impact learning communities have on student involvement,

This research fills a critical gap in the previous work of Astin (1992), Tinto (1987), and others who have explored the importance of student involvement to student success and persistence. While reaffirming the fact that involvement matters our research provides empirical documentation of a number of ways in which that involvement arises in three different educational settings. In doing so, it moves the conversation about involvement beyond the recognition of its importance to the practical issue

of how involvement can be generated in settings where it is not easily obtained. This finding is significant because there is a direct relationship between student involvement and success in college (p. 74)

While most community college students' academic and social involvement with the institution is limited, students enrolled in learning communities defy this.

Students of Differing Abilities

In addition to increasing peer group development, student/faculty interaction, and student involvement, which are critical for field-dependent students, learning communities also provide the perfect environment for field-dependent students with differing abilities to succeed. In Accent on Learning, Cross (1979) describes the type of curricular environment field-dependent students of differing abilities need to thrive:

There is research evidence that students with a high desire for close, friendly interpersonal relations develop problem-solving skills better when they are assigned to work on the problems in pairs, whereas those low in affiliation needs achieve better alone (Sutter, 1967). Similarly, we have some research support for the notion that weak students are especially likely to profit from peer tutoring (Reed, 1974; Wallace, 1965). (p. 125)

In Tinto, Love and Russo's (1994) discussion of the effects of learning communities on differing types of learners, the authors state:

The effects were as prevalent among remedial students as for their non-

remedial peers. Learning communities work for many types of students, including those typically excluded from the mainstream of academic life because of deficient academic preparation. (p.4).

Many learning communities are being employed to help students in developmental education because of the proven benefits for these students (Gaff & Ratcliff, 1994; Raftery & VanWagoner, 2002). Raftery and VanWagoner (2002) address this issue in their discussion of developmental education and learning communities,

Providing a friendly, nurturing atmosphere helps students become comfortable with the learning process and gain the skills and self-confidence they will need throughout their educational journey. By applying the power of a learning community to the needs of developmental education students, colleges can creatively advance a critical component of their comprehensive mission. (p. 26)

This evidence further suggests why learning communities are appropriate for field-dependent community college students. Not only do learning communities provide the necessary nurturing environment described by Cross (1979), they also benefit students of differing abilities. The research substantiates the viability of the “ideal situation” Cross (1979) describes for field-dependent students to flourish. In an educational environment with students of widely differing abilities and field-dependency as the dominant cognitive style, learning communities are an appropriate curricular choice.

Conclusion

The literature indicates fascinating links between the needs of field-dependent students and the benefits of learning communities. If one considers the dominant cognitive style of community college students, then learning communities are an appropriate applied model. This model increases peer group and faculty/student interaction and increases student involvement, which is essential to the success of field-dependent students. This curricular tactic addresses the specific needs of these students and will hopefully increase the persistence of community college students. Examining this relationship between cognitive style and curriculum provides an interesting area for this study to examine.

CHAPTER III: RESEARCH METHODOLOGY

Introduction

While extensive research exists describing the needs of field-dependent students or extolling the virtues of learning communities, there has been no research conducted linking the two variables. Nor has there been research investigating the dominant cognitive style of community college students. The purpose of this study is to remedy this by investigating the cognitive style of community college students in learning communities through qualitative analysis. This will provide clarification on the relationship of these three variables. The following chapter will discuss the rationale of qualitative analysis for examining these issues, an overview of the subjects studied, and a description of the research design method, Interactive Qualitative Analysis (IQA).

Qualitative Methodology

Many times qualitative studies are used because there is a lack of theory or because existing theory fails to explain a phenomenon adequately (Merriam, 1998). Qualitative research is inductive in nature. It builds abstractions, concepts, hypothesis or theories rather than testing theory. This method is especially appropriate for this study because no research exists that specifically examine the effects of learning communities on field-dependent students. A plethora of research exists discussing field-dependent students and the effects of learning communities, but nothing links the two. The exploratory nature of

qualitative inquiry makes it especially appropriate for this study.

In addition, qualitative research allows for a rich explanation of perceptions and experiences, which makes it an appropriate method of inquiry for this study. In “Quality in Qualitative Research: Methodological Principles and Recent Developments,” Patton (1985) discusses this aspect,

Qualitative research is an effort to understand situations and their uniqueness as part of a particular context and the interactions there. This understanding is an end in itself, so that not attempting to predict what may happen in the future necessarily, but to understand the nature of that setting—what it means for participants to be in that setting, what their lives are like, what’s going on for them, what their meanings are, what the world looks like in that particular setting...The analysis strives for depth of understanding. (p. 24)

The very nature of qualitative research allows one to explain how subjects experience situations. It allows the researcher to understand the subject’s perceptions and experiences. This type of inquiry is required to help explain the experiences of students within a particular curricular context. Qualitative research produces the type of rich data required to explain the experiences of students within a particular context.

Research Design

IQA was selected for this study because of the rigor of the IQA process, coupled with its ability to help define the nature of a problem as well as its ability to allow the voice of

the participants to flow through the results. The rationale for using IQA is explained by McCoy (2003):

IQA reconciles quantitative TQM [Total Quality Management] rigor to a qualitative design of data collection and analysis. IQA seeks to capture the lived reality of people, actively involving participants in the mapping of their stories. IQA identifies relationships among self-identified components of an issue. IQA integrates the identification of the nature of the problem with solutions, even when you are not sure what the problem is. IQA builds consensus among the focus group participants. IQA builds strategies around the nature of the problem. (p. 2)

Pilots

Two pilot studies were conducted for this study. These initial research inquiries were conducted in two separate learning communities at a large multi-campus urban community college in central Texas, which will be referred to as Texas Community College. One group of students was enrolled in a developmental learning community, while the other pilot group was part of a community combining history and psychology. During the fall 2003, these pilots served to help the researcher fine-tune the focus group and the individual interview tools for this study. These pilots lacked the field-dependency test, but rather focused on assessing the student's experiences. The preliminary results of these groups will be discussed briefly in Chapter 4.

Subjects

The subjects in the final study were from a learning community in a suburban community college in Illinois, which will be referred to as Illinois Community College. The targeted students were from the Intensive English Program (IEP), a full-time, academic ESL program for students whose native language is not English. Twenty students were enrolled in this 12-hour learning community, which focuses on advanced listening , speaking, grammar, editing, reading, and writing. The IEP is a parallel program to Developmental English and prepares ESL students for English 101. It is specifically designed for students who do not place into English 101 because they lack English-language proficiency, not just reading and writing proficiency.

The researcher studied this learning community during the entire fall 2004 semester. First, all students completed the consent forms and biographical information sheets. Then later in the semester, the students field dependence was gauged using the Group Embedded Illustrations Test (GEFT). This test determined whether students were field-dependent or field-independent.

The affinities for the learning community were developed by all the students in the IEP program. They developed eight affinities describing their experiences in the learning community. Then the field-dependent students and field-independents students were interviewed separately about these affinities and their relationships. Students were selected based on their scores on the GEFT test. Five students who tested strongly as field-dependent and five who tested strongly as field-independent were interviewed.

Data Collection and Analysis

Overview of the IQA Method

Data were collected using the IQA method developed by Northcutt and McCoy (2002). As described by the creators, “the IQA method is a qualitative data gathering and analysis process that depends heavily on group process to capture a shared and socially constructed view of the respondents’ reality” (p. 3). The method is comprised of several steps, which are explained below.

Identification of Factors

Important factors are identified by the participants of the study, rather than imposed upon them by the researcher. In this way, the researcher gets a truly authentic picture of the system. This is accomplished through work with focus groups of people who “share some common experience, work or live within some common structure, or have a similar background” (Northcutt & McCoy, 2002, p. 5). The focus group members are oriented to the process that they will go through, and then given a quick introduction to the research issue. A four-step process then identifies factors:

- Silent nominal brainstorming phase
- Clarification of meaning phase
- Affinity grouping (inductive coding)
- Affinity naming and revision

The following is a description of each of these steps:

Silent nominal brainstorming phase

During this step, research participants are asked to think about the issue presented and then write down words or phrases that represent their thoughts and experiences on the subject. Individuals write each thought on a separate index note card, filling out as many as they would like. The exercise is done individually, not as group discussion at this point. This ensures that even the shyest person will have an opportunity to contribute. The cards are then taped on the wall so that they can be used for the next phase.

Clarification of meaning phase

Once the cards have been affixed to the wall where all participants can view them, the researcher asks the group to clarify any cards that are ambiguous in meaning or unclear to him/her. In this way, the researcher will be certain that he/she understands the insider's perspective of the system, rather than assigning their own interpretation to vague words or statements.

Affinity grouping (inductive coding)

The study participants are asked to group the cards into categories based on commonalities or themes. These groups are called "affinities." This is the first preliminary data analysis, called "inductive coding" because they are using inductive reasoning to go from the specific to the general by synthesizing the concepts on the cards into meaningful units.

Affinity naming and revision

After the affinities have been identified, the participants use group process to determine an appropriate name for each affinity. The name should clearly identify the nature of the affinity, for example: "Emotions." At this time affinities, may be divided

into sub-affinities, which are also named; for example, “positive emotions” and “negative emotions” might both be sub-affinities of the affinity “Emotions.” Once the affinities have been named, it might become clear that specific cards do not really belong in the affinity to which they have been assigned, so some revision might take place with cards being moved from one affinity to another.

It is important that the group feels that the affinities they have created are an accurate and authentic representation of the elements of the issue being researched. These affinities will form the basis for all further research in the study.

Identifying Relationships Among Factors

With the construction of affinities complete, the group then moves on to the next phase, which is identifying the relationships among the affinities. This helps the researcher “rationalize the system” (Northcutt & McCoy, 2002). The first step is to construct a group Interrelationship Diagram (IRD) that summarizes the group’s perception of the relationships between the affinities they have identified. The potential relationships are considered between each possible pairing of affinities, with only three possibilities allowed for a given pair of factors:

- Factor A exerts influence over factor B (represented in shorthand as A → B)
- Factor B influences Factor A (B → A)
- Neither factor influences the other (no arrow)

Sometimes a focus group member might not be able to define clearly the direction of influence between two factors, but still might feel that there is a relationship. It is important to note these separately from the IRD because they may be part of a feedback

loop. Each individual focus group member completes an IRD and the results are summarized in a tabular IRD (see Illustration 3.01), which provides an easy way to record the results and ensure that all possible pairs have been considered. Each number on the top and side of the table represents a specific affinity, and the relationships are recorded by an arrow pointing to the affinity being influenced. The columns to the right record the number of affinities influenced by each individual affinity (Outs) vs. the number of affinities that particular affinity *is influenced by* (Ins). The relative strength of each affinity is calculated by subtracting the number of ins from the number of outs. That power ranking is represented by Delta in the table. Affinities with a positive delta value are considered Drivers of the system because they influence more factors than they are influenced by. Affinities with a delta value of zero have an equal number of affinities influencing them as they in turn influence, so are considered Pivots in the system. Affinities with a negative delta value are influenced by more factors than they in turn influence and are considered Outcomes of the system. This will become important when constructing the mind map or SID to analyze the affinity relationships as a system.

Illustration 3.01: Tabular IRD Example

Tabular IRD												
	1	2	3	4	5	6	7	8	9	OUT	IN	
1		↑	□	↑	↑	□	↑	↑		5	2	3
2	□		□	↑	□	□	□	□		1	6	-5
3	↑	↑		↑	↑		↑	↑		6	0	6
4	□	□	□		□	□	□	□		0	7	-7
5	□	↑	□	↑		□	□	↑		3	4	-1
6	↑	↑		↑	↑		↑	↑		6	0	6
7	□	↑	□	↑	↑	□		↑		4	3	1
8	□	↑	□	↑	□	□	□			2	5	-3
9										0	0	0

Constructing an Interview Protocol

The affinities identified by the focus group form the basis of the interview protocol. The researcher uses the data from the tabular IRD to determine the primary driver(s) of the system of relationships between the affinities. At this point the researcher may construct a preliminary “mind map” or Systems Influence Diagram (SID) to represent visually the flow of influence between affinities. This can be useful in making final adjustments to the affinities and might suggest affinity relationships that would be worth additional exploration in the interview. The interview protocol is comprised of a list of the affinities with numbers assigned alphabetically, a description of each affinity, additional follow-up questions to be asked, and a Theoretical Code Table to record the relationships between each possible pair of affinities

The IQA interview is divided into two distinct sections:

- Axial
- Theoretical

Axial Interview

The Axial Interview is more open-ended and elicits the interviewee's understanding of each affinity, independent of the relationships between them. The interview protocol starts with the affinity identified by the focus group composite IRD as the primary driver of the system. The researcher defines the affinity and asks the interviewee to tell them about his/her thoughts and experiences with that affinity. In their discussion, the interviewee will likely make connections between this affinity and another. This provides segue into discussion of the next affinity. Continue in this manner until all affinities have been discussed. The researcher may ask follow-up questions or probe more on affinities that are particularly interesting based on the focus group SID or the interests of the researcher.

Theoretical Interview

The theoretical interview is more structured and asks the interviewee to describe the nature of the influence (if any) between each possible pair of affinities. An important part of this discussion is that the interviewee provides concrete examples of how these relationships are manifested. These examples help the researcher understand the view of the interviewee from an emic or insider's perspective. A Theoretical Code Table (Illustration 3.02) is used to record the relationships indicated by the interviewee.

Illustration 3.02: Theoretical Code Table Example

Theoretical Code Affinity Relationship Table			
Affinity Pair Relationship	Line Number	Theoretical Quotation	Researcher Notes
1 □ 2	439-442	There are group benefits like study groups. We get to work with those people. When your teaching something or studying with someone there is a high percentage of learning. We get to work in our groups a lot and we all have each other's phone numbers. It helps.	
1 □ 3	444-446	They are two different classes and two different teachers, so, going about certain things. You have a teacher that is straight forward and one that kind of explains things but takes a while longer to explain certain things....kind of talks different, very different. The notes and stuff, how they teach the class. You know how they give information...overheads, some use notes...	
	15-22		
	43-47	It is comfortable. When we go in there and kind of sat by who we wanted to so when we got placed in our groups it was with people that we knew. So even if you knew only one person, they might know another person and that would make a group...it made it easy..don't have to study with someone that you don't really care to talk to.	

Conducting Interviews

The interviews for this study were conducted at Illinois Community College. The interviews took place during the learning community class in fall 2004. The interviews were taped on a standard tape, and later transcribed into a word document by the researcher. The researcher acted as both the focus group facilitator and interviewer.

Interview Analysis

Accurate and effective data analysis techniques are important because they give credibility to interpretations. The IQA method uses rigorous data analysis techniques of both the axial and theoretical interviews.

Axial coding

The Axial Coding identifies key phrases that best exemplify the individual's thoughts and experiences with each affinity. These phrases are then put in an Axial Code Table (ACT) and line numbers identify quote location in the interview transcript. The ACT is a tool that allows the researcher to extract the essence of each affinity description for later review and use of quotations in the write-up of the study.

Theoretical coding

Theoretical Coding identifies and illustrates the relationships between the affinities. The researcher uses a Theoretical Coding Table to record the relationship that between each possible pair of affinities the interviewee discussed; then the researcher groups quotes that support that relationship. This is also a good opportunity to explore discrepancies between the relationship that the interviewee stated between the affinities and examples they gave in either the axial or theoretical interview.

Summarizing and tabulating the theoretical codes

The researcher then summarizes and tabulates the theoretical codes using a Pareto table (Illustration 3.03). The Pareto table allows the researcher to capture the most inclusive view of the group by incorporating at least 80% of the relationships stated by the group of interviewees. It is important to reconcile contradictory relationships reported by large numbers of your interview pool by making sure that both perspectives are represented in the system, typically through a feedback loop.

Illustration 3.03: Pareto Table Example

Affinity Pair Relationship	Frequency Sorted (Descending)	Cumulative Frequency	Cumulative Percent (Relation)	Cumulative Percent (Frequency)	Power
2 < 7	26	26	1.4	3.1	1.7
3 > 4	26	52	2.8	6.1	3.4
3 > 7	26	78	4.2	9.2	5.1
2 < 3	25	103	5.6	12.2	6.6
2 > 4	25	128	6.9	15.1	8.2
1 < 3	24	152	8.3	18.0	9.6

Constructing a Systems Influence Diagram from individual and composite interviews

The relationship data from either the group (using the Pareto table) or individual (using the IRD) are then analyzed by creating a Systems Influence Diagram (SID). This process starts by visually representing all reported influence links between affinities,

which is known as the Cluttered SID (see Illustration 3.04). Affinities are shown in a circle, with drivers of the system located on the left and other affinities distributed in order of Delta towards the right. Redundant links are then removed using a systematic process, resulting in a “clean” or Uncluttered SID (see Illustration 3.05). This diagram allows the researcher to understand clearly the nature of the relationships between the affinities for either the individual or the group. This is a powerful tool when paired with the specific examples provided in the interview.

Composite Affinity Descriptions

All interviews were transcribed word for word. Once the transcripts had been prepared, the researcher analyzed the text for *axial codes*, which are *specific examples of discourse that illustrate or allude to an affinity*. The researcher then documented the reference for retrieval by recording the affinity number on the line of transcript that refers to the affinity, and by documenting the line numbers and affinity numbers in the *Individual Interview Axial Code Table (ACT)*. Quotes relating to a specific affinity were cut and pasted into the third column of the ACT, along with the line(s) of the transcript that were the source of the axial quote. Once all interviews had been coded, the data from the interviews were summarized to create a composite of the individual’s experience with the phenomenon. Axial data were transferred from each *Individual Interview Axial Code Table* to a *Combined Interview Axial Code Table*. By combining all interviews into one table, the researcher created a database for the entire set of respondents containing all axial codes for all affinities, with each code containing a link or a reference to the transcript and line numbers that produced the code.

The researcher next examined all quotes for each separate affinity. The quotes for a particular affinity were organized into subgroups. These subgroups contained quotes that addressed a common theme describing that affinity. Multiple quotes were then woven together to develop a composite quote. Chapter III contains the composite descriptions of the affinities based on quotes obtained from all the interviews.

Conclusion

The goal of this study is to discern not only the dominant cognitive style of community college students, but also their response to learning communities. The exploratory nature of this research and the nature of the questions warrant a qualitative study. Specifically, the use of IQA will allow the researcher to understand best the experiences of these students. This method will help not only to crystallize these common experiences, but also provide a voice for them. Ultimately, it will provide research that will describe in the students' own voices how they learn and their response to learning communities.

CHAPTER IV: FINDINGS

Introduction

The purpose of this study is to understand the experiences of the field-dependent community college student in the learning community environment. This study seeks to answer two questions:

1. What are the experiences of field-dependent students in learning communities at Illinois Community College?
2. How do learning communities address the cognitive needs of the field-dependent community college student at Illinois Community College?

These questions will be answered by comparing the experiences of both field-dependent and field-independent students in the learning community environment. Ultimately, this study seeks to understand if learning communities are an appropriate curricular tactic for the field-dependent community college students.

This chapter begins with the demographics of the study subjects. Presented will be the descriptions of the composite affinities by field-dependents and field independents, a complete description of the development of SIDs and for both groups along with a composite.

Pilot Results

Prior to the research conducted for this study, two pilots were conducted, which were described in Chapter 3. These pilots helped to develop the research tools used in the final

study. The following is a brief overview of the different affinities developed by different learning communities.

Texas Community College Pilot One Affinities

- Motivating
- Hands On
- Team Work
- Convenience
- Environment
- Unique
- Helpful
- Comfortable

Texas Community College Pilot Two Affinities

- Engaging
- Group benefits
- Positive Social Interaction
- Class Structure
- Comfortable
- Teacher Relations

The affinities were very similar in both learning communities. The same is true of the final affinities, which are very similar to the pilot results. Based on the research for this study, regardless of geography, type of learning community or students, affinities among learning communities remained strikingly similar.

Demographics

The subjects in this study included 14 women and six men at a small community college in a suburb in Northern Illinois and will be referred to as Illinois Community College. They were enrolled in the 12-hour Intensive English Program (IEP), which is an academic English as a Second Language (ESL) learning community designed to help students transition to English 101. Students ranged from ages 17 to 45, with a median age of 25. The students were enrolled in this academic ESL program during fall 2004 semester.

Results from the GEFT indicated that nine of the participants were field-independent; those students scored 14 and above on the GEFT. The remaining nine participants scored 13 and below on the GEFT and were identified as field-dependent. The score range for the GEFT is 0 to 18. Additional demographic data can be found below:

Categorical Data Summary

		Table Valid N %
Field Dependent		50% (10)
Field Independent		50% (10)
Gender	Male	30% (6)
	Female	70% (14)
Ethnicity	African American	0% (0)
	Caucasian	0% (0)
	Hispanic	100% (20)
Marital Status	Single	75% (15)
	Sep/Div	0% (0)
	Married	25% (5)
Children	Yes	25% (5)
	No	75% (15)
Major	Education	20% (4)
	Nursing	20% (4)
	Criminal Justice	15% (3)
	Undecided	20% (4)
	Other	25% (5)
Student Status	Full -time Student	100% (20)
	Part -time Student	0% (0)
Employment Statue	Full-Time	15% (3)
	Part-Time	35% (7)
	Not Employed	50% (10)
Finances a Concern	Yes	45% (9)
	No	55% (11)
On Financial Aid	Yes	70% (14)
	No	30% (6)
First Generation	Yes	75% (15)
	No	25% (5)

Demographic Summary

Age and Hours Worked

	Count	Minimum	Median	Maximum
Age	20	17	25	45
Hours Worked	20	14	18	57

Composite Affinity Descriptions

To summarize interview results, separate composite descriptions of each affinity described by field-dependents and field-independents were created. The following descriptions of the eight affinities identified by the focus group comprise both cognitive groups collective perceptions of the learning community. These factors include: Hope, Comfort Zone, Happiness, Working Together, Learning, Fear, Friendship and Special Teacher.

It also must be noted that at times the grammar and sentence structure is less than perfect in these descriptions. All of the students interviewed spoke English as their second-language, and it is evident. Rather than drastically editing their recollections to fit the norms of “standard English,” the researcher decided to retain their voices by making only minor edits.

Field-Dependent Affinity Descriptions

Hope

In discussing the learning community experience, field-dependent students expressed feelings of hope. This feeling was based on the belief that learning English would dramatically improve their lives. Students expressed hope that being a part of this community would help them to obtain a better job in the future and enable them to enter into English 101.

Hope to live in America and like to have a good career and to succeed in life.

Students discussed how the class had given them *hope* for a better future through better

English skills. “Hope? Because everybody need hope to... Hope to live in America and like to have a good career and to succeed in life. I think everybody has hope. All of us have like main goals that we to improve in something. So we like most of us have goals that we want to do. So that’s why I think hope came up.”

Hoping to get better and go to 101 class. Students expressed *hope* for improved English skills, which would gain them entry into Freshman English. “I think we talked about it because learning, from my own experience, I think first of all when I came in this program was like I hoped to be like learning my English and learn some new things. That’s what I hoping and actually doing. Hoping to reach goals. Hoping to get better and we learn how to do that. And, you know... Yeah, hoping to get better and go to 101 class. I guess it’s like the hope that we have for us and I have for myself. I have hope to finish this course and to be able to enroll in the regular college courses. To be at the level that I know I should be. That’s very, very exciting.”

Comfort Zone

Also, while discussing the learning community experience, students expressed feeling a comfort zone in the classroom. Field-dependent students described it as a sense of belonging due to the positive relationship they had with the teacher.

You’ll feel that you belong there, that you can do anything that you’re supposed to do. Many students expressed the classroom being a *comfort zone* because of the relaxed feeling around peers. “It’s because in the class you get to know like some new friends and it’s like you feel like comfortable with them. I guess we are all at the same level or at some form of the same level. That’s why we’re in this class. And it just

makes you feel comfortable. And comfort zone is like you are comfortable with your members of your class. So you don't feel like you're strange in the class, so you feel good, you'll feel that you belong there, that you can do anything that you're supposed to do. Because we have the freedom to talk in the classroom. Like nobody's laughing about you or just make you feel bad. And if you feel comfortable in the class, you don't feel like nervous to participate because you feel comfortable all the time, like friends. Like you have some questions that you don't understand, sort of like, you know, words mean... things like that. Like she's [the teacher] not, like, you know, right away she understands us. I think it means when you're in the class because you want to enjoy an environment that you like.

It's nice and comfortable with the teacher, with the way that she is. Many students noted feeling a *comfort zone* around the teacher. "She nice to persons and stuff like that. Well, at the beginning of the semester we were... at least I was scared because you never know what's going to happen in the beginning of the semester. And after a while, it's nice and comfortable with the teacher, with the way that she is. She makes it comfortable and she made us talk to each other and she put us in different groups all the time, so we never were with the same person."

Happiness

Another emotion mentioned when discussing the IEP experience was happiness. Field-dependent students expressed feeling happiness with the teacher and peer relationships.

We're all excited to be in the class because it's a different environment at least with the other courses that I've taken. Students expressed *happiness* concerning their relationship with their peers and teacher. "Because when you feel happy when you come to school because you're gonna see your friends and that are... you feel happy. You feel happy when you see your friends or when you want to learn something. Happy, there are a lot of things can make you happy. Like, for example, for instance when you're sad, I think that it can make a difference in you. Like if you have a problem, they make you seem happy by telling you a joke or by doing something. They give you a nice break, so that's happiness. They give you happiness, the friends. With my own friends because most of them I know most of them because I've been there from high school. I've think the difference it makes a difference in your life. So I think happiness, there's a difference. Yes. I guess we're all happy. We're all excited to be in the class because it's a different environment at least with the other courses that I've taken. It's like I always interact with the other students here. I was just happy to be in class. I had the interaction and communicating with everybody, knowing everybody.

She makes the class to be happy. Students discussed feeling *happy* with their relationship with the teacher. "The teacher makes the environment happy because she is so positive. Happiness because sometimes some teachers when you work, they have fears and all that. But Ms. X is like, I don't know, happy. She always tells you good advice, so she makes the class to be happy. With my teacher, too. Like she make us understand everything. I feel happy when like she give us a test. Like friends, I

think, again. Like how the teacher gets involved and friendship and I think also hope because like you hope to get better.”

Working Together

In addition to a range of emotions, field-dependent students also discussed working together as a feature of the learning community. This affinity was described as the teamwork environment.

So most of the times, I do work better when I’m with a group that I know. The students talked about *working together* in various class projects and how it aided in their learning. “Everybody likes to work like together because we do it well. We learn so much about it. Like when all the time we have like to work with a partner or work in some groups. And sometimes, you know, we have to decide some things we do, like as a group. As I say before, I know like most of most of them, so I’m like very attached to them. So I’m like very comfortable with them. So most of the times, I do work better when I’m with a group that I know. So I know them, so I do the job better and I try to like do them... like work better so I can improve the group. So I think the group helps us understand more. Working together in a group, she [the teacher] she will group us into five people whenever we had to do and we work together. Like we read stories together. We work together and that’s how I made many friends that I have now. Because we help each other with words. And because that’s what we do. We have to do our individual work, but then we put it all together.”

Learning

Field-dependents listed many different areas when asked about the learning that occurred in the learning community. They described learning about college operations and improving their English. Also, they described learning a great deal while being a part of this community.

We were like we don't even know like so many things. Students discussed *learning* how to be a college student. Students spoke about *learning* a great deal in this learning community. "Sometimes we don't know some things. When we first started the program, like the first weeks, we were like we don't even know like so many things. And now, you know, we're learning about like, you know, one of the things that I didn't know was about plagiarism or something like that. And Ms. X, the teacher...And we have been like learning lots of things that we don't even know and we're like... what?"

I think that I have learned more than in high school. Students also described *learning* as the amount they had learned since the start of the semester. "You learned or there's a good way. I was in high school before about one and a half years. And here it's just one semester and I think that I have learned more than in high school with Ms. X. She's a good and positive person. Probably like if I can remember the subject, the verbs, the adverbs and all that stuff. It's starting to refresh my memory of when I graduated a while ago."

You want to improve your English skills. Students discussed *learning* the English language. "It can be like when I was in the previous class, I say I'm going to learn everything that I need to go to do 101. So I think learning, I do everything in that class

because you want to learn something, because you want to improve your English skills. So that's a main thing. Learning different things. Learning how to write and learning how on organization and development. Well, we learn a lot of stuff really. How to not be shy and how to express ourselves. And how to work on conclusions for like stories, stuff like that."

Fear

Another common emotion shared in the IEP program was Fear. Field-dependents described being scared about speaking in front of the class, failing the course, and outside environmental factors.

I just had fear to go in front of a class and speak. Many students expressed *fear* of speaking English in class. "Like it's not your own language, so sometimes you can't express yourself as you want to. It's only that, but you know the things or everything, you know, but you couldn't express yourself well. And sometimes because you can get embarrassed if you make some mistakes or something. That's my fear. Because I don't know, unless I just had fear to go in front of a class and speak like a... like read a report or something. That was my own fear. Right, because I don't speak English relatively well. Now it's kind of better because like we get to know each other. And then we have the two classes together, so then it's even better. Because like you're with the same people together, you know, like we would go."

We fear . . . we're gonna get like bad grades or something like that . . . Many students expressed *fear* of failing the class. "For me it's like, you know, sometimes when we are in the group, we're like we fear, though, like we're gonna get like bad grades or

something like that, maybe, because of that. Everybody has like challenges to go through and I think for everybody it's very challenging to do it good. I think fear is only at the beginning where you don't get something, when you don't know nobody, when you're starting. The fear of probably like at the beginning, we didn't know what was going to happen, what was going to be going on in the classroom. And as the teacher was explaining it to us, I started feeling more comfortable. And I have fear, but I don't know, not that much. Yeah, what was going to happen. Maybe something that I couldn't handle. But pretty much I think I've been okay."

Afraid of not like having money to pay their rent or to come to school. Students expressed fear of outside forces pushing them out of college. "So you sometimes feel like... most of us... most of my friends, they... they don't live with their parents, they're just with a friend or with relatives. They might be afraid of not like having money to pay their rent or to come to school. I think that's what they talking about, too, because most of us... most of my friends... a lot of friends, like their boyfriends that they... They don't have their parents with them. They're not living with them, so I think that makes the difference, too."

Friendship

In discussing the program, field-dependents described feeling a sense of friendship among peers. These friendships made the program feel comfortable, social, and enabled them to express themselves in class.

We talk to each other and I mean definitely we're friends. Students discussed the sense of *friendship* in the class. "We are friends - everybody. So we talk to each

other, like what do you think this weekend or something like that. We have the... how do you say... we feel comfortable to... to talk with your friends about your things. The friendship is because you're in the group. Everybody gets to, you know, hang out together. We all talk good like to each other. We are just together. Friendship because, like everybody knows each other, right now and that's what I said before. I know them like from a long time ago, so I'm very comfortable with them. Like working with your friends and getting new friends. I have and we all know one another. I feel comfortable, like somebody could help me out or something. Talking, asking questions, group assignments and... We have friendship like if we're all friends. We talk to each other and I mean definitely we're friends. I mean, they're nice people, nice to be around and nice to be with. I think so because, you know, like say we're in groups, she puts us in groups and it's easier because sometimes it's hard to break the ice when you're with somebody. Sometimes you don't know how to start. Sometimes the teacher has a lot of influence on that. If she puts you into groups and you start talking to them, then you start to be comfortable and then you express yourself. You express yourself to the other persons the way that you want to and then you click."

Special Teacher

Field-dependents described Special Teacher as being positive and a great instructor. The teacher's optimistic attitude and skilled pedagogy were the reasons students defined her as special.

I see her, I feel like something positive in me. Students expressed feeling that the instructor was a *special teacher* because she is positive and caring. “Because Ms. X is really positive person. She’s like when I come to school and I see her, I feel like something positive in me and like we’re enthusiasts to come to school. Because, as I told you before, she’s like really happy all the time. Well, she’s not like any other teacher here. And she worry about us and she’s like really special. The way that the teacher teaches us. Like she is really patient with us. She is really nice. You know, she’s just nice. She’s a good teacher. She talks about pretty much everything. She tell everything straight and like the, you know, the truth.”

She make us understand everything very clear. Students discussed that she is a *special teacher* because of her skills as an instructor. “She always try to get like new ways to teach us. She is very special, I think, for us, because like she make us understand everything very clear. And when we don’t know anything, then she explain it to us. Like she is very good with everything. She give us like... if we don’t want if we don’t understand something, then she gave us something else to understand it. She try to do the class better for us. And I was used to a teacher that didn’t do the corrections like sheet. And she did the corrections and pick up a sentence in many different ways and lots of different ways. And she also taught me how to do a correct thesis statement because I thought I was doing it right, but I wasn’t. And she taught us how to do a thesis statement, how to write a paper with a good thesis statement.”

Field-Independent Affinity Descriptions

Hope

In discussing the learning community experience, field-independent students expressed feeling hope — hoping to improve their communication skills in English and reaching their immediate and future life goals.

I want to improve myself in English. Students expressed *hope* in improving their English, which enables them to improve their communication skills. “I have to learn everything because, you know, I speak a little bit, not too much. I am the person who doesn’t like to speak a lot. And I hope some day to talk better. Something you want to do. For me, to try to get better and better with my English. I want to improve myself in English. That I’m learning my English better. And I communicate better with my with friends. Like before I was shy and then I think... and now I’m not. Well, I’m shy a little bit, but it’s just... it’s not the same. Hope means a better future.”

Hope for me to reach the goals. Students expressed *hope* in improving their English, which would enable them to achieve their life goals. “I think it’s the feeling that I have for what I expect for me in the class and why, and my goals in this class. I think that’s hope. Hope for me to reach the goals. They are working right now to improve their life in the future. If we learn good English, it’s easier to get a better job. So that’s the hope, to hope in ourselves to improve the life.”

Comfort Zone

Also, students discussed feeling a comfort zone in the class. Field-independents defined this feeling as being relaxed with their peers and teacher and sharing a common first language.

But a lot of times we are using Spanish, so we feel very, very comfortable.

Student discussed a *comfort zone* because all the students knew Spanish. “And for most of the time the guys talk each other in Spanish. And only when we have to answer something or we are starting some history, we use English. But a lot of times we are using Spanish. So we feel very, very comfortable. It shows in the class. So very simple, my goal is to improve my English. So for me, it would be much better to be in other kind of group where we force myself to listen more English, to speak more English and stay more in a English environment.”

I feel comfortable because everybody knows each other. Students discussed feeling a *comfort zone* with their peers. “It’s because I think we help each other. It’s comfort because in the classroom you feel that your friends are. When you’re good with someone or with the group. Like this is good. And like you’re not like nervous or you’re not scared. When you feel comfortable around your peers. Yeah, I feel comfortable because everybody knows each other. And, you know, when you go up to class or whatever, it’s... you don’t get shy because you know them and you think... you know, and when you’re in like separate classes and you don’t know them very well, it’s more shy because you’re thinking of, oh, what are they gonna think of... what if you do something wrong

or stuff like that. And... but when you're all together, it's different because you know everybody and if you do a mistake, it's just... they just help you out. “

I think it's how we feel in the class around with everybody, the teacher.

Students felt a *comfort zone* with the teacher. “I think we are very closely and very comfortably with the teacher. We participate and we feel comfortable. I think it's how we feel in the class around with everybody, the teacher. And she always try to understand when I... when we try to say something in English and we have a little problem. And... but because we are thinking in Spanish and we take time to translate something to say it in English. And she is very, very patient with that. And it's comfortable for us.”

Happiness

Another emotion students discussed feeling was happiness. Field-independents defined this affinity as happiness with their peers and with improving their English.

Everybody, every day, everybody is exciting. Students expressed *happiness* with the peer group. “We always study and everything. But we sometimes we talk and we make jokes about it and, you know, sometimes we laugh at some stuff that some people say wrong. Like, for example, one of my friends, she we were writing a paper about ethnics and she put *ética* [Spanish for ethics]. We were laughing about that because we thought it was funny. And we helped her out and we told her what was wrong and everything. When we're joking and we're like saying jokes and playing around. Right. When the teacher sort of like she's with us saying little jokes. Everybody, every day, everybody is exciting. We're laughing. We're talking. That's happy.

Sometimes you when you wake up in your home, you say, ‘Oh, I go to the school,’ for it’s... I don’t know, it’s so... when it’s so difficult or... or hard to wake and dressing and... and go to the school. And I think, okay, I go to school, but it’s like... so some people say I’m sorry. It’s like that because... okay, we are learning in a classroom and it’s good. It’s all the time the same people here together. I think it that helps.”

When you are working to improve your life, you must be happy. Students discussed *happiness* with their goal attainment in the class. “We miss Mexico, but at the same time, we are working in goals, in objectives, so we are happy to stay here, to stay together, to stay with the teacher, to stay in the school, to stay liking a lot of things. So when you get something, when you are making something, when you are working to improve your life, you must be happy. Everybody feels happy with the teacher, with everything that we are learning, maybe also with staying here in the United States, having at the same time the opportunity to have a better life. So this makes us happy.”

Working Together

Students also discussed working together as a common experience. Field-independent students defined this affinity as feeling a sense of teamwork.

Working together like I told you, we help everybody, we help each other out.

Students experienced *working together* in a multitude of ways in the learning community.

“It’s not hard to work with people you already know. Like at the beginning, I was uncomfortable because, well, you don’t know nobody. And once you know them and you know how they are and everything, it’s better to get along. I think that is like us, a

group, when we are like together and then working together like we're doing, a group. Everybody working, like I say, together. We're always working. Working together like I told you, we help everybody, we help each other out. We make presentations and work with another partner. And we're working on making grades or something like that. Okay. It's not the same thing you work alone, you work... you put only your thinking in a work. If you work with somebody, somebody help you and you help somebody to write or to think and it' for me, it's more comfortable working with someone. It's very nice to work in team. Especially in this group where there's a real confidence in each other. It's nice. You feel really comfortable to work with all the classmates."

Learning

Also, students identified learning as a common theme in the IEP program. Field-independents defined learning not only in the content but also in sources of it.

Learning, it means from each other, from the teacher, to learn all by myself.

Students expressed *learning* from the peer group, teacher and themselves. "But I learn a lot of things with this group. It's like you see two languages because of it. I think that we're like playing in the same time we're learning with the different things. And, well, for me, I don't get bored in the class. Because I like to be there because there's for me, Dr. X makes interesting the class. Learning, it means from each other, from the teacher, to learn all by myself."

I'm learning what I speak and to express myself in English. Students discussed *learning* English and improving their language skills. "Learning when I come to United

States, I don't feel good, like somebody or when I hear someone speaking English. And I don't try to speak English. And with this course, I'm learning what I speak and to express myself in English. I think that is learning. I have learned a lot of stuff. Like, for example, I had problems with my grammar. Now I'm okay with it. I'm not that good like I want to, but I'm learning. Like I see myself... like before I would just talk like that. And now I just stop and then say what I have to say, but in the way the teacher wants me to say. Learning means that we are learning English. Why we are learning English? We are learning English to improve. In this way we have the chance to get something else after. Like a better job. For example, in my case, I think to go back to Mexico. In this way we have the chance to get something else after. Like a better job. For example, in my case, I think to go back to Mexico. But maybe I am not sure now because you never know what is going to happen later. But I would like to get a job like an English teacher in a university. I am a professional, so I have the experience. I can have the opportunity to work in a university or college or something like that. I have friends in a university that they told me about to get the teacher's degree in Mexico and to start working as a English teach. So I have the idea to work as a teacher in Mexico. Maybe I can live there in June, but I'll try and start working another area. Maybe. I'm not sure because I would like to continue in the engineering, too, like I told you, as a bilingual engineer. But if I can't, I would like to do work as an English teacher. If I can do work in both areas, it would be much better for me because in this way I can improve my English, not forget my English. Because if I only work in one area, I'm going to maybe I can forget English and I wouldn't like to forget my English."

Fear

In addition to feeling everything from hope to happiness, students discussed the negative emotion of fear. Field-independent students detailed being scared about class participation and of outside environmental factors.

Fear in the class is like, fear to talk, to participate, stand up to the class.

Respondents reported feeling *fear* of speaking in front of class and failing. “ I think they’re like nervous and they’re shy. For at the first, in the beginning. Like that the other people knew more than me and things like that. Fear in the class is like, fear to talk, to participate, stand up to the class or to fit the... don’t surpass the goals. . . Some of us, they are scared of how to stay in front of everybody and to talk about something. They forget the words. That’s a fear. So by this you saw some were nervous. We’re afraid of not succeeding; not doing as well as we are right now. Afraid of slacking off.”

I have fears about to go back to Mexico, to get a good job. Students expressed *fear* in their lives stemming from outside environmental factors – everything from legal status to employment. “Always we have fears. In my case, I have fears. Fears about my levels in my legal situation to stay here in the United States. I have fears about to go back to Mexico, to get a good job. And all the time we live with fears. It’s a paradigm and we have to break the paradigm. Right now, here’s our paradigms that we have to break up. In this way, we can be successful. But we need to break those paradigms.”

Friendship

In discussing their learning community experience, students cited friendship as a common experience. Field-independents students defined the learning environment as “friendly.”

The environment that there is in the classroom is a friendship environment.

Students discussed feeling *friendship* with their peers and teacher. “It’s a friendship. It’s better to get friends because you’re always with them and once you’re always with them, you need to help them because you don’t want to be mean and then if you’re not...Friendship in the classes. How can we share with each others and it’s really group. If you just have one class with them, it’s harder because you don’t meet everyone. And when you’re all together, you meet everyone. You meet every single person, you know everyone. Like you know how in the class the first day they all get up and say their name? Well, you don’t remember them because you don’t know them. But if ever they do it like at the end of the class, you know everyone and you know everybody’s name. I have my friends there and I met a new friend, so we were like together in the group. I have more friends. We have friendship. Well, all people is friendship in the class. Very nice friendship also with the teacher that is very friendly and very, very nice. So the environment that there is in the classroom is a friendship environment. And everybody is nice with each other.”

Special Teacher

Last of all, students unanimously discussed special teacher as a common theme in the learning community. Field-independent students described the teacher as special because of their comfort level and the competence demonstrated as an instructor.

We could talk and stuff and that we just don't see her as a teacher. Students experienced the professor as a *special teacher* because she makes the students feel comfortable. "Special teacher means like she always give us like the way to that we can feel comfortable. We can talk to her about whatever we want and sometimes we... I think she's smiling, too, because you can talk to her. She's special. She takes her time to teach and I think it's so hard. If I... if I were teaching somebody in Spanish, I think it's hard for me teach the language that people don't understand so much, you know. And she's very patient. She's very, very great teacher. And she's special. A special teacher is someone that trusts us that likes to be our friend at the same time, you know, like an authority Illustration. And, you know, that she's not afraid of talking of her feelings and us. That we could talk and stuff and that we just don't see her as a teacher. She's like the advisor also. Personally, she gave me some advice to keep don't know how to say. I mean, she's nice."

She knows how to teach and she teaches very well. Students discussed how the professor was a *special teacher* because of her pedagogical skills. "A special teacher means we got maybe the best teacher in the college She's very friendly. She understands everybody. She tries to help us. She's a very helpful teacher. By

this, we appreciate her a lot and we love her. She knows how to teach and she teaches very well, so I think I learn a lot of things with her.”

Development of the SIDs

As noted in the section in Chapter 3, once the affinities were identified through the focus group, a series of individual interviews were conducted to add further detail to the data. Information from these interviews was then analyzed using the Pareto Protocol and an Affinity Relationship Table (ART) and an Interrelationship Diagram (IRD) were developed. From these two charts, it was possible to draw a composite SID. The charts below outline the progression from the Pareto Table to the final, uncluttered SID. This process was conducted three times for this study, for the field-dependents, field-independents and a composite. The following is a description of the development of the SIDs.

Field-Dependent SID

Affinity Name
1. Hope
2. Comfort Zone
3. Happiness
4. Working Together
5. Learning
6. Fear
7. Friendship
8. Special Teacher

Examine each individual Interview Theoretical Code Table and tally the frequency of each relationship in the table below.

Combined Interview Theoretical Code Frequency Table							
Affinity Pair Relationship	Frequency		Affinity Pair Relationship	Frequency		Affinity Pair Relationship	Frequency
1 □ 2	3		2 □ 6	1		4 □ 7	3
1 □ 2	1		2 □ 6	0		4 □ 7	2
1 □ 3	1		2 □ 7	1		4 □ 8	5
1 □ 3	4		2 □ 7	4		4 □ 8	0
1 □ 4	3		2 □ 8	0		5 □ 6	1
1 □ 4	1		2 □ 8	5		5 □ 6	3
1 □ 5	4		3 □ 4	1		5 □ 7	0
1 □ 5	1		3 □ 4	4		5 □ 7	3
1 □ 6	1		3 □ 5	3		5 □ 8	0
1 □ 6	1		3 □ 5	2		5 □ 8	5
1 □ 7	2		3 □ 6	1		6 □ 7	0
1 □ 7	3		3 □ 6	1		6 □ 7	1
1 □ 8	1		3 □ 7	2		6 □ 8	0
1 □ 8	4		3 □ 7	3		6 □ 8	3
2 □ 3	4		3 □ 8	0		7 □ 8	1
2 □ 3	0		3 □ 8	5		7 □ 8	4
2 □ 4	5		4 □ 5	2			
2 □ 4	0		4 □ 5	3			
2 □ 5	5		4 □ 6	1			
2 □ 5	0		4 □ 6	3			

Field-Dependent Composite Interview Affinity Relationship Table

Affinity Name	Possible Relationships
1. Hope	
2. Comfort Zone	$A \sqcap B$
3. Happiness	$A \sqcap B$
4. Working Together	$A \diamond B$
5. Learning	(No Relationship)
6. Fear	
7. Friendship	
8. Special Teacher	

Composite Interview Affinity Relationship Table						
Affinity Pair Relationship		Affinity Pair Relationship		Affinity Pair Relationship		Affinity Pair Relationship
1 □ 2		2 □ 3		3 □ 5		4 □ 8
1 □ 3		2 □ 4		3 ◇ 6		5 □ 6
1 □ 4		2 □ 5		3 □ 7		5 □ 7
1 □ 5		2 ◇ 6		3 □ 8		5 □ 8
1 ◇ 6		2 □ 7		4 □ 5		6 ◇ 7
1 □ 7		2 □ 8		4 □ 6		6 □ 8
1 □ 8		3 □ 4		4 □ 7		7 □ 8

Field-Dependent Tabular IRD

Affinity Name	
1.	Hope
2.	Comfort Zone
3.	Happiness
4.	Working Together
5.	Learning
6.	Fear
7.	Friendship
8.	Special Teacher

Tabular IRD											
	1	2	3	4	5	6	7	8	OUT	IN	□
1		↑	□	↑	↑	◇	□	□	3	3	0
2	□		↑	↑	↑	◇	□	□	3	3	0
3	↑	□		□	↑	◇	□	□	2	4	-2
4	□	□	↑		□	□	↑	□	2	5	-3
5	□	□	□	↑		□	□	□	1	6	-5
6	◇	◇	◇	↑	↑		◇	□	2	1	1
7	↑	↑	↑	□	↑	◇		□	4	2	2
8	↑	↑	↑	↑	↑	↑	↑		7	0	7

Count the number of up arrows (↑) or *Outs*

Count the number of left arrows (□) or *Ins*

Subtract the number of *Ins* from the *Outs* to determine the (□) *Deltas*

□ = Out- In

Tabular IRD											
	1	2	3	4	5	6	7	8	OUT	IN	
8	↑	↑	↑	↑	↑	↑	↑		7	0	7
7	↑	↑	↑	□	↑	◇		□	4	2	2
6	◇	◇	◇	↑	↑		◇	□	2	1	1
1		↑	□	↑	↑	◇	□	□	3	3	0
2	□		↑	↑	↑	◇	□	□	3	3	0
3	↑	□		□	↑	◇	□	□	2	4	-2
4	□	□	↑		□	□	↑	□	2	5	-3
5	□	□	□	↑		□	□	□	1	6	-5

Tentative SID Assignments	
8	Primary Driver
7	Secondary Driver
6	Secondary Driver
1	Secondary Outcome
2	Secondary Outcome
3	Secondary Outcome
4	Secondary Outcome
5	Primary Outcome

Illustration 4.01: Field-Dependent Cluttered

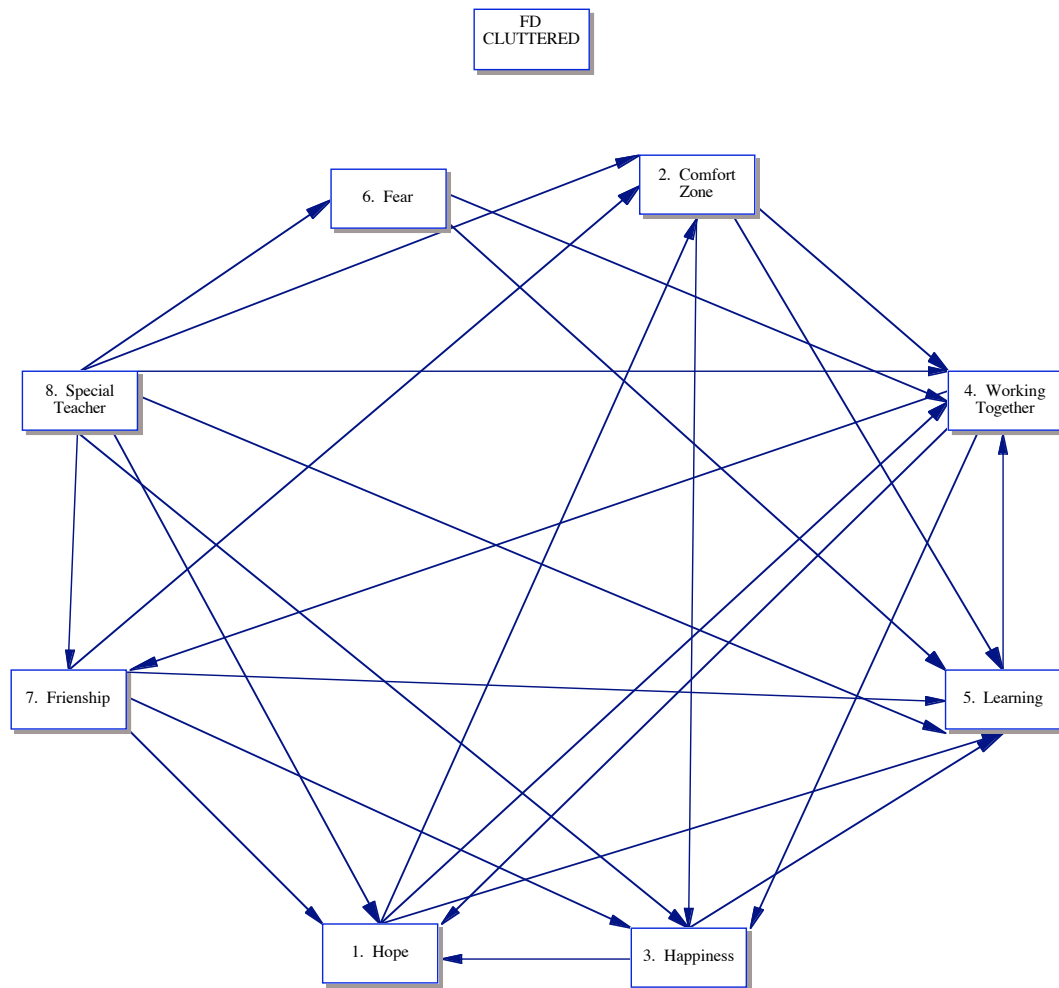


Illustration 4.02: Field-Dependent Uncluttered

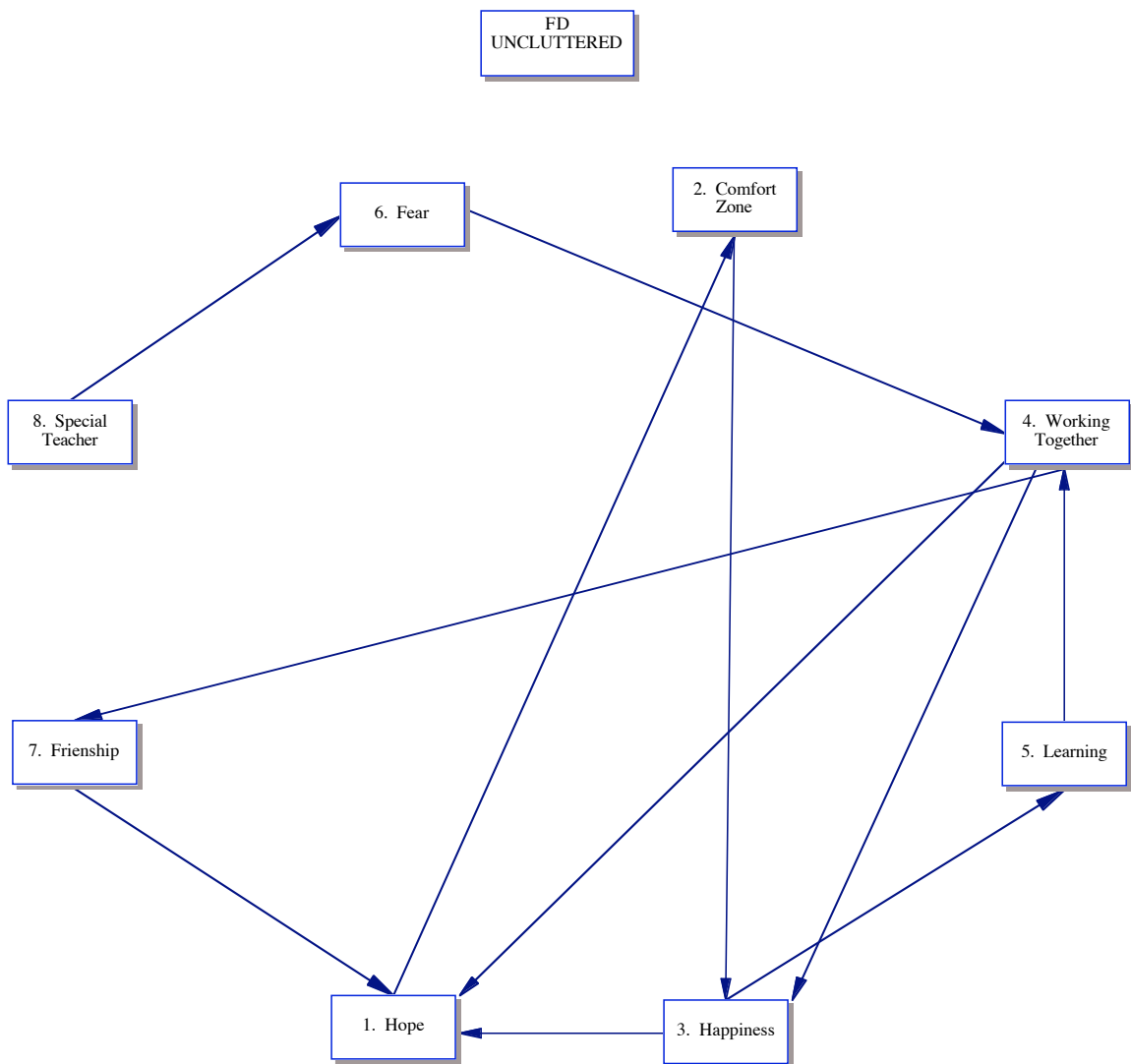
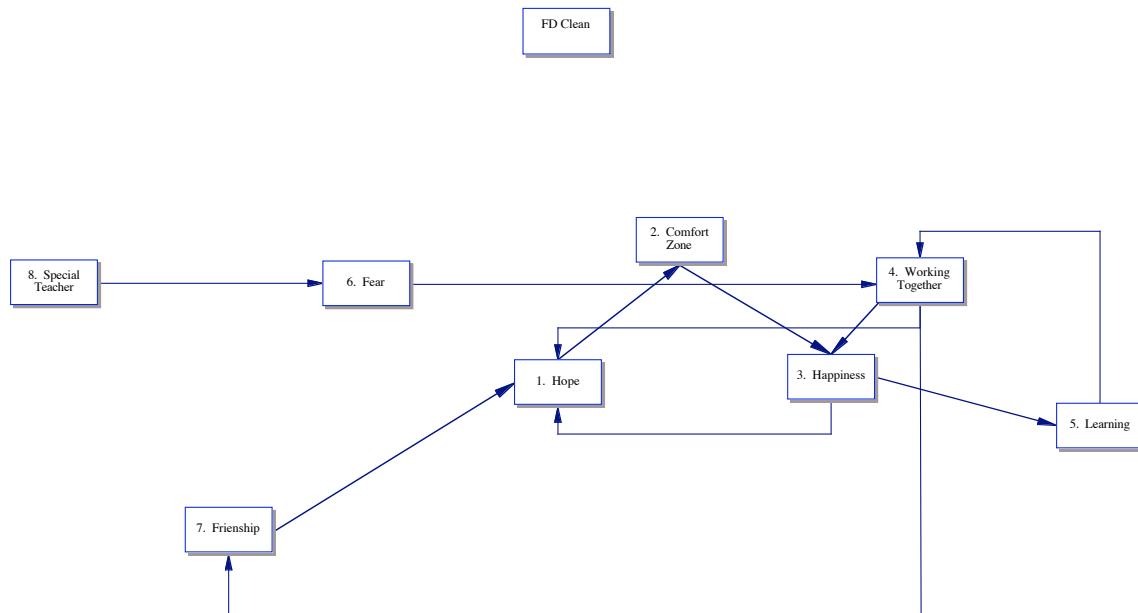


Illustration 4.03: Field-Dependent Clean



Touring the System

The field-dependent uncluttered SID is a system describing the experiences of these students in a learning community. This journey begins with Special Teacher and ends with Learning. Perceptions of these affinities, either positive or negative can influence the subsequent affinities (Northcutt & McCoy, 2002, p. 26). The tour is depicted visually in Illustration 4.03.

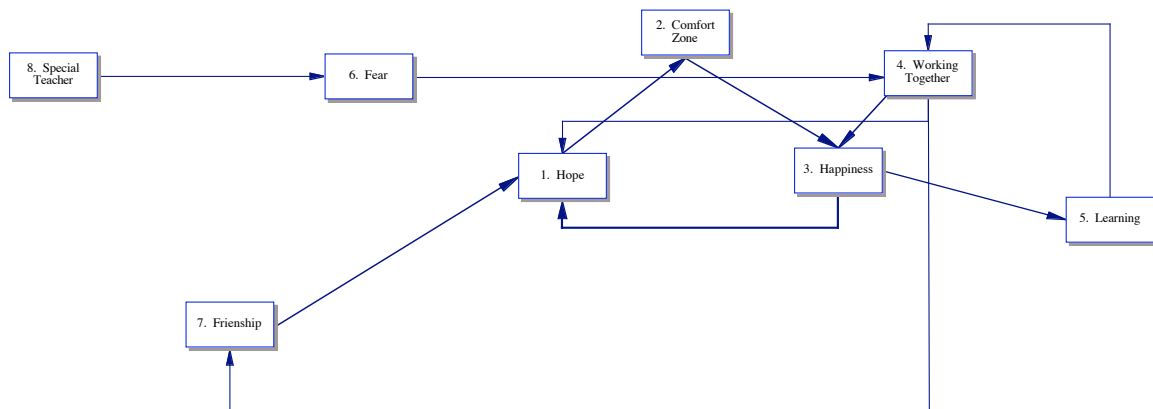
It begins with Special Teacher influencing Fear. The Special Teacher works to eliminate this Fear, which hinders Working Together. Working Together influences the positive affinities of Comfort Zone, Hope and Happiness. At the same time, this triad of positive affinities is greatly influenced by Friendship as well. These critical interrelated affinities influence the primary outcome of learning.

Feedback Loops, Zooming, Naming

The field-dependent students' system included four feedback loops. These feedback loops contain subsystems of at least three affinities, each influencing the others (Northcutt & McCoy, 2004, p. 335). In the instances of these feedback loops, the distinction between drivers and outcomes is blurred because there is no longer an absolute cause and effect system (Northcutt & McCoy, 2002, p. 335). The interconnectedness of these factors creates a dynamic set of affinities. A description of the four subsystems within the system follows.

First, one must examine the feedback loop of Happiness feeding back to Hope. This feedback creates a triangulation of Comfort Zone, Happiness and Hope all influencing each other and ultimately influencing the primary outcome of Learning. The following Illustration 4.04 demonstrates this relationship.

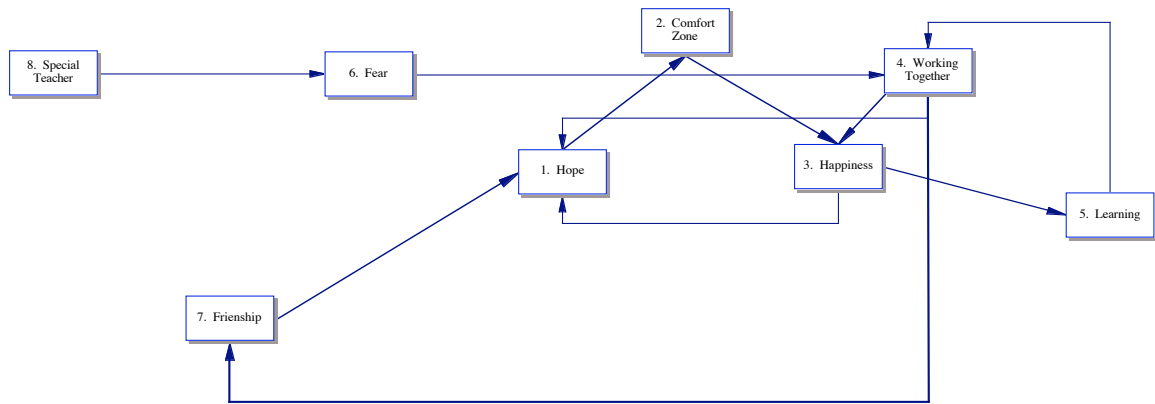
Illustration 4.04: Zooming Happiness - Hope



Second, one must examine the feedback loop of Working Together feeding back to Friendship. In this feedback, the secondary outcome of Working Together feeds back

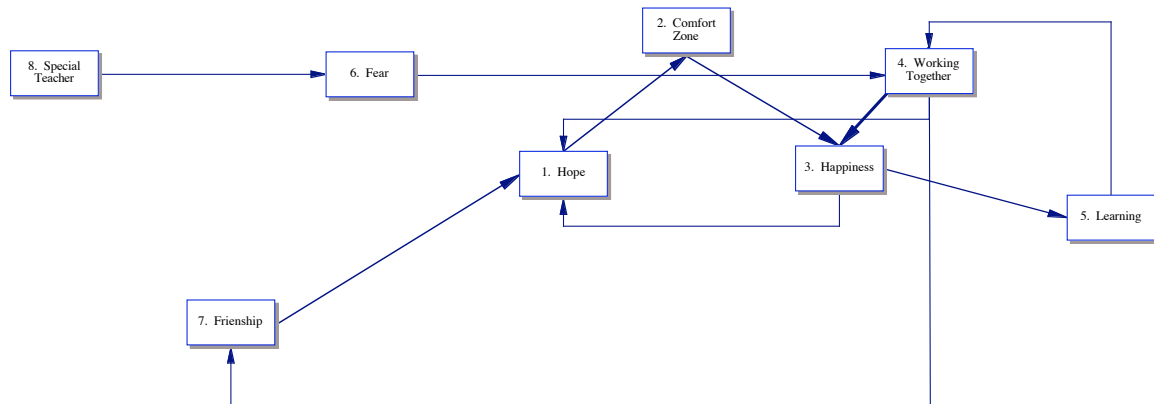
into the secondary driver of Friendship. This relationship influences the previously mentioned feedback loop, creating the same triangulation of Comfort Zone, Hope and Happiness, which all influence Learning. The following Illustration 4.05 demonstrates this relationship.

Illustration 4.05: Zooming Working Together - Friendship



Third, one must examine the feedback loop of Working Together feeding back to Happiness. Again, like the previous two feedback loops, this creates the same triangulation of Comfort Zone, Hope and Happiness, which all influence Learning. The following Illustration 4.5 demonstrates this relationship.

Illustration 4.06: Zooming Working Together - Happiness



Last of all, one must note the feedback loop of Learning to Working Together. This last feedback loop is the same as all the others previously mentioned because it influences the triangle relationship of Comfort Zone, Happiness and Hope, which ultimately feeds back to Learning. The following Illustration: 4.6 demonstrates this relationship.

Illustration 4.06: Zooming Learning – Working Together

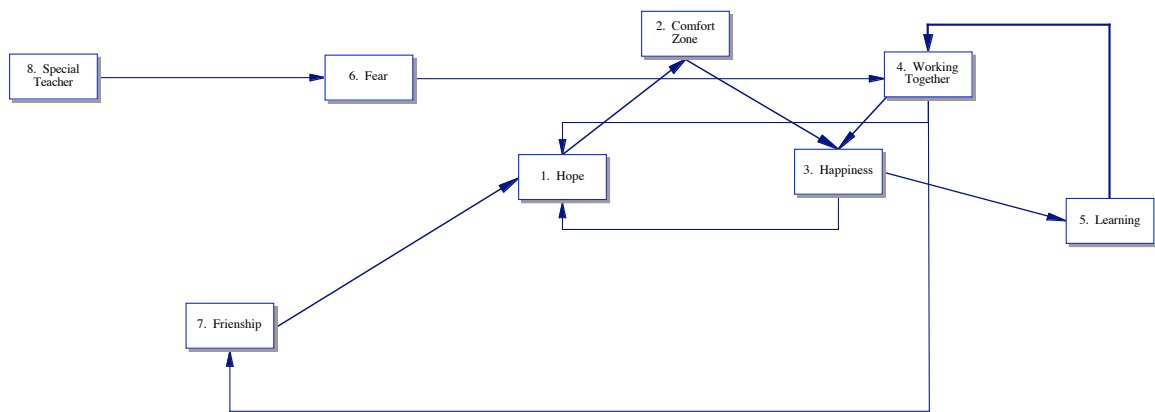
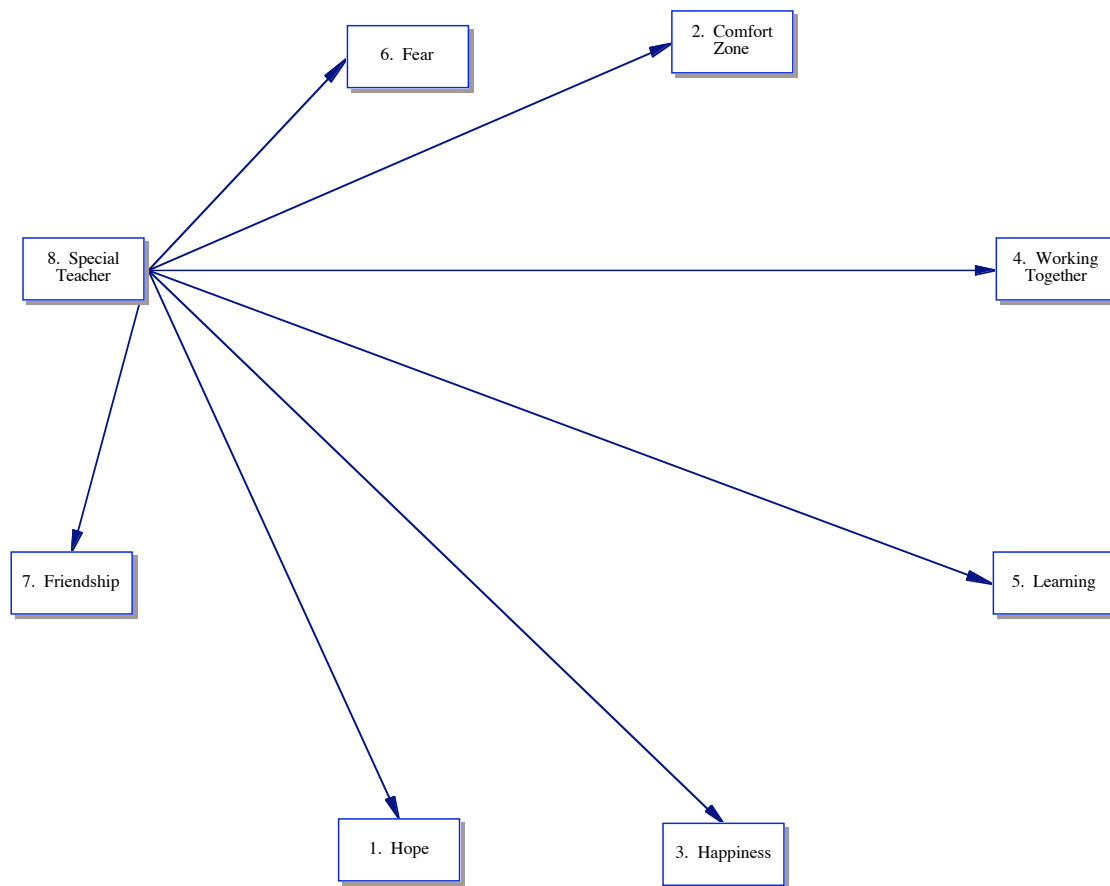


Illustration 4.07: Friendship Relationships



Field-Dependent Special Teacher Influences

Special teacher is a powerful driver of the students' experience. It directly influences all aspects of the learning community, as illustrated by Illustration 4.07. The following is a description of these influences.

Hope. *The Special Teacher influences students to have hope to success.* “I think special teacher influences you to have hope, not to lose the hope. Because she gave us hope to overcome. I think the special teacher influence the hope because for example, Ms. X is always giving us that, like, kind of motivation so that’s why we hope. Because

she's positive with us. She's always telling us, like, 'You're improving, you're improving in this, you have to like, to get better in this. I believe that you are gonna do this or you are gonna get better in this.' Like the other day she went like, 'Yeah, you are getting better in reading.' And, yeah, I mean, because I feel good and we like do the job better."

Comfort Zone. *Special Teacher is critical in making students feel the comfort zone in class.* "She makes us feel comfortable in the class. Because Ms. X give us the comfort zone in the classroom. I think the special teacher influence the comfort because it's her that makes us feel comfortable, otherwise we wouldn't be comfortable in that class. She's very good and she makes us feel comfortable with her. She make us feel good."

Happiness. *The Special Teacher influences Happiness by facilitating quality learning, making students comfortable and the instructor's own contentment.* "Because if she's able to teach us good, we'll be happy. If the special teacher makes you feel comfortable, then you'll be happy around her or the person that's around her. Because she makes us feel good in the class and we're happy and everything. Learning many things. I think special teacher influences happiness. Because sometimes a teacher has to tell you they're bored and going to, like into some good stuff. So the class is gonna be like bored. But in this case, I think it's like a special situation, it's happiness. She's always happy. She's never like I don't want to do this or struggling to do something. She always like, let's do this, let's and we're gonna do this right now. She never complains of anything."

Working Together. *Special Teacher influences Working Together because the instructor is the one who structures the curriculum to include teamwork and facilitates these groups.* “Because she could be the one that is putting you on the team, working together with others. The special teacher influence the working together. Because she gives us the freedom to work and to express our ideas together. The special teacher is the one that make us work together. Not because we want to, but she forces us. Because she’s like we’re gonna work together so we can understand better. Like the other day we were supposed to read a, like an article and we couldn’t understand it, so we read it, I think, the whole class and then she make us like understand and she makes the article clear to us. So that was in a group, the whole class with the teacher. Because she could be the one that is putting you on the team, working together with others. Special teacher influence Working Together because if she helps us to get along and to ask her questions.”

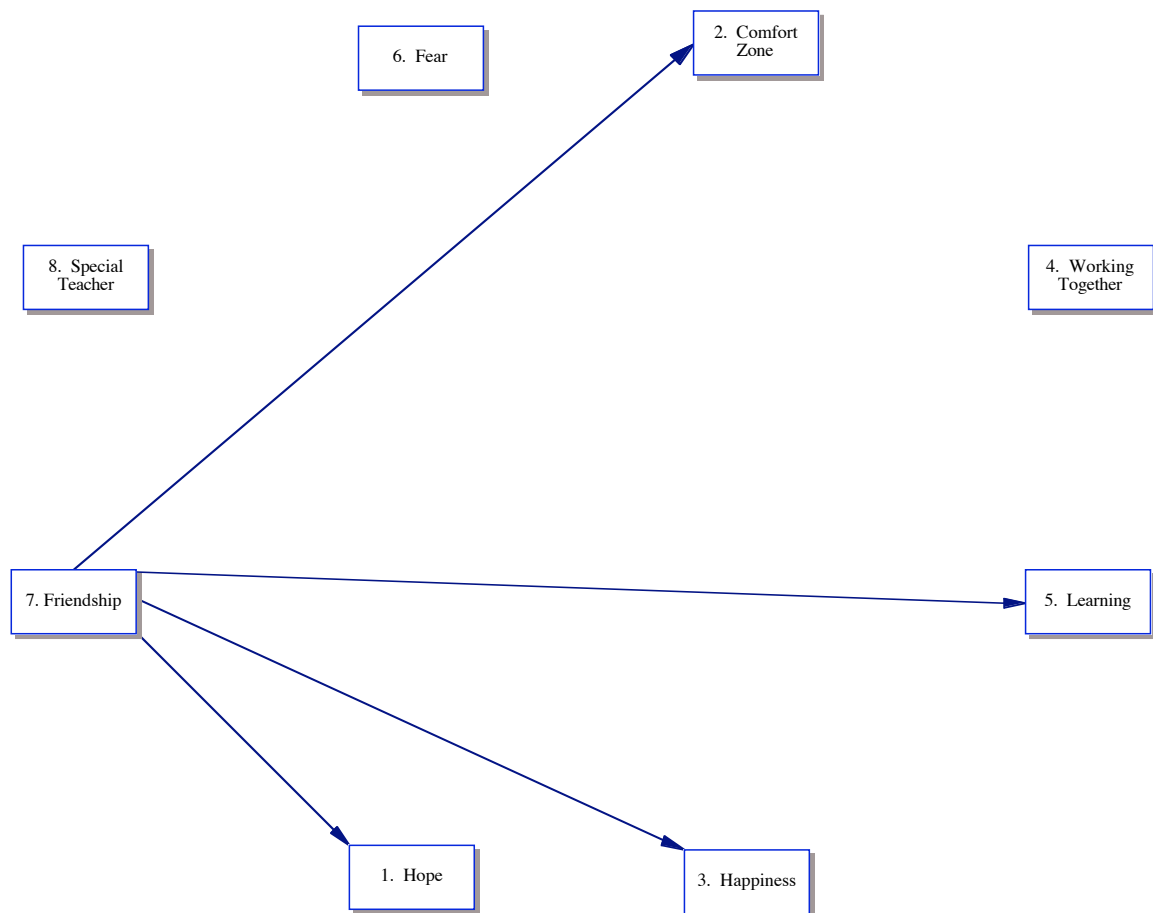
Learning. *Special Teacher influences Learning because the instructor teaches and decides course content and the direction of the class.* “I think Special Teacher influences Learning because of the way she teaches. She’s the one that’s going to teach, tell us what to do, what to learn. And because she tell us like many things to learn. Right now, the Special Teacher is the one that is influencing the learning because she’s the one that is teaching us. She’s always telling us that we can do what we want, we can even get good jobs by getting our goals.”

Fear. *Special Teacher influences Fear by teaching students not to be afraid.* “I think Special Teacher influence the Fear because she helps us to not be fearful. Because

sometimes the teachers are like, you know, giving you, like you know, some kind of gifts to not be afraid. And then they other times, there are times they're like, 'Don't be afraid of this, you can do it,' and stuff."

Friendship. *Special Teacher influences Friendship by facilitating group work, creating a friendly, open environment and being a friend.* "She helps all of us. I think in this case she contributed a lot to our friendship because she made us in just like groups and made us talk to each other and generate more. We have made new friends through the class. Because on that first of the semester, I remember that she told us that we're gonna be like good friends, everybody. And it is like that now. Well, she's like our friend. We can talk about anything. Like she says you can say anything as long as you learn something new and the point is like that you learn. You learn like things every day. So you can ask me anything that you want and I'll answer for you. So she's like our friends, like we can ask her anything that we want and she's gonna answer us. So she's like our friend."

Illustration 4.08: Friendship Relationships



Field-Dependent Friendship Influences

Friendship is another powerful driver of the students' experiences. It has a direct influence on four aspects of the learning community, as illustrated by Illustration 4.08.

The following is a description of these influences.

Hope. *Friendship influences Hope by providing support.* “It could be because they support you in whatever the problem you might have. And they warn you not to lose hope on something. Because like friends can give you hope for something. They can give you, oh, you’re gonna make it, you’re not gonna make it. So they

can make a difference in friends and friendship and hope. So they always, like they are telling you... like my friends, they say, 'Oh, you can work on doing this, or you can do this and that.' They give you advice."

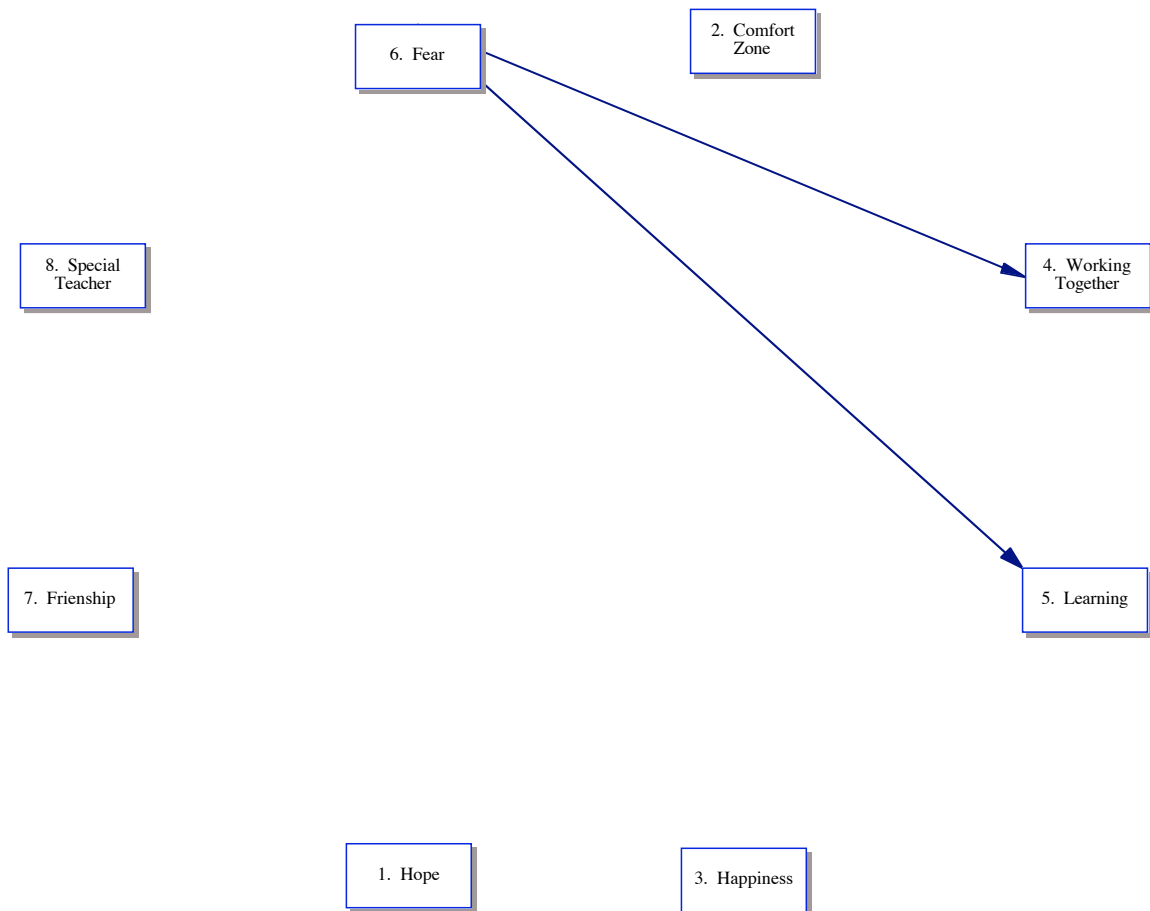
Comfort Zone. *Friendship influences Comfort Zone because the relationships are key to the feeling of ease.* "Friendship influences comfort because how the friendship goes, that's the way you're going to feel comfortable in it. You need to be comfortable and you need to have friendship before you feel comfortable. When you feel good wherever you are, then you're going to make many friends and you're gonna be happy working together and happy learning what you want. And there's no fear. If you feel like comfortable with some friends, it depends on the person, you know. If you don't like the person, then it's like very different and you're not gonna feel so comfortable with that person. I think Friendship influences Comfort Zone because like friends can make you feel happy in your class, can make you do a better job. They can tell you add this thing and then tell you to say... to get rid of something, which is not good in the project. So Friendship influences Comfort Zone."

Happiness. *Friendship influences Happiness because these relationships are the reasons for the feelings of joy.* "If you have a good relationship with the people around you, with the person around you, then you'll feel happy. Friends, they always make you happy. If they're really your friends, they won't make you feel bad. They're gonna tell you good things, what is good and what is wrong."

Learning. *Friendship influences Learning because students felt they learned better Working Together than alone.* "I guess you can learn better in a group than

by yourself. I think Friendship influence the Learning because when you don't know something, sometimes your friend can help you to learn something. Friends, they're always there for you. Like I say before, if they're really your friends, they're gonna help you do things and do better or something.”

Illustration 4.09: Fear Relationships



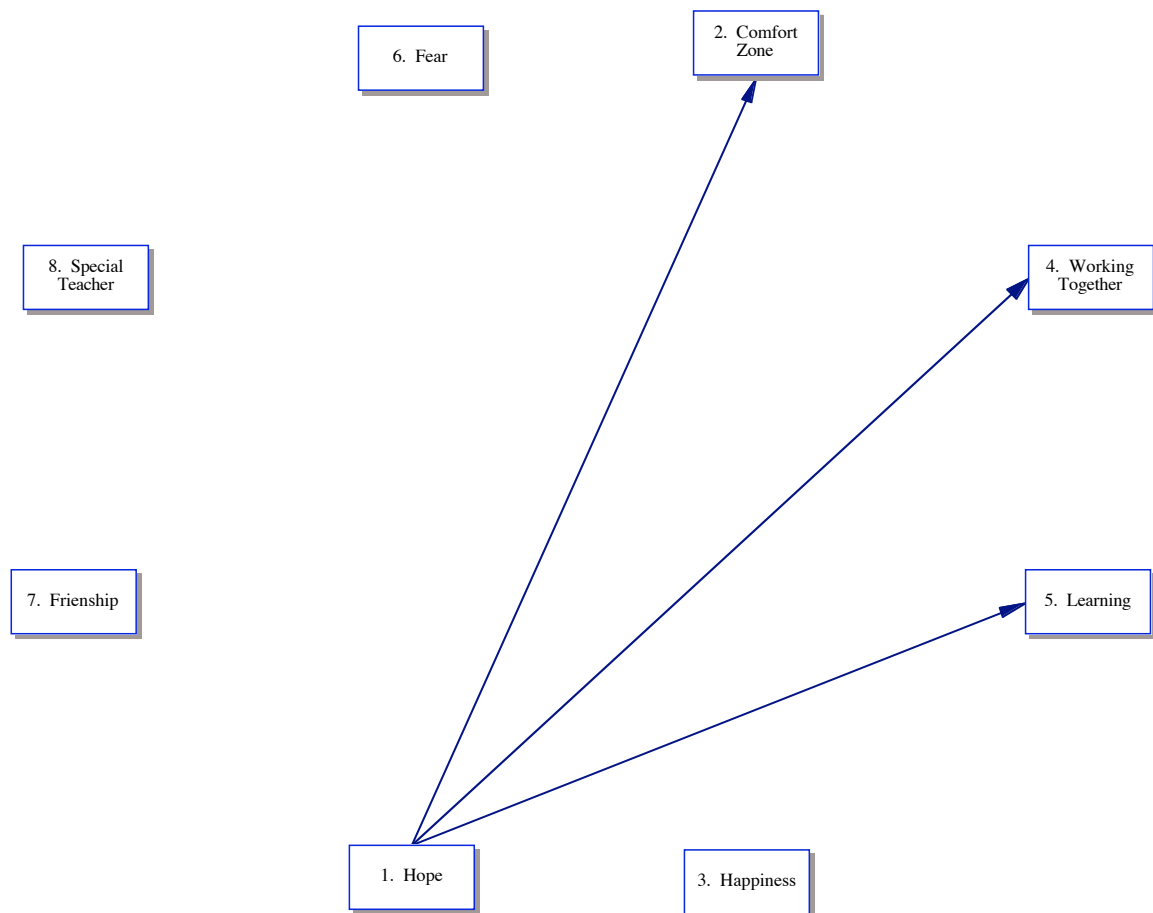
Field-Dependent Fear Influences

Fear is a powerful driver of the students' experiences. It has a direct influence on the outcomes of Working Together and Learning, as illustrated by Illustration 4.09. The following is a description of these influences.

Working Together. *Fear influences Working Together by disturbing students' ability to learn cooperatively.* "If you have fear for maybe a project or the people around you, it's less if you are working together. Because sometimes there's some people that are like really shy, so they like to work together. So I think that's a reason why they need to... they're working together."

Learning. *Fear disrupts the learning process.* "If you have fear for something or for learning, you're not gonna learn anything. I think fear influence the learning. Because if you're afraid of something to learn because, you know, if you're afraid to learn some new things, you're not gonna learn. So Fear influences more the Learning."

Illustration 4.10: Hope Relationships



Field-Dependent Hope Influences

Hope is a powerful outcome in the students' experiences. It has a direct influence on three important secondary outcomes of the learning community, as illustrated by Illustration 4.10. The following is a description of these influences.

Comfort Zone. *Hope creates the Comfort Zone by providing common ground for all the students as well as a common goal.* “I think Hope influences comfort because if you’re hoping for something, you want to get comfortable so you could reach your goal.

Because if you have hope, you feel comfortable around like a specific thing that

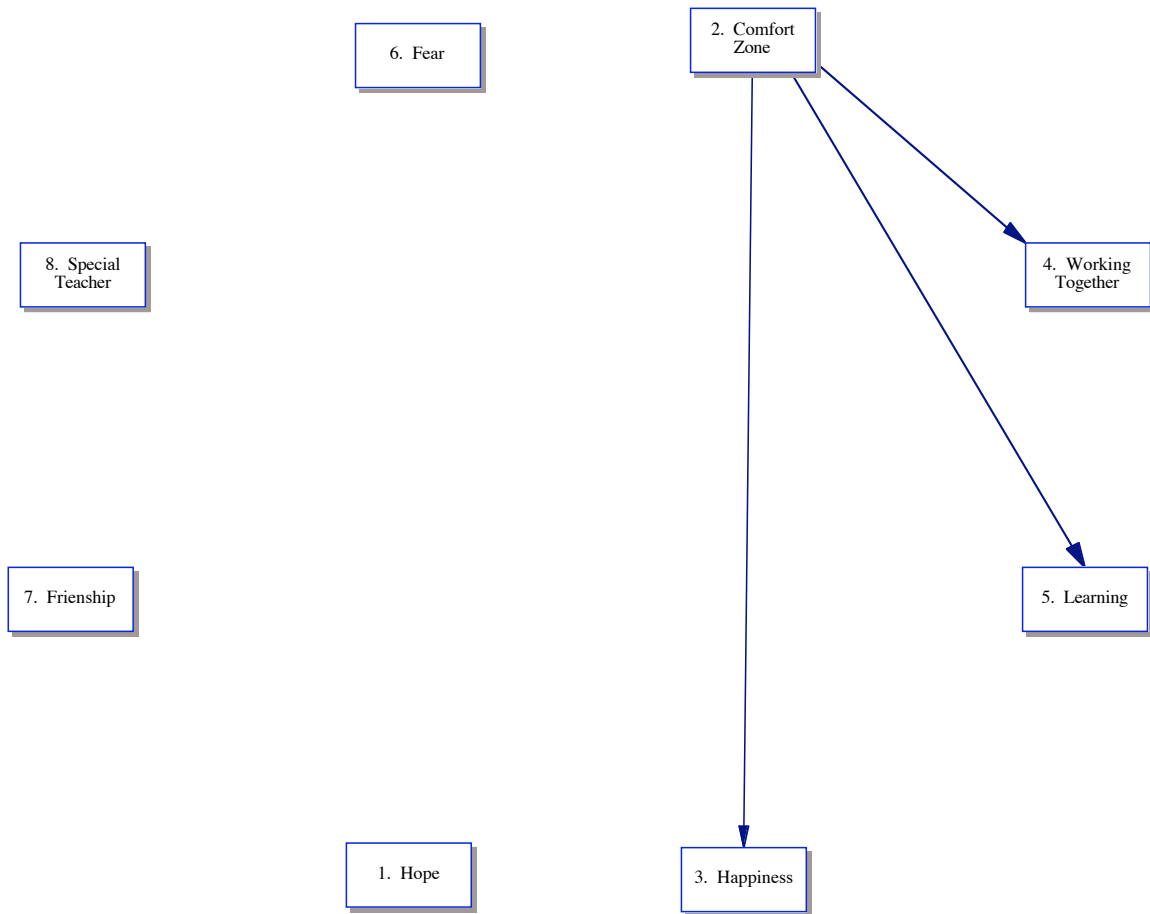
you're doing or something. Because if you hope like to do something, you're going to get to be comfortable with it, so you are very comfortable if you hope something.

Because otherwise you're not gonna get what you hope to. Because like when you are with your friends, they comfort you, they make something and that's like hope for them to do something, which is good for you."

Working Together. *Hope influences Working Together by providing students with a common objective to work toward.* "You hope something, you got to get some new ways to get what you hope, so you got to work together. Because you're hoping that you're going to work good with the person or the people that you're going to work with."

Learning. *Hope influences Learning by providing a goal and confidence.* "Because if you want to like reach for something and you have to try to learn it. I think because like you're hoping to learn something and now you're just hoping together you're going to learn something, you're hoping. The hope that you will do good in whatever you're learning. I got hope there, so I can learn."

Illustration 4.11: Comfort Zone Relationships



Field-Dependent Comfort Zone Influences

Comfort Zone is a powerful outcome in the students' experiences. It has a direct influence on two secondary outcomes and one primary outcome of the learning community, as illustrated by Illustration 4.11. The following is a description of these influences.

Happiness. *Comfort Zone influences by creating the environment possible for Happiness to exist.* "If you're comfortable in a place, then you'll be happy.

Because when you feel good in a place, you can be happy. I think comfort influences

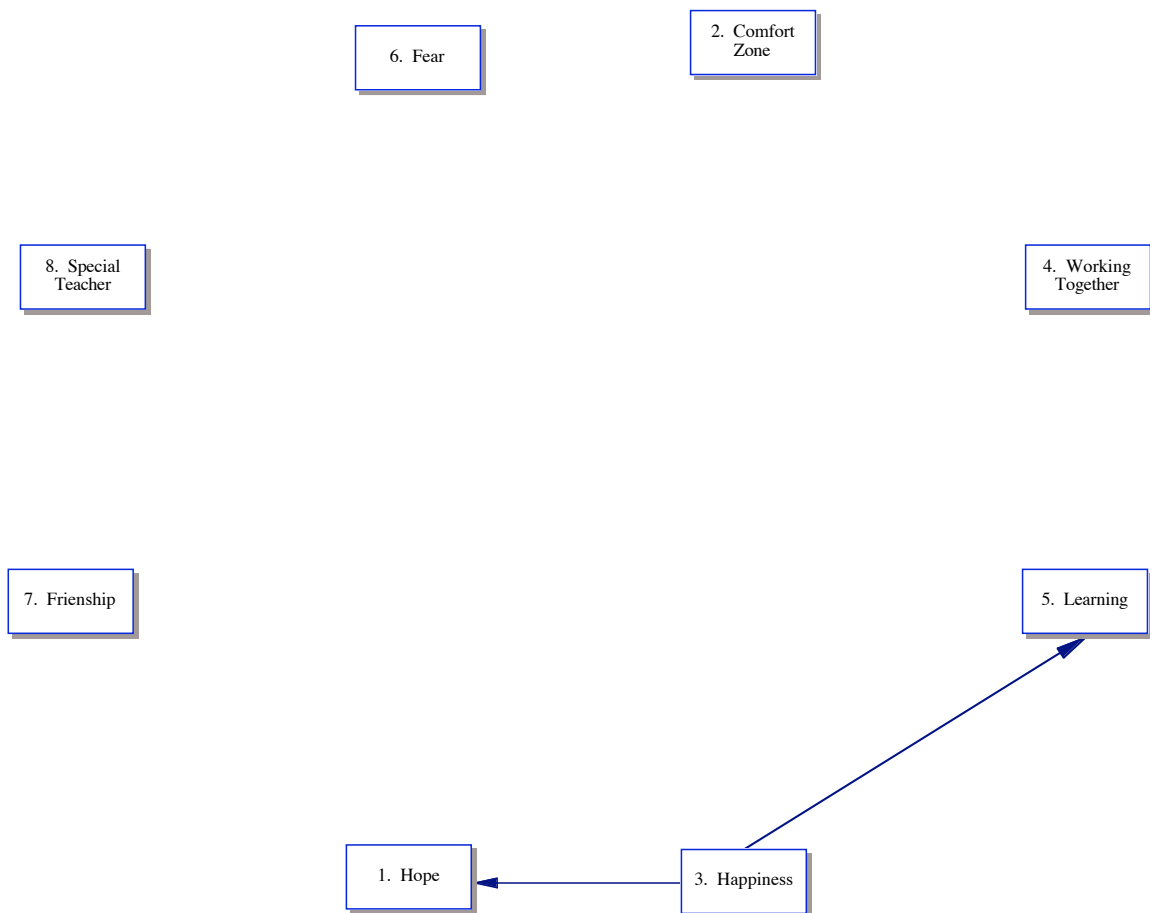
happiness because if you're comfortable, like in the classroom sometimes, they're gonna be happy. Well, if you are not like in an environment that you don't like, let's say that I'm in the group and I don't like the people. Then I'm not going to be happy and I'm not going to enjoy that. I'm not going to be doing the work good as if I would be with like people that I like and then I'm gonna be happy. If I'm with people that I really like and I'm gonna be doing my job better, I'm gonna be happy, so I'm gonna be doing everything better."

Working Together. *Comfort Zone influences Working Together by creating the necessary environment for teamwork to occur.* "I think comfort influences working together because you want to feel as comfortable as possible to work together. If you're comfortable with the environment that you're working with, it will make you feel much comfortable. Because, like I said, if you feel good in a place, you're gonna work good together. I think that comfort influence the Working Together because when you work with somebody, you need to be comfortable with him or her because otherwise they're not gonna get along too well. You have to be comfortable, too, like with your partner because if you are not comfortable with your partner, then you are not gonna do a good job."

Learning. *Comfort Zone creates the necessary atmosphere for students to be able to learn.* "I think comfort influences learning because you want to feel comfortable when you're learning. Comfort influences learning because if you feel comfortable in the place that you're learning or whatever you're learning, it makes you feel better. I think it's comfort influences the learning because it depends if you're comfortable and sometimes

you want to learn faster and better. But if you're not comfortable, you're not gonna learn the same way the others do. Well, you have to be comfortable in a place to learn something. Because if you are not comfortable, then you won't listen to the teacher. You won't listen to the teacher, you won't do anything. And then the other time, if you are comfortable, then you are gonna be like more interested in the class, you are gonna be learning more things."

Illustration 4.12: Happiness Relationships



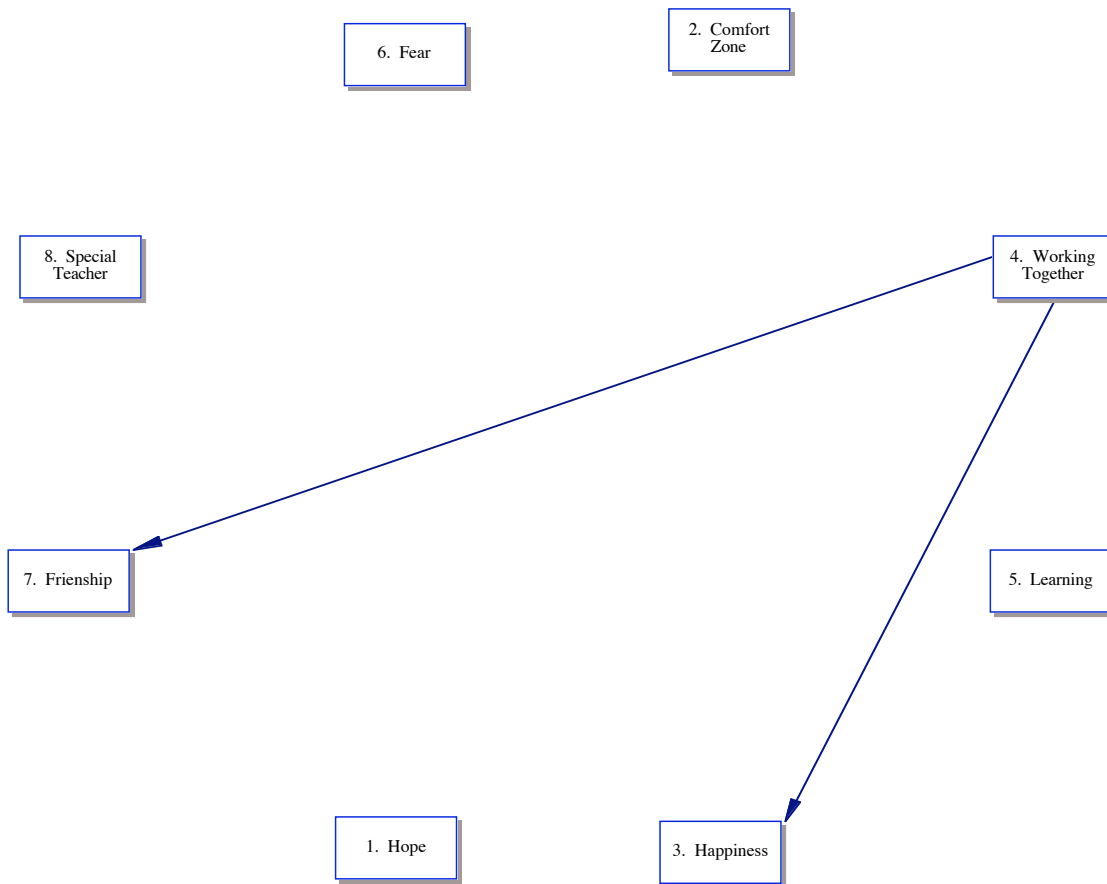
Field-Dependent Happiness Influences

Happiness is a powerful outcome in the students' experiences. It has a direct influence on one secondary outcome, Hope, and one primary outcome, Learning, in the learning community, as illustrated by Illustration 4.12. The following is a description of these influences.

Hope. *Happiness makes it possible for students to Hope.* “I think Happiness influences Hope, if you’re happy, you have hope for something, for whatever you’re hoping for. It can be because sometimes when you happy, if you’re gonna be like all sad and bored, you’re not gonna hope something, you’re just gonna be like dead, not hoping anything.”

Learning. *Happiness is critical in enabling Learning.* “If you’re happy, you’ll be able to learn. If you’re happy or if you feel good about yourself, you’re gonna learn whatever you want. Because if you’re happy, you’re gonna learn. Like you would like to learn more and more, so you go every day.”

Illustration 4.13: Working Together Relationships



Field-Dependent Working Together Influences

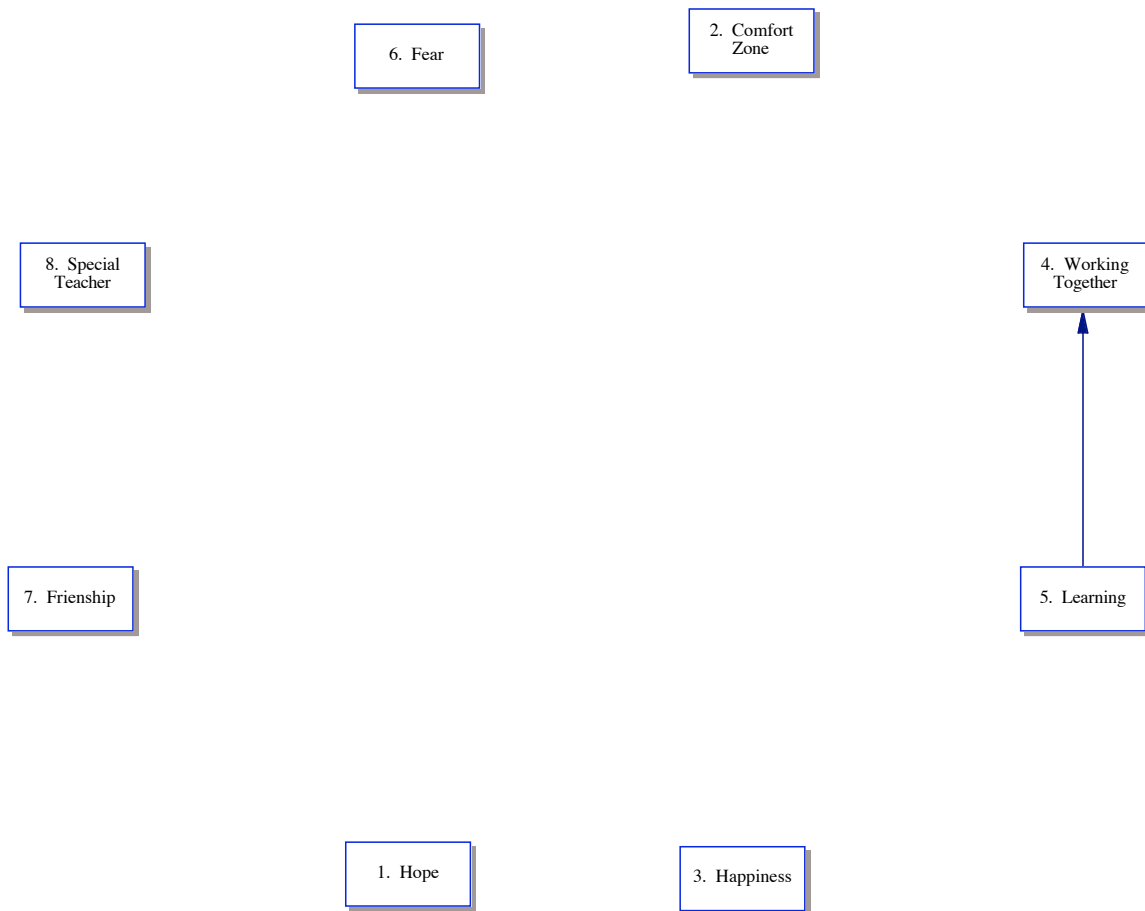
Working Together is a powerful secondary outcome in the students' experiences. It has a direct influence on the secondary driver of Friendship and secondary outcome of Happiness in the learning community, as illustrated by Illustration 4.13. The following is a description of these influences.

Happiness. *Working Together influences Happiness by making the learning community exciting and fun.* “Because if you get a lot of work, you’ll be happy. Because when you work together and you like the work you’re doing, you’re gonna be happy. Because

when we're working together, we're all happy and it's very different. If you work like alone, then you're gonna be bored, so you're not gonna be happy. When you're working together, then you're gonna sometimes if you are alone, then you're get boring, you don't do anything. So if you're in a group that is working well, well you are gonna feel happy doing the job and getting done the assignments that you are supposed to do."

Friendship. *Working Together creates the situations where Friendships are formed.* "It could be a friend of yours and you can be a project could work out pretty good and you could become friends in the future. I think Working Together influences the Friendship. Because when you work together, you can have like many friends."

Illustration 4.14: Learning Relationships



Field-Dependent Learning Influences

Learning is a powerful primary outcome in the students' experiences. It has a direct influence on the secondary outcome of Working Together in the learning community, as illustrated by Illustration 4.13. The following is a description of these influences.

Working Together. *Learning provides students with a common objective in Working Together.* "Because we want to learn while work together. If you're going to be in a

group and you don't understand something, other people can explain it to you.

Because I think you can learn more working together.”

Field-Independent Composite SID

Affinity Name
1. Hope
2. Comfort Zone
3. Happiness
4. Working Together
5. Learning
6. Fear
7. Friendship
8. Special Teacher

Examine each individual Interview Theoretical Code Table and tally the frequency of each relationship in the table below.

Combined Interview Theoretical Code Frequency Table

Affinity Pair Relationship	Frequency		Affinity Pair Relationship	Frequency		Affinity Pair Relationship	Frequency
1 □ 2	1		2 □ 6	0		4 □ 7	1
1 □ 2	2		2 □ 6	3		4 □ 7	4
1 □ 3	2		2 □ 7	1		4 □ 8	0
1 □ 3	3		2 □ 7	4		4 □ 8	4
1 □ 4	3		2 □ 8	1		5 □ 6	0
1 □ 4	1		2 □ 8	4		5 □ 6	2
1 □ 5	3		3 □ 4	1		5 □ 7	0
1 □ 5	1		3 □ 4	3		5 □ 7	4
1 □ 6	0		3 □ 5	1		5 □ 8	0
1 □ 6	0		3 □ 5	4		5 □ 8	5
1 □ 7	1		3 □ 6	0		6 □ 7	1
1 □ 7	4		3 □ 6	1		6 □ 7	0
1 □ 8	0		3 □ 7	0		6 □ 8	0
1 □ 8	5		3 □ 7	5		6 □ 8	0
2 □ 3	2		3 □ 8	1		7 □ 8	2
2 □ 3	3		3 □ 8	4		7 □ 8	3
2 □ 4	1		4 □ 5	5			
2 □ 4	4		4 □ 5	0			
2 □ 5	2		4 □ 6	0			
2 □ 5	3		4 □ 6	0			

Field Dependent Composite Interview Affinity Relationship Table

Affinity Name	Possible Relationships
1. Hope	$A \square B$
2. Comfort Zone	$A \square B$
3. Happiness	$A \diamond B$
4. Working Together	(No Relationship)
5. Learning	
6. Fear	
7. Friendship	
8. Special Teacher	

Composite Interview Affinity Relationship Table							
Affinity Pair Relationship		Affinity Pair Relationship		Affinity Pair Relationship		Affinity Pair Relationship	
1 \square 2		2 \square 3		3 \square 5		4 \square 8	
1 \square 3		2 \square 4		3 \diamond 6		5 \square 6	
1 \square 4		2 \square 5		3 \square 7		5 \square 7	
1 \square 5		2 \square 6		3 \square 8		5 \square 8	
1 \diamond 6		2 \square 7		4 \square 5		6 \diamond 7	
1 \square 7		2 \square 8		4 \diamond 6		6 \diamond 8	
1 \square 8		3 \square 4		4 \square 7		7 \square 8	

Field-Independent Tabular IRD

Affinity Name
1. Hope
2. Comfort Zone
3. Happiness
4. Working Together
5. Learning
6. Fear
7. Friendship
8. Special Teacher

Tabular IRD											
	1	2	3	4	5	6	7	8	OUT	IN	□
1		□	□	↑	↑	◇	□	□	2	4	-2
2	↑		□	□	□	□	□	□	1	6	-1
3	↑	↑		□	□	◇	□	□	2	4	-2
4	□	↑	↑		↑	◇	□	□	3	3	0
5	□	↑	↑	□		□	□	□	2	5	-3
6	◇	↑	◇	◇	↑		◇	◇	2	0	2
7	↑	↑	↑	↑	↑	◇		□	5	1	4
8	↑	↑	↑	↑	↑	◇	↑		6	0	6

Count the number of up arrows (↑) or *Outs*

Count the number of left arrows (□) or *Ins*

Subtract the number of *Ins* from the *Outs* to determine the (□) *Deltas*

□ = Out- In

Tabular IRD											
	1	2	3	4	5	6	7	8	OUT	IN	
8	↑	↑	↑	↑	↑	◇	↑		6	0	6
7	↑	↑	↑	↑	↑	◇			5	1	4
6	◇	↑	◇	◇	↑		◇	◇	2	0	2
4		↑	↑		↑	◇			3	3	0
2	↑								1	6	-1
1				↑	↑	◇			2	4	-2
3	↑	↑				◇			2	4	-2
5		↑	↑						2	5	-3

Tentative SID Assignments	
8	Primary Driver
7	Secondary Driver
6	Primary Driver
4	Circulator/Pivot/ ?
2	Secondary Outcome
1	Secondary Outcome
3	Secondary Outcome
5	Primary Outcome

Illustration 4.15: Field-Independent Cluttered

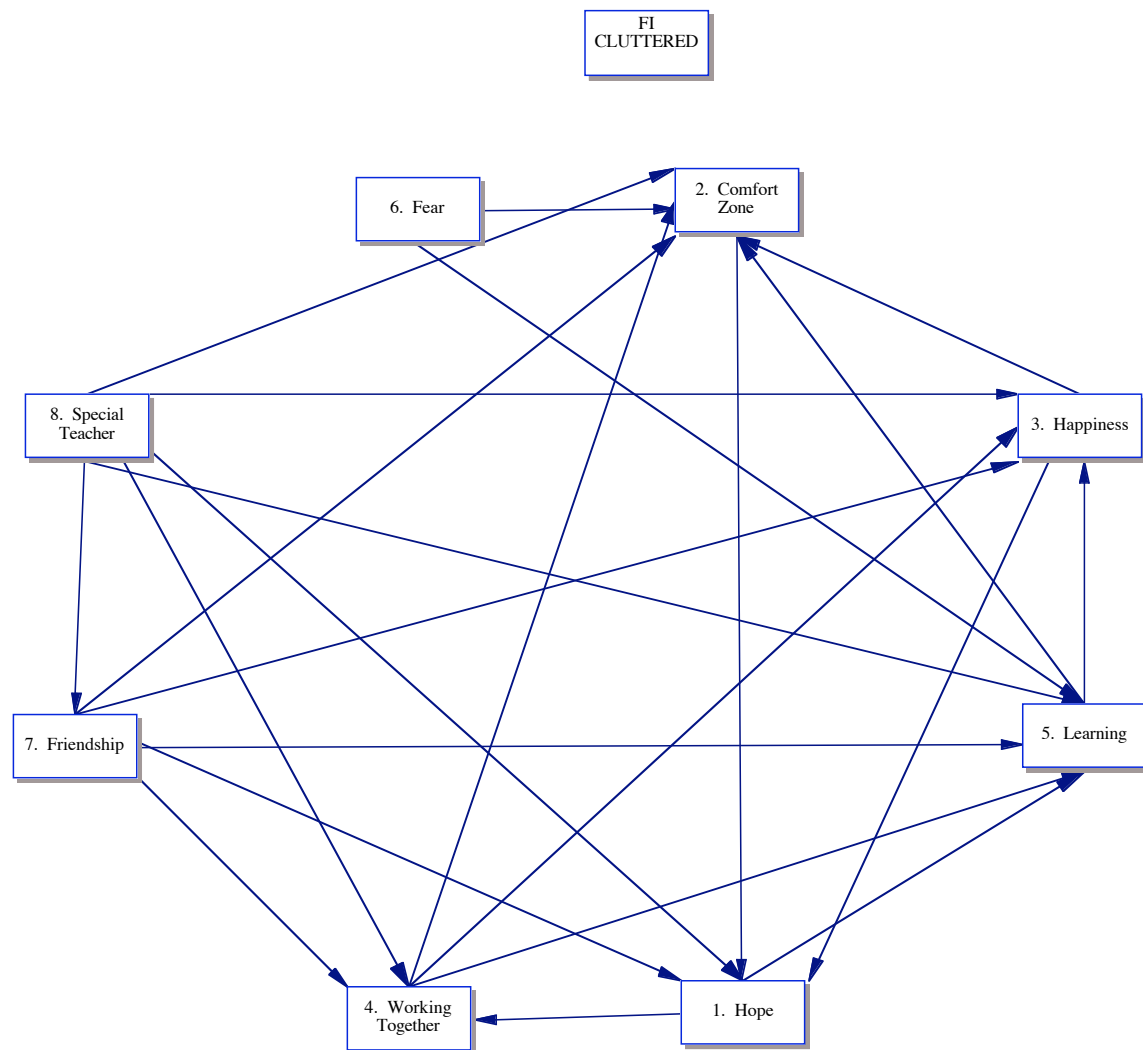


Illustration 4.16: Field-Independent Uncluttered

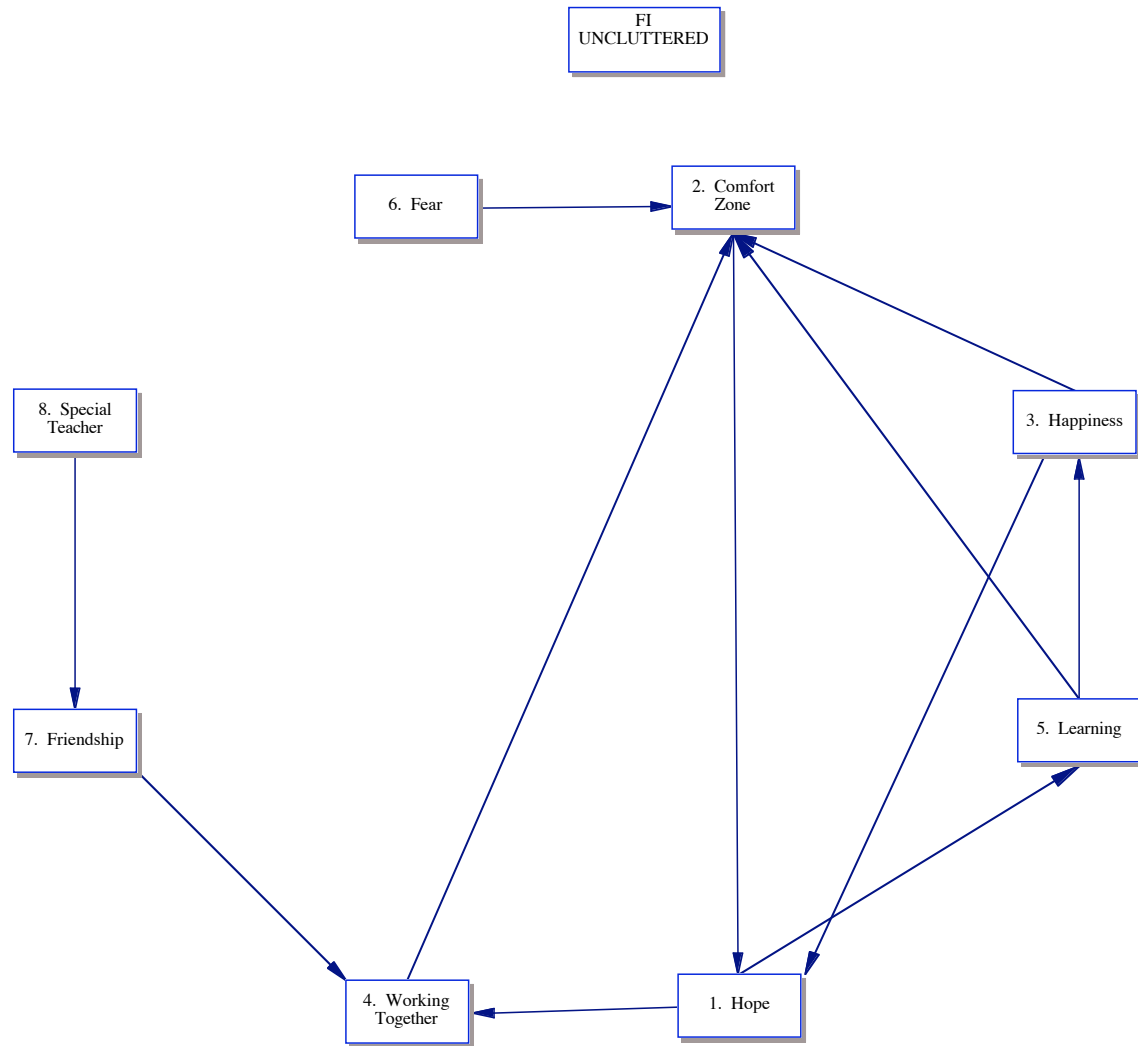
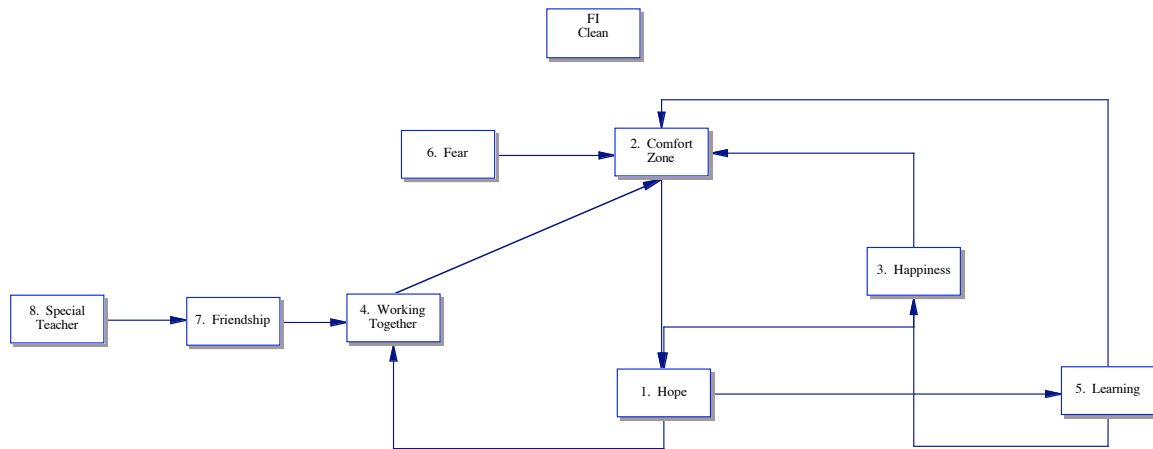


Illustration 4.17: Field-Independent Clean



Touring the System

The field-independent uncluttered SID describes the experiences of these students in the learning community. The journey begins with Special Teacher and ends with Learning. Perceptions of these affinities, either positive or negative can influence the subsequent affinities (Northcutt & McCoy, 2002, p. 26). The tour is depicted visually in Illustration 4.17.

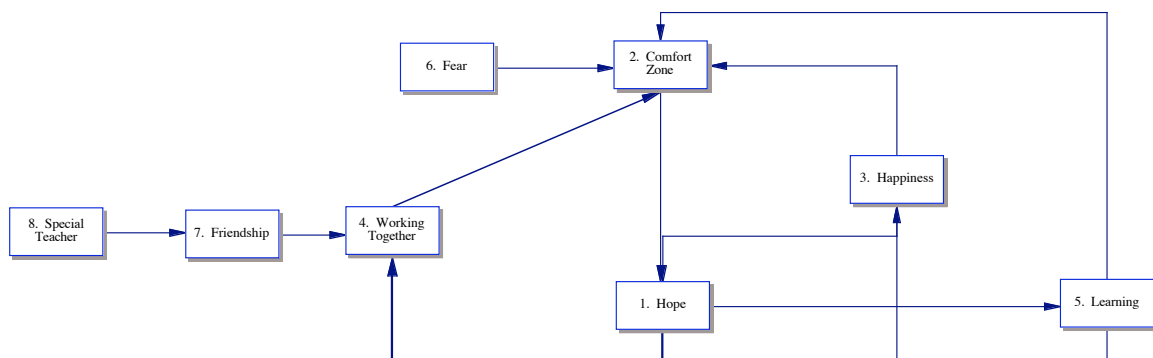
This journey begins with Special Teacher influencing Friendship. Then Friendship directly impacts Working Together. The three affinities of Special Teacher, Friendship and Working Together each directly influence each other and influence Comfort Zone. At the same time, the affinity of Fear also influences Comfort Zone. Next, the interrelated affinities of Comfort Zone, Happiness and Hope all influence each other. This interrelated triad ultimately results in the primary outcome of Learning.

Feedback Loops and Zooming

The field-independent student system included five feedback loops. These feedback loops contain subsystems of at least three affinities, each influencing the others (Northcutt & McCoy, 2004, p. 335). In the instances of these feedback loops, the distinction between drivers and outcomes is blurred because there is no longer an absolute cause and effect system (Northcutt & McCoy, 2002, p. 335). The interconnectedness of these factors creates a dynamic set of affinities. A description of the five subsystems within the system follows.

First, one must exam the feedback loop of Hope feeding back to Working Together. This feedback creates a triangulation of Comfort Zone, Hope and Working Together all influencing each other and ultimately influencing the primary outcome of Learning. The following Illustration 4.18 demonstrates this relationship.

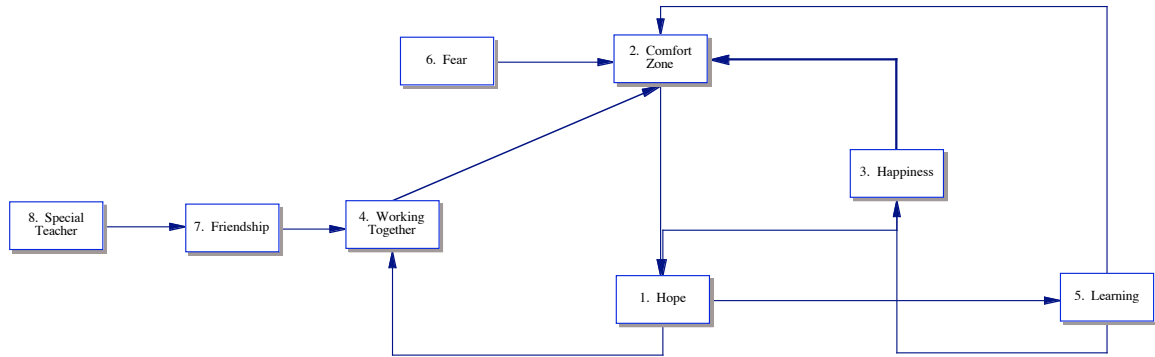
Illustration 4.18: Zooming Hope – Working Together



Second, one must examine the feedback loop of Happiness feeding back to Comfort Zone. Like the previous feedback loop, this creates the same triangulation of Comfort

Zone, Hope and Working Together, which all influence Learning. The following Illustration 4.19 demonstrates this relationship.

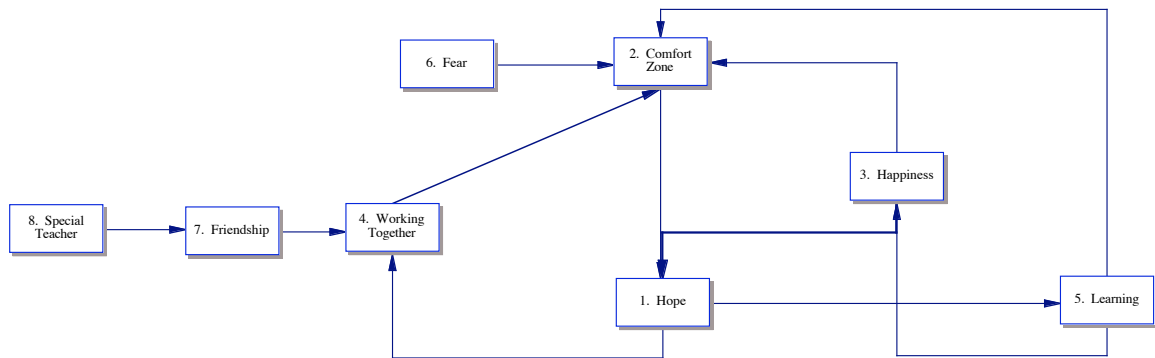
Illustration 4.19: Zooming Happiness – Comfort Zone



Third, one must examine the feedback loop of Happiness feeding back to Hope.

Again, like the previous two feedback loops, this creates the same triangulation of Comfort Zone, Hope and Working Together, which all influence Learning. The following Illustration 4.20 demonstrates this relationship.

Illustration 4.20: Zooming Happiness – Hope

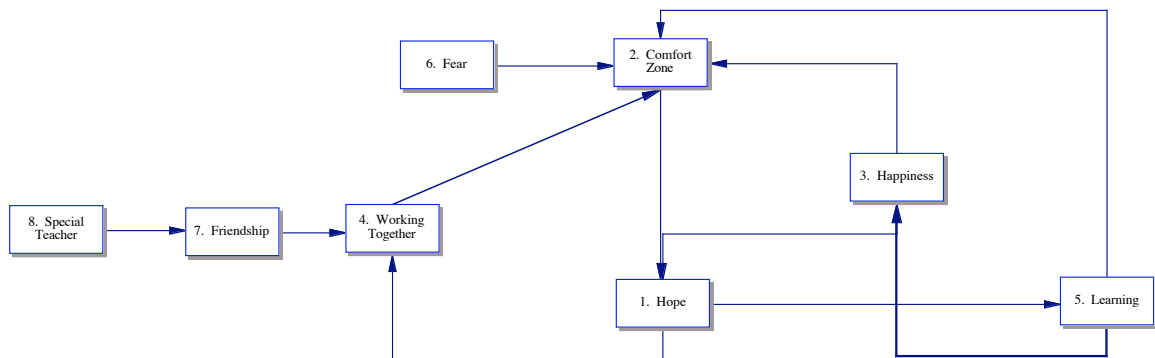


Fourth, one must examine the feedback loop of Learning feeding back to Happiness.

The feedback loop to Happiness ends up feeding the triangulation of Comfort Zone, Hope

and Happiness once again. Ultimately this relationship feeds to Learning, again. This demonstrates how interrelated relationships of the five affinities Comfort Zone, Hope and Happiness, Working Together and Learning. Again, like the previous two feedback loops, this creates the same triangulation of Comfort Zone, Hope and Happiness, which all influence Learning. The following Illustration 4.21 demonstrates this relationship.

Illustration 4.21: Zooming Learning – Happiness



Last of all, one must note the feedback loop of Learning to Comfort Zone. This last feedback loop is the same as all the others previously mentioned because it influences the triangle relationship of Comfort Zone, Working Together and Hope, which ultimately feeds back to Learning. The following Illustration 4.22 demonstrates this relationship.

Illustration 4.22: Zooming Happiness – Comfort Zone

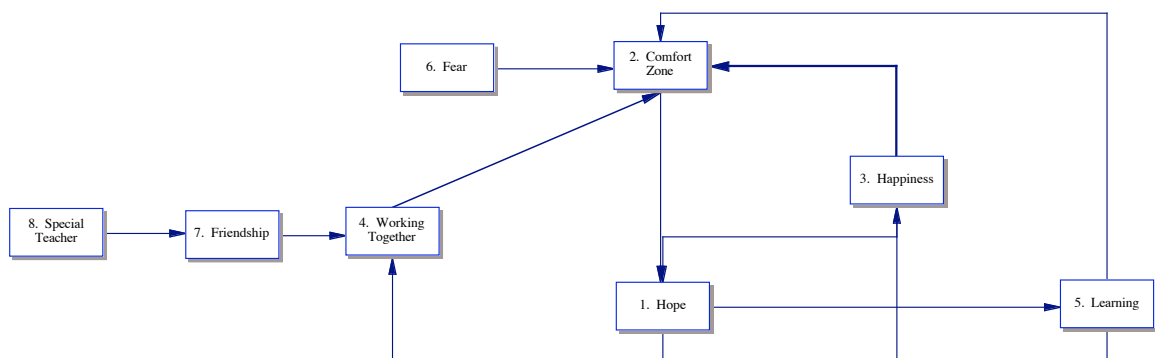


Illustration 4.23: Zooming Happiness – Comfort Zone

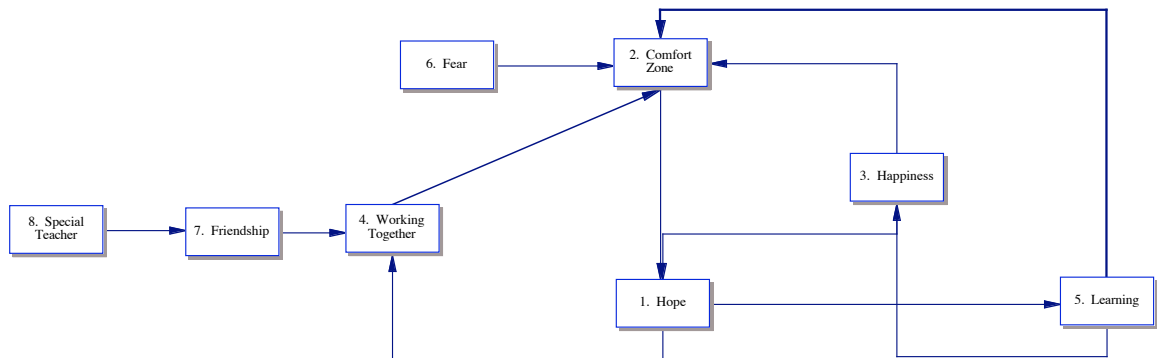
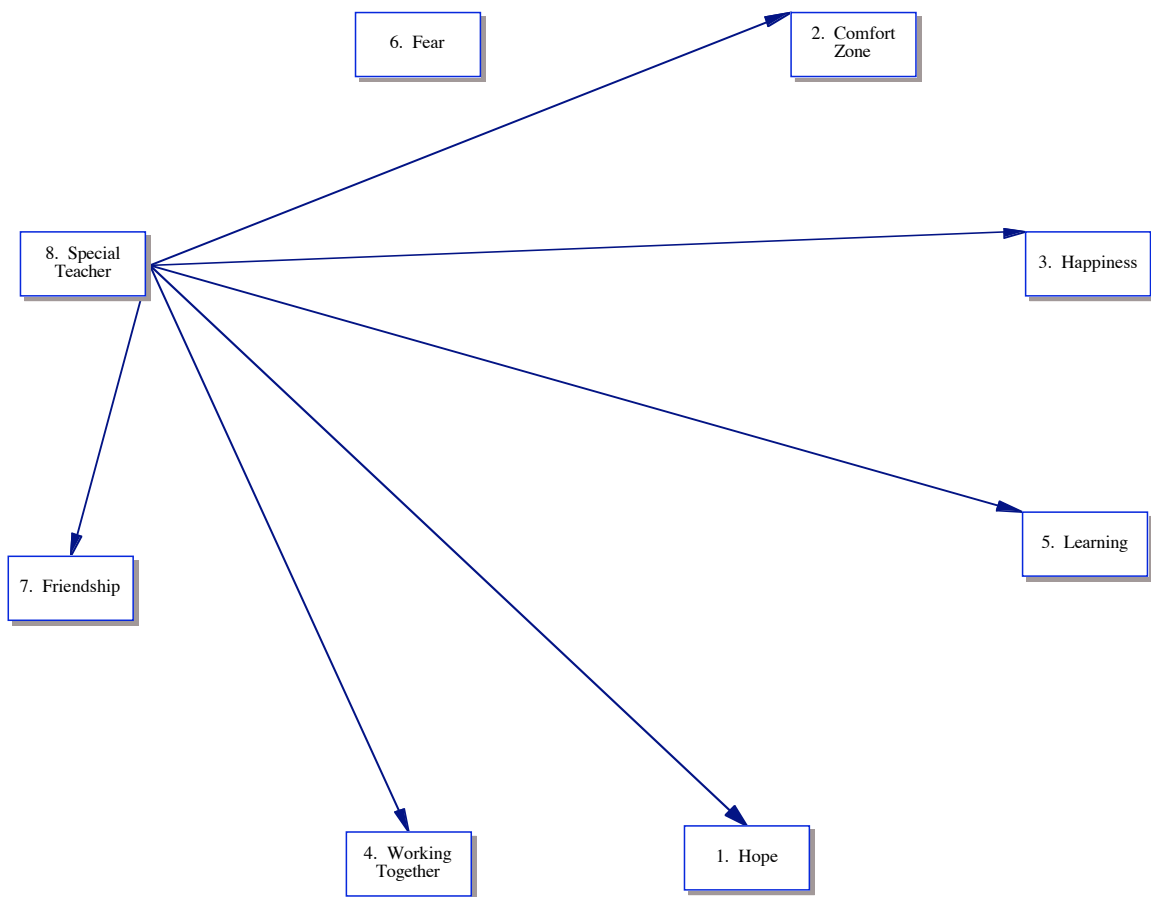


Illustration 4.24: Special Teacher Relationships



Field-Independent Special Teacher Influences

Special Teacher is a powerful driver of the students' experience. It has a direct influence on all but one of the aspects of the learning community, as illustrated by Illustration 4.24. The following is a description of these influences

Hope. *Special Teacher influences students to have Hope.* “I think the Special Teacher influence Hope because a special teacher motivates you to have goals. Because maybe at first you could have some hopes, but when you have a very nice teacher, special teachers, they met you through your hopes. She helps us, filling us with encouraging words every morning. She has the energy to teach us, I think. They teach you stuff and everything that you hope for, you know, and they help you out. The teacher has the first goal is like that everybody pass the course. Special teacher and then Hope. It's like you have to feel good with the teacher to have hope.”

Comfort Zone. *Special teacher is responsible for creating the Comfort Zone.* “Comfort Zone is going to influence the Special Teacher. The leader is the leader and the leader creates the environment. So a special teacher is the leader that creates the environment. So I think special teacher creates a learning environment where everybody felt comfortable with himself and with everybody. Because the teacher makes you feel comfortable because of the way they talk to you, how they teach you, how they trust they're giving you, you know, and they're not being too strict and stuff like that.”

Happiness. *Special Teacher influences Happiness through quality instruction, hard work and concern for the students.* “My teacher influences me to get

happiness. They try to make things better. And by making things better, you feel happy because you know that they're trying and they're trying, so you know, it's better. It's happier. She always works with us and she's positive. She always is worried about how we feel every day. You have your teacher and she's teaching you good and you're learning. I think learning, I feel happy."

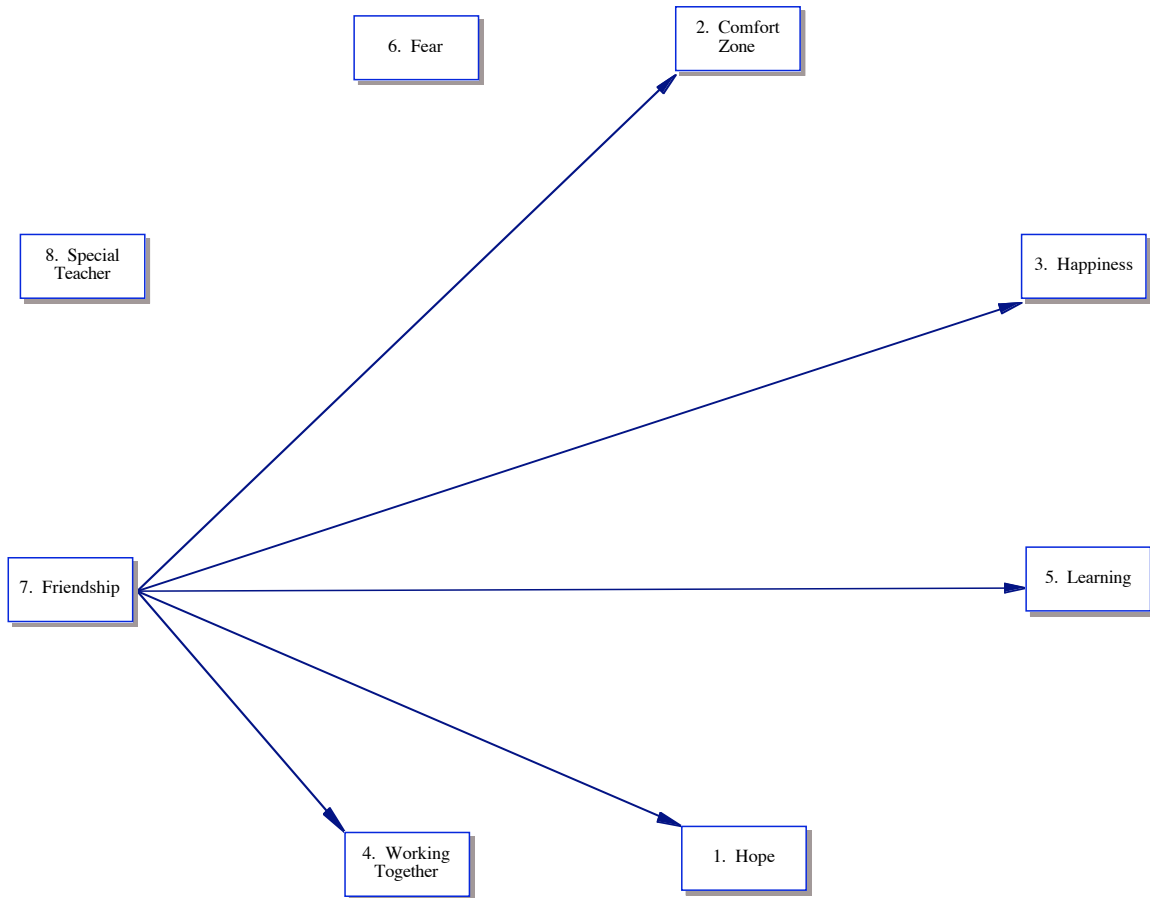
Working Together. *Special teacher creates the environment of Working Together.* "The special teachers create the environments for their students to learn. So working together is influencing to learn. Easy enough. So a Special Teacher creates Working Together. If she doesn't expect that we can't work together. Because a teacher says we are going to work together, so we do."

Learning. *Special Teacher influences Learning by motivating students, quality pedagogy.* "You could be very good with your teacher and you love your teacher, so you want to learn. You want to learn. You wish to learn because the teacher motivates you all the time. You feel very nice with your teacher, you want to learn. She has the good way to teach us. If she don't have that, we can't learn. Special Teacher influences Learning because they if they are good teachers, you know, they try to teach you everything that you don't know. And they ask you about some stuff that you think that you know and, you know, that's how they get their ideas to teach, like teaching methods to help you out in the weakest points."

Friendship. *Special Teacher creates an environment for Friendships to form.* "Because you're feeling a very nice environment, you feel very nice with your classmates and you feel very nice with your teacher, so the environment is nice."

And so you start loving your friends, you start learning together. It's a very nice environment to learn together everybody. Because she say that we can work together and that is the way to make friends, to make new friends.”

Illustration 4.25: Friendship Relationships



Field-Independent Friendship Influences

Friendship is another powerful driver of the students' experiences. It has a direct influence on four outcomes of the learning community, as illustrated by Illustration 4.25. The following is a description of these influences.

Hope. *Friendship influences Hope through encouraging words and a helping hand.*

“People give you some encouraging words. You can go and you have the hope to succeed. You have new friends and they help you out. And, you know, it’s just they don’t let you down.”

Comfort Zone. *Friendship with peers is responsible for the Comfort Zone felt by students.* “Because when you get good friends before you met your friends, sometimes you don’t feel comfortable. But when you start having a good friendship with some guys, you are getting a comfort zone. You feel comfortable when you are with them. You talk with them, you talk with your problems and you’re really nice with them. I think I go to the classroom with my classmates and they are my friends and I feel comfortable with that. Friendship influences Comfort Zone because when you have friends and with friends you’re more active. And, you know, you feel more comfortable because you know everybody, you’re friends with everybody. When in a friendly group, you feel confidence, comfortable with everybody if you’re friends. I think in this group everybody is like... no problems.”

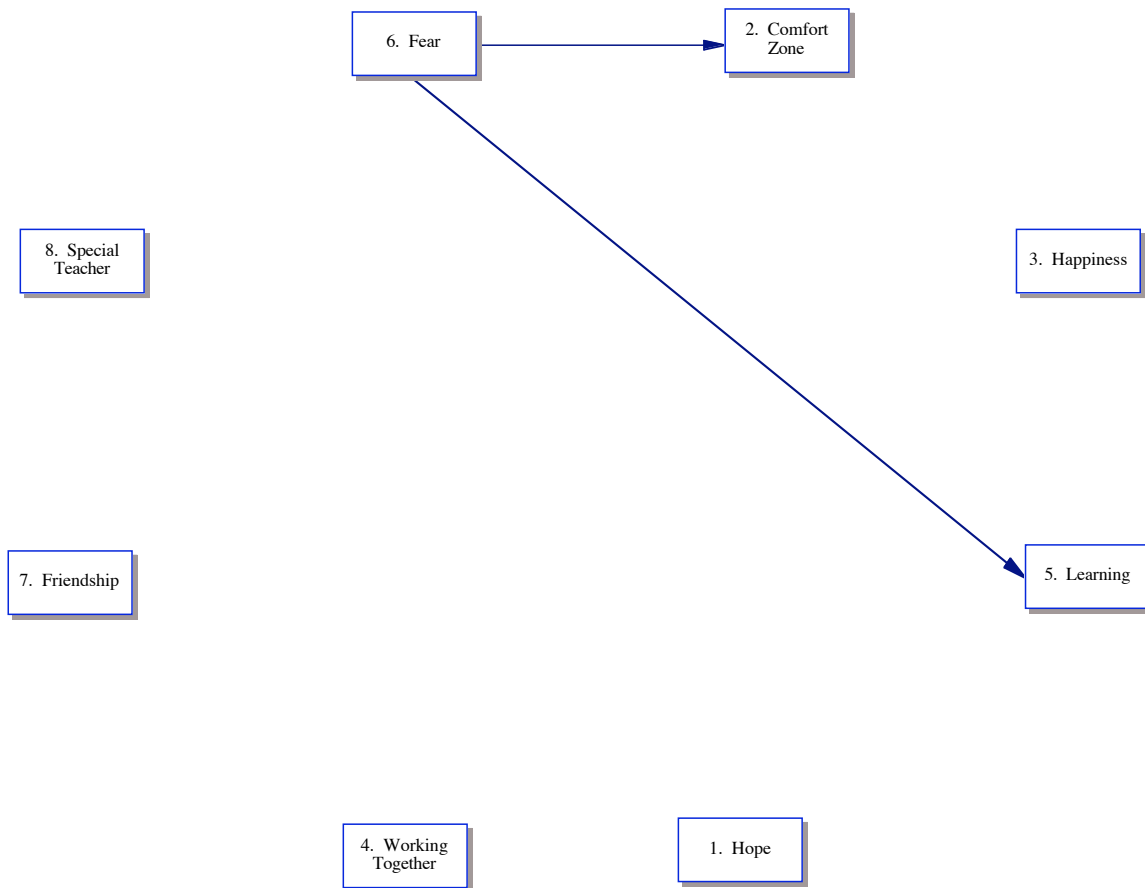
Happiness. *Friendships influence students to be happy because of the positive relationship.* “Friendship influences Happiness, I think, because when you have very good friends, you feel happy. Happy about having this kind of friendship

with this kind of person. So I think that friendship can influence a little bit happiness. The people that you work and the time you spend with the people give you some happiness. Friendship influences Happiness because like if your friends are not good to you, you're not gonna feel happy about yourself. You're gonna think that something was wrong with you. Everybody's excited, everybody participates and everybody's talking. Because if you have someone to feel good with someone to be happy."

Working Together. *Friendships allow students to Work Together better because of the established relationship and familiarity.* "Because when you work with somebody, you have the time to meet the person. I think if you work with a friend and like if you know a friend, like. It's like better because you know the person. The friendship comes first, I hope. You know, we talk a little bit about them and then we start working."

Learning. *Friendship influences Learning through motivation and collaboration.* "Because sometimes you don't want to learn. I am lazy, you know, I don't want to work through the schoolbooks. You have a good friend that tell you, 'Come on, got to go. We are going to learn something very nice today. Come on. Push up. Right? Get up. Go ahead.' So by this, I think Friendship influence Learning sometimes. Because you're learning things, something that you don't know that could... they might know and they talk to you about it."

Illustration 4.26: Fear Relationships



Field-Independent Fear Influences

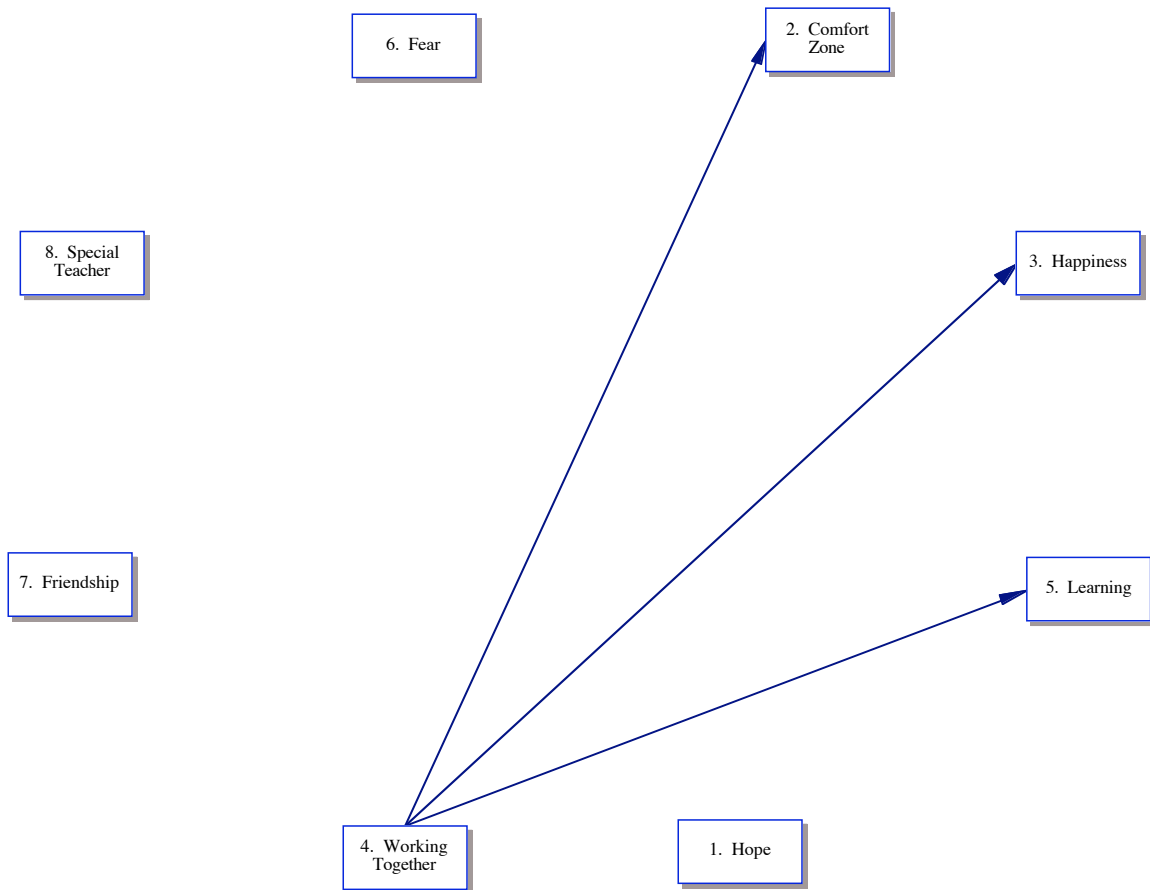
Fear is a powerful driver of the students' experiences. It has a direct influence on the secondary outcome of Working Together and the primary outcome of Learning, as illustrated by Illustration 4.26. The following is a description of these influences.

Comfort Zone. *Fear influences Comfort Zone by preventing students from interacting with one another.* “Fears influence your Comfort Zone because you try to make your own environment where you can keep to yourself and accept that this is where you are safe from your fears. You got it? I think fear influences comfort

zone. Because when you fear something, you're not welcome, you're not comfortable enough."

Learning. *Fear influences Learning by affecting the learning process and decreasing motivation.* "Sometimes I feel like I can't, I no do it, I don't have the feeling to go to school today. I think fear first and then learning because if you fear to something, I don't think you're going to learn better or you... or you're going to learn about the thing."

Illustration 4.27: Working Together Relationships



Field-Independent Working Together Influences

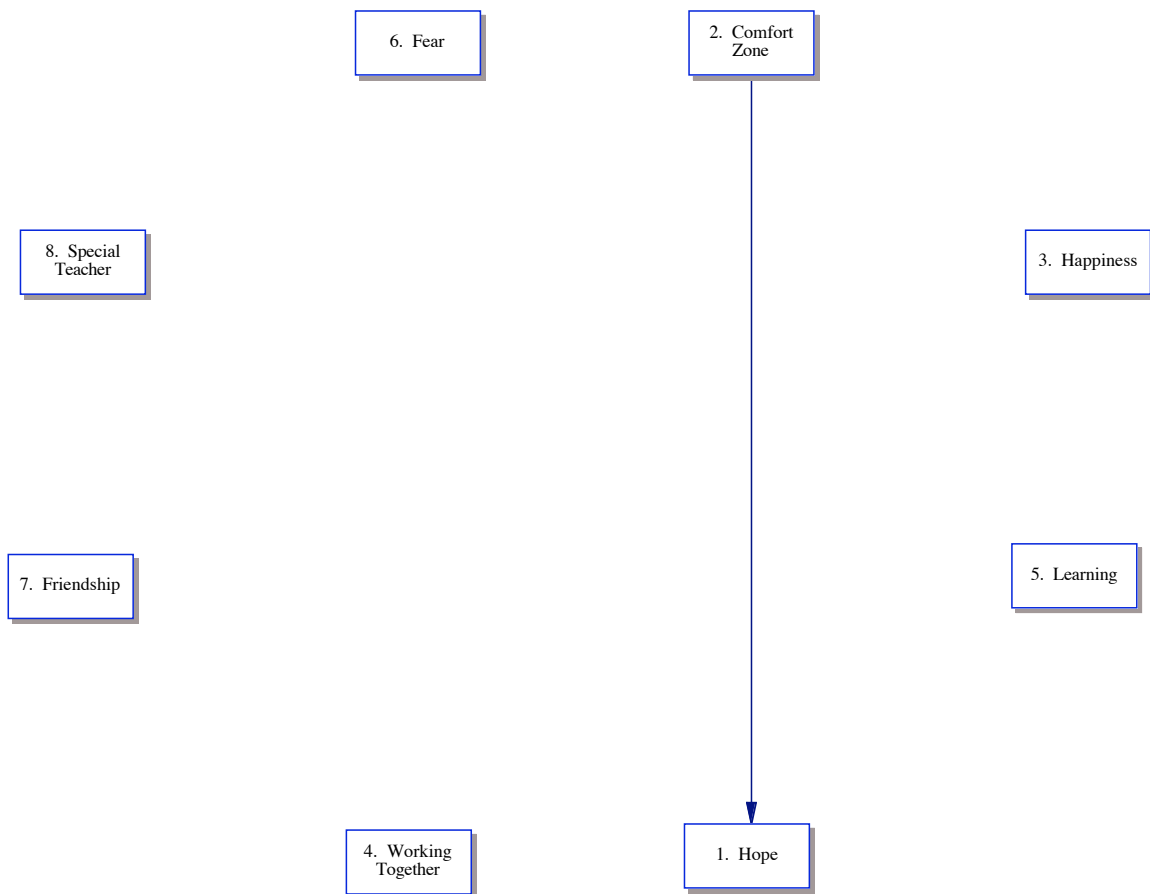
Working Together is a powerful outcome of the students' experiences. It has a direct influence on the outcomes of Comfort Zone, Happiness and Learning, as illustrated by Illustration 4.27. The following is a description of these influences.

Comfort Zone. *Working Together enables students to feel a Comfort Zone in the learning community.* “Working together, I think, influences to stay in a comfort zone. Because when you’re working together and you’re with the people and, you know, it’s better and the more you meet them, you get more comfortable.”

Happiness. *Working Together influences Happiness by providing students with a sense of belonging and teamwork.* “Because you are in a team. You are in a team where you feel good. So if you feel good with your classmates, sometimes you can feel good working in a team. Because if you were with somebody or with a group, together and you make something good I guess it’s happiness.”

Learning. *Working Together influences Learning through collaboration and group responsibility.* If I had a doubt and someone understands it and some may explain it to me and I understand, not the way the teacher says because in the way of my classmate. I think Working Together influences Learning because it’s easier. Because when you’re by yourself, you know, it’s like you’re distracted easier and when you’re working together, it’s like then you really have to put it all there because, you know, if you don’t do something, you’re gonna affect the other persons who are, too.

Illustration 4.28: Comfort Zone Relationships



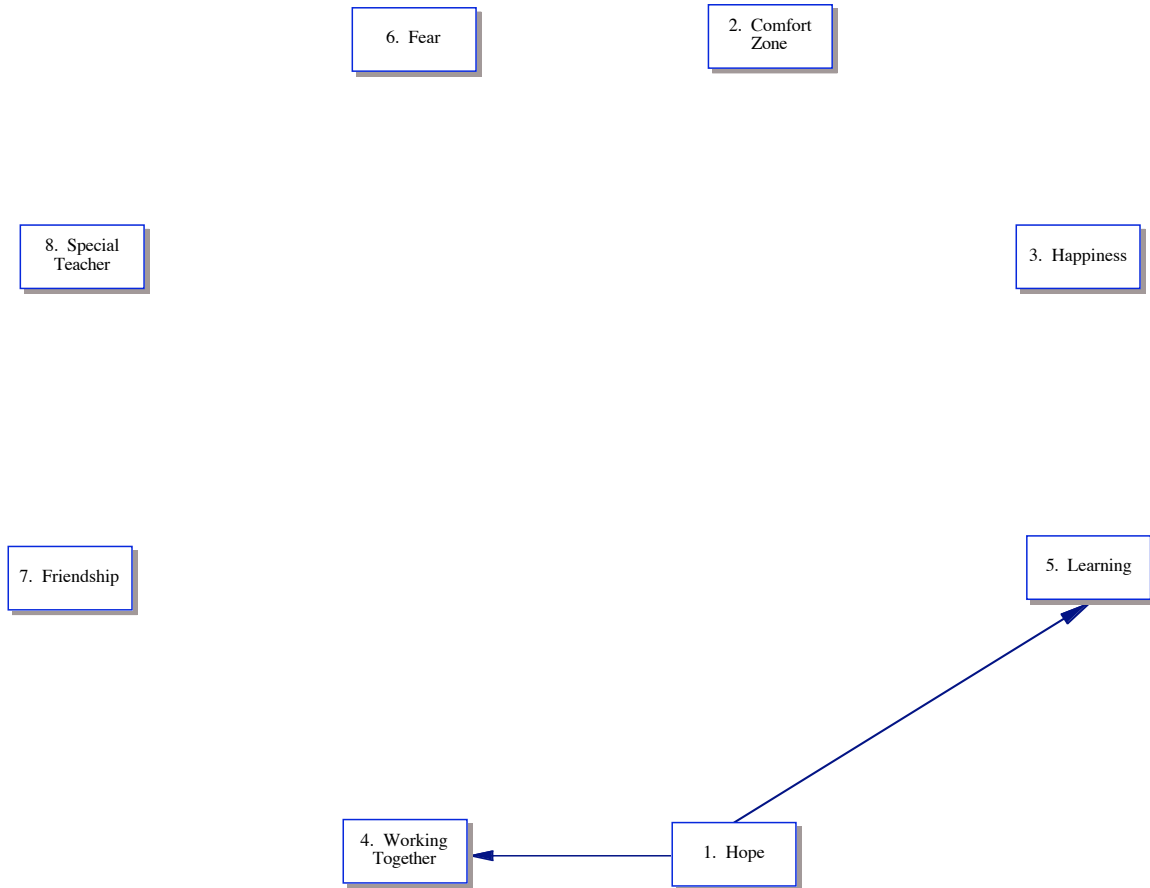
Field-Independent Comfort Zone Influences

Comfort Zone is a powerful outcome of the students' experiences. It has a direct influence on the secondary outcome of Hope in the learning community, as illustrated by Illustration 4.28. The following is a description of these influences.

Hope. *The Comfort Zone created in the learning community enables students to Hope.* “I think Comfort Zone, it influences Hope. Because, when you’re comfortable, it... like the hopes you have it’s better when you’re comfortable, it’s better for you to like let it out.

You know? Because I think you have to be comfortable with someone or with the group to have hope.”

Illustration 4.29: Hope Relationships



Field-Independent Hope Influences

Hope is a powerful outcome of the students’ experience. It has a direct influence on two outcomes of the learning community, as illustrated by Illustration 4.29. The following is a description of these influences.

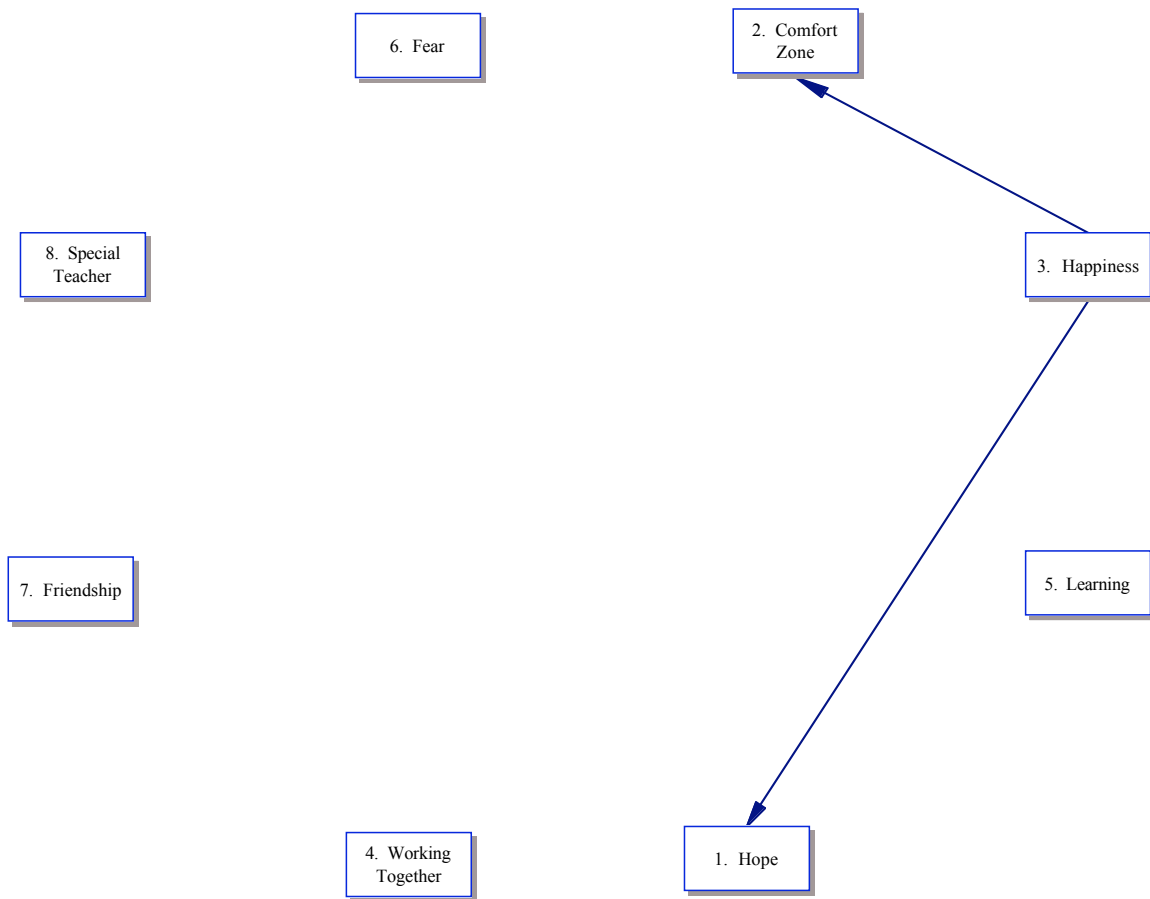
Working Together. *Hope influences Working Together by providing students with a common goal.* “The same Hope that you have influences that you can Work

Together. If you don’t have that hope in yourself, you can’t work with people.

Working together means that everybody has hope because they have the same kind of goals. I think you need to get first hope and then working together because, like, you need to start with something. And then like to keep it... to continue.”

Learning. *Hope influences Learning by providing students with a goal and the desire to work for it.* “Because Hope makes you learn. Because if you’re hoping for something you can’t just stand there and just do nothing. You have to learn the stuff and when you learn it, you know, that’s good.”

Illustration 4.30: Happiness Relationships



Field-Independent Happiness Influences

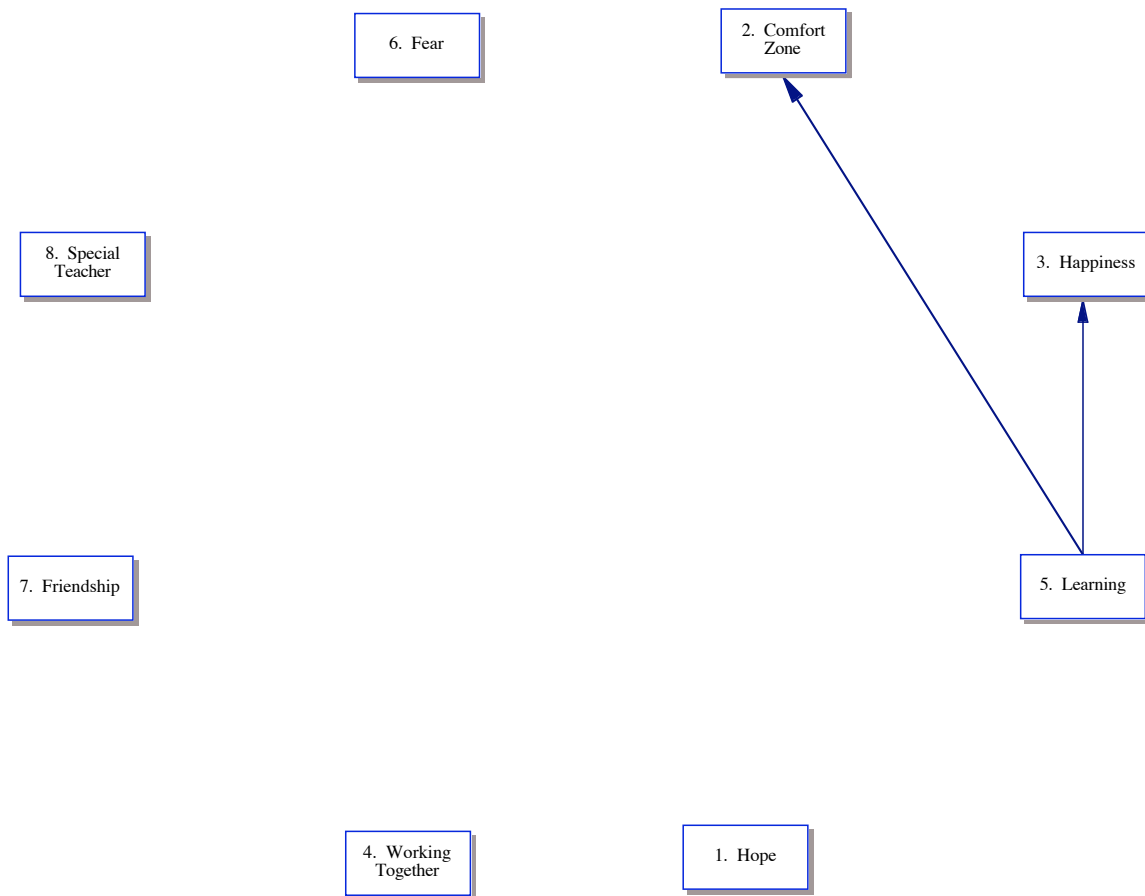
Happiness is a powerful driver of the students’ experiences. It has a direct influence on two outcomes of the learning community, as illustrated by Illustration 4.30. The following is a description of these influences.

Hope. *Happiness influences students to the confidence to have Hope.*“ Because if I feel happy, I then I know I can do it, I can. Because if you are excited and very positive,

you can, then your hope becomes positive. I think it's like the same, like you feel happy and you have like hope to continue.”

Comfort Zone. *Happiness influences students to feel comfortable in the learning community.* “If you are happy, you feel comfortable. If someone don't feel happy, no work in a comfort zone. Because when you feel happy, you are comfortable.”

Illustration 4.31: Learning Relationships



Field-Independent Learning Influences

Learning is a powerful outcome of the students' experiences. It has a direct influence on two outcomes of the learning community, as illustrated by Illustration 4.31. The following is a description of these influences.

Comfort Zone. *Learning is a necessary outcome in order for students to feel comfortable.* “Because you have the wish to learn, so you are in your comfort zone. I think Learning influences Comfort Zone. You have to learn, to experience comfort.”

Happiness. *One result of the outcome of Learning is students feel happy about achieving this.* “If you feel comfortable with your learning, you feel happy. If you don't feel happy with your learning, you feel unhappy. So I think Learning influence happy. I feel happy. I am learning. I feel every day more comfortable in my English. I afraid sometimes, but I get up again and continue. I feel happy. I think Learning influences Happiness. Because you're more intellectual, which makes you happy. And you feel happy about it because, you know, you could talk to anyone about it, about any subject and you know you know that. And when you don't know that, you don't know something, it's hard to talk to someone and be happy but... and not be confused. Because you learn and if you learn what you want to learn, right? In my case, I feel good, I feel happy because I'm learning.”

Composite SID

Composite Tabular IRD

Affinity Name
1. Hope
2. Comfort Zone
3. Happiness
4. Working Together
5. Learning
6. Fear
7. Friendship
8. Special Teacher

Tabular IRD											
	1	2	3	4	5	6	7	8	OUT	IN	Δ
1			□	↑	↑		□	□	2	3	-1
2			↑	↑	↑	□	□	□	3	3	0
3	↑	□		□	□		□	□	1	5	-4
4	□	□	↑		↑	□	□	□	2	5	-3
5	□	□	↑	□		□	□	□	1	6	-5
6		↑		↑	↑			□	3	1	2
7	↑	↑	↑	↑	↑			□	5	1	4
8	↑	↑	↑	↑	↑	↑	↑		7	0	7

Count the number of up arrows (↑) or *Outs*

Count the number of left arrows (□) or *Ins*

Subtract the number of *Ins* from the *Outs* to determine the (Δ) *Deltas*

$$\Delta = \text{Out} - \text{In}$$

Tabular IRD – Sorted in Descending Order of \square											
	1	2	3	4	5	6	7	8	OUT	IN	\square
8	↑	↑	↑	↑	↑	↑	↑		7	0	7
7	↑	↑	↑	↑	↑			\square	5	1	4
6		↑		↑	↑			\square	3	1	2
2			↑	↑	↑	\square	\square	\square	3	3	0
1			\square	↑	↑		\square	\square	2	3	-1
4	\square	\square	↑		↑	\square	\square	\square	2	5	-3
3	↑	\square		\square	\square		\square	\square	1	5	-4
5	\square	\square	↑	\square		\square	\square	\square	1	6	-5

Tentative SID Assignments	
8	Primary Driver
7	Secondary Driver
6	Secondary Driver
2	Circulator / Pivot / ?
1	Secondary Outcome
4	Secondary Outcome
3	Secondary Outcome
5	Primary Outcome

Illustration 4.32: Composite Cluttered

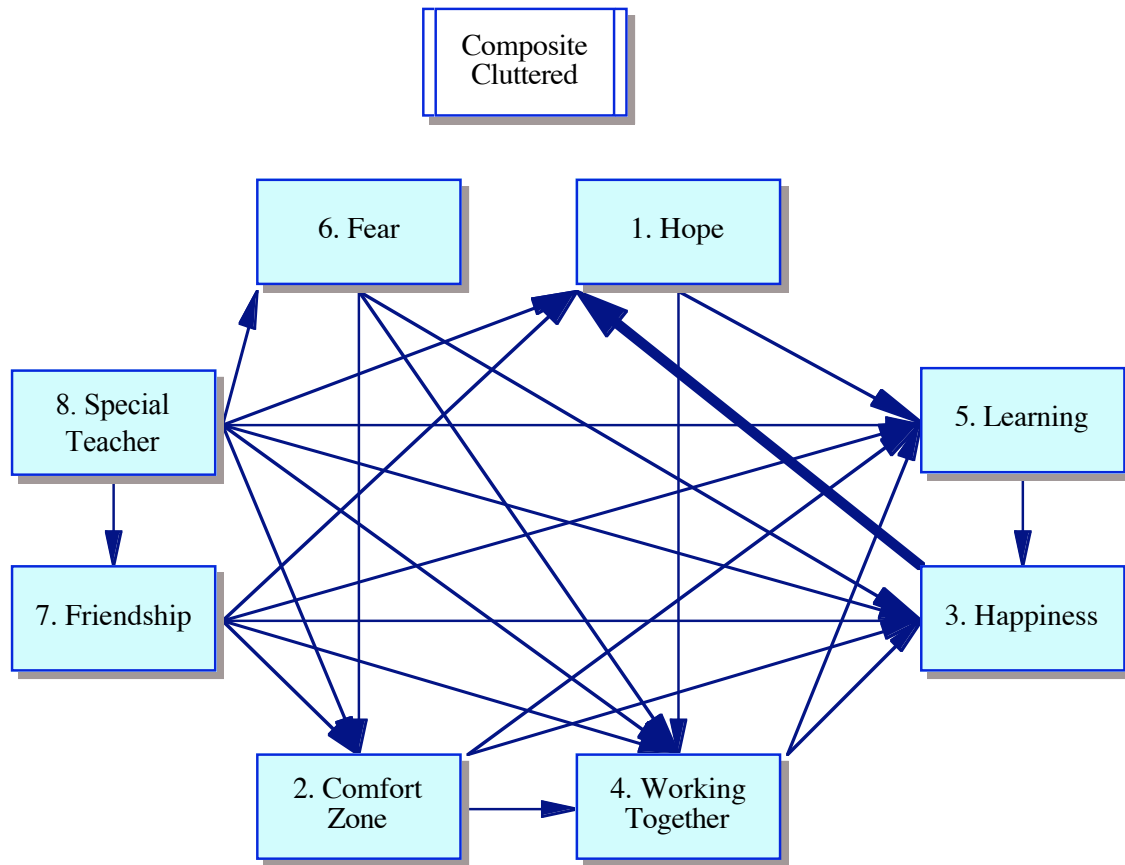


Illustration 4.33: Composite Uncluttered

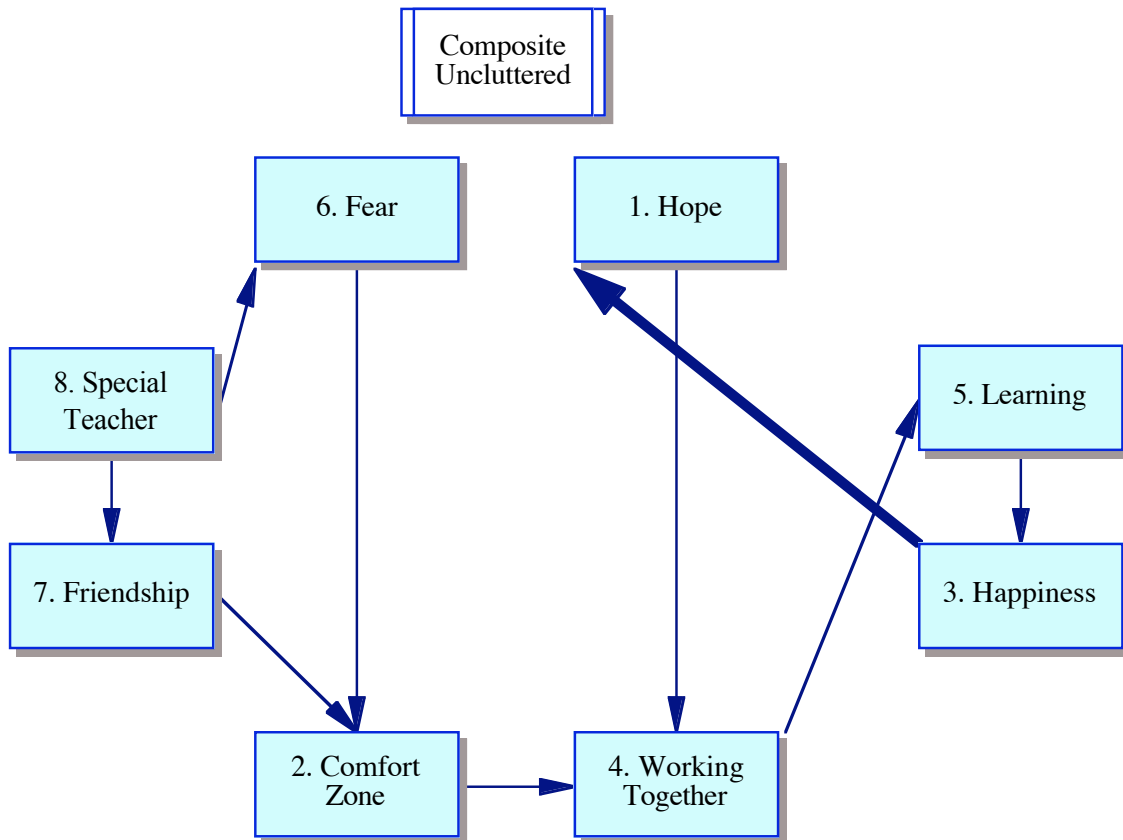
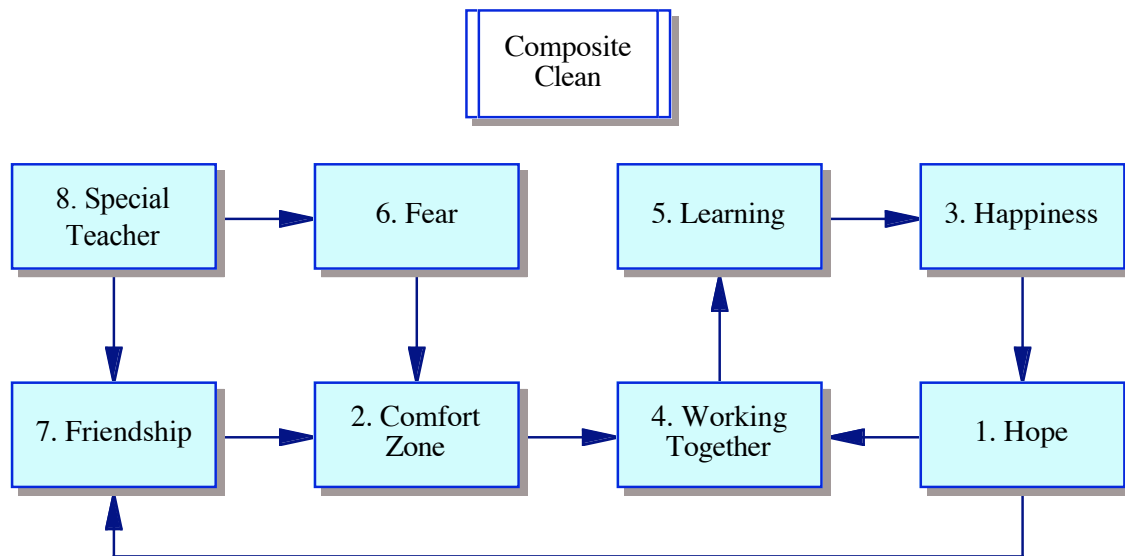


Illustration 4.34: Composite Clean



Touring the Composite SID System

The composite SID describes the experiences of all students in the learning community. The following tour explains the collective experiences in this type of applied curriculum and begins with Special Teacher and ends with Learning.

This journey begins with Special Teacher influencing Friendship and Fear. Both Friendship and Fear feed into Comfort Zone. Then Comfort Zone feeds into a quadrate of Working Together, Hope, Happiness and Learning. It is an interrelated four-point affinity system with Hope having a feedback loop to Friendship. Learning is the final outcome, but it is influenced by the other three secondary outcomes.

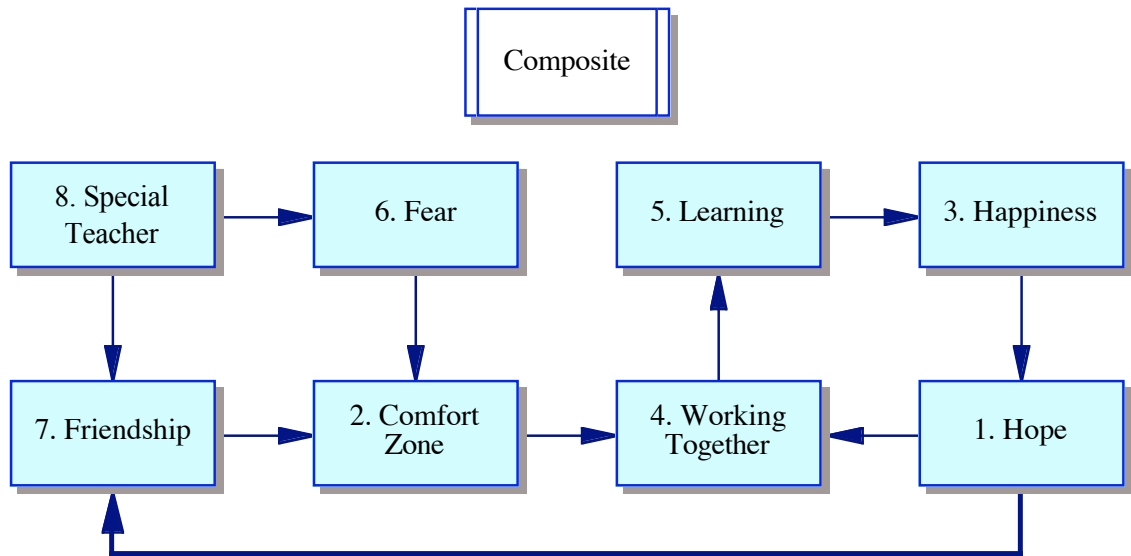
Feedback Loops and Zooming

The composite student system included one feedback loop. This feedback loop contained subsystems of at least three affinities, each influencing the others (Northcutt & McCoy, 2002). In the instances of this feedback loop, the distinction between drivers and

outcomes is blurred because there is no longer an absolute cause and effect system (Northcutt & McCoy, 2002, p. 335). The interconnectedness of these factors creates a dynamic set of affinities. A description of the five subsystems within the system follows.

In the composite system, Hope feeds back into Friendship. This creates an interesting relationship because it connects the drivers and outcomes. The system is comprised primarily of two quadrates – the drivers and the pivot influence the secondary and primary outcomes. The formation of this feedback creates another crucial relationship of the secondary outcome of Hope influencing the secondary driver of Friendship. The following Illustration 4.35 demonstrates this relationship.

Illustration 4.35: Zooming Hope - Friendship



Conclusion

Research results produced axial and theoretical code data for three groups, field-dependent, field-independent, and a composite of all students in the IEP learning

community. These data were utilized to identify, describe and define the factors that comprise how these students experienced the IEP program. To illustrate the data visually and allow for comparison and inferences, system representations were created for both constituencies. The next and final chapter discusses how these different student groups experienced the learning community environment and informs how these curricular structures address the needs of field-dependent community college students.

CHAPTER V: IMPLICATIONS

Introduction

The purpose of this study was to determine the experiences of field-dependent students in a learning community environment and whether these experiences support the cognitive needs of these students. This was explored by examining the experiences of both field-dependent and field-independent students in the learning community environment. These experiences were studied to determine whether they matched the cognitive needs of the field-dependent student. Data were collected and analyzed to examine the experiences of the field-dependent and field-independent students in addition to a composite of both. Conceptual mind maps were created to produce a system representation of each cognitive group and the composite.

This chapter begins with comparisons of the affinity description, their individual relationships, and the final SID of each group. Through this comparison, it was possible to conclude what the experiences of the field-dependent community college student in the learning community were. How the experiences of the field-dependent student met the cognitive needs of the community college student was then examined. The chapter also provides recommendations for further study and concludes with the implications of the study on community college curriculum.

Comparison of Composite Affinities

One way in which to develop a comparison between two groups is through examining the interpretation of affinities (McCoy and Northcutt, 2002). The following is a

comparison of the composites for the field-dependent and field-independent students interpretation of the eight affinities developed for this study. This comparison allows one to understand the differences and similarities between the two groups in terms of how these affinities were defined.

Hope. Both field-independent and field-dependent described feeling a sense of hope for similar objectives. A content analysis revealed these similar objectives were to improve their English and reach their goals, which were contingent on learning English.

Specifically, field-dependents discussed hoping to improve their communication skills in English and reaching their life goals. Similarly, field-independent students expressed feeling hope that learning English would dramatically improve their lives and enable them to enter into English 101. Despite slight variations in wording, both cognitive groups perceived affinity Hope in the same way.

Comfort Zone. Field-independent and field-dependent students had similar and different interpretations of the Comfort Zone affinities. A content analysis revealed both groups expressed positive emotions with this common experience, which was defined as feeling relaxed around both the peers and the teacher. However, field-independent students expressed feeling negatively with the Comfort Zone. They attributed the comfort to sharing the same first language and explained how this comfort with each other ultimately hindered learning. While both cognitive groups expressed similar positive feelings with this affinity, field-independent students expressed negative emotions related to it.

Happiness. Both field-dependent and field-independent students expressed the affinity of Happiness positively. A content analysis revealed similarities and differences in the dimensions of this affinity. Both cited peers as a reason for the happiness they experienced. When examining differing dimensions, field-dependents described happiness with the teacher, while field-independent discussed achieving their goals. This analysis reveals overall positive experiences with this affinity, and the groups sharing one dimension, but differing in one.

Working Together. Both cognitive groups expressed positive interpretations of the Working Together affinity. Also, a content analysis shows both field-dependent and field-independent students described this affinity exactly the same way. Students discussed a sense of teamwork in the learning community. In short, regardless of cognitive style, students interpreted this affinity the same way.

Learning. Both groups expressed this affinity positively. A content analysis revealed similar and differing interpretations of the affinity. Both groups interpreted it as having two dimensions. Similarly, both field-dependent and field-independent students discussed learning a great deal of English while they have been a part of the learning community. The student groups differed in their second interpretations of the affinity, specifically field-dependent students discussed learning in terms of the college system, while field-dependents defined learning from a variety of sources. In short, both groups defined learning positively with two parts. The groups had differing interpretation of the second part of this affinity.

Fear. Both cognitive groups discussed multiple negative associations with the Fear affinity. A content analysis revealed the groups shared two of the dimensions, but they differed because field-independent discussed possessing another negative dimension. Similarly, they discussed feeling fear of outside factors prohibiting them from continuing the IEP program. Also, the groups shared feeling a sense of fear with class participation. The students feared embarrassing themselves because of their poor English skills. In addition to fearing outside factors and participation, field-dependent students also expressed fearing failing the class, which was an interpretation not shared by field-independents.

Friendship. Both groups expressed positive feelings with the Friendship affinity. Also, a content analysis revealed the groups had the same interpretation of the affinity. The students both described the IEP program being a friendship environment. This friendly environment included the teacher and peers. There was no difference due to cognitive style in the interpretation of this affinity.

Special Teacher. Field-dependent and field-independent students expressed very positive interpretations of Special Teacher. A content analysis revealed both groups described this affinity as possessing two dimensions. The cognitive groups shared one interpretation, but differed on the second. Similarly, both groups discussed the special teacher as being a very skilled teacher. These groups had different interpretation of the other dimension, specifically field-dependent students described it as being the positive nature of the teacher, while field-independent students defined it as being the comfort level with the instructor.

Overall, the affinity comparisons showed that regardless of cognitive style, students described the affinities the same. While there was slight differentiation of a few affinities, overall the interpretation was strikingly similar. The interpretation shows differences between the two groups; for example, the field-independent student felt the comfort level could be a disadvantage. Despite these differences, for the most part the interpretation of the affinities was consistent between the two groups.

Comparison of Relationships

Hope Influences

Field-dependent and field-independent students agreed on the role of Hope in the learning community. Both believed it had a direct impact on the primary outcome of Learning and the secondary outcome of Working Together. But, field-dependent students believed it also influenced Comfort Zone. For the most part, the groups agreed on the role of Hope in community.

Illustration 5.01: Field-Dependent Hope

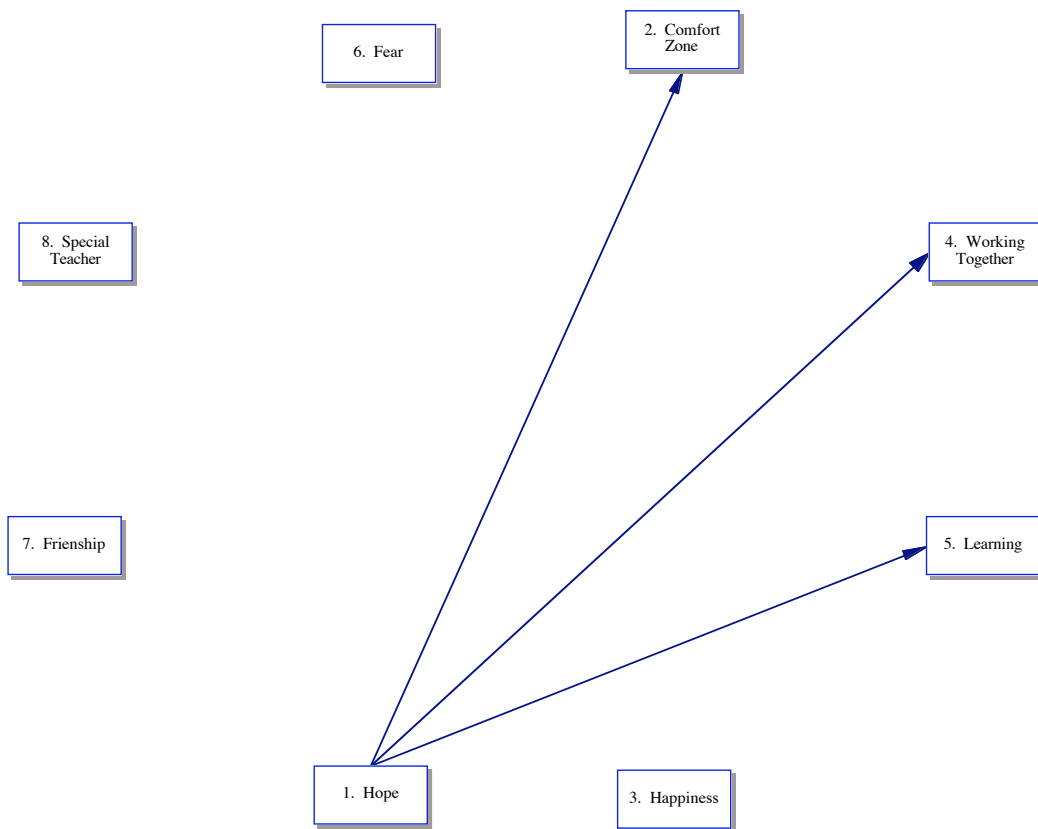
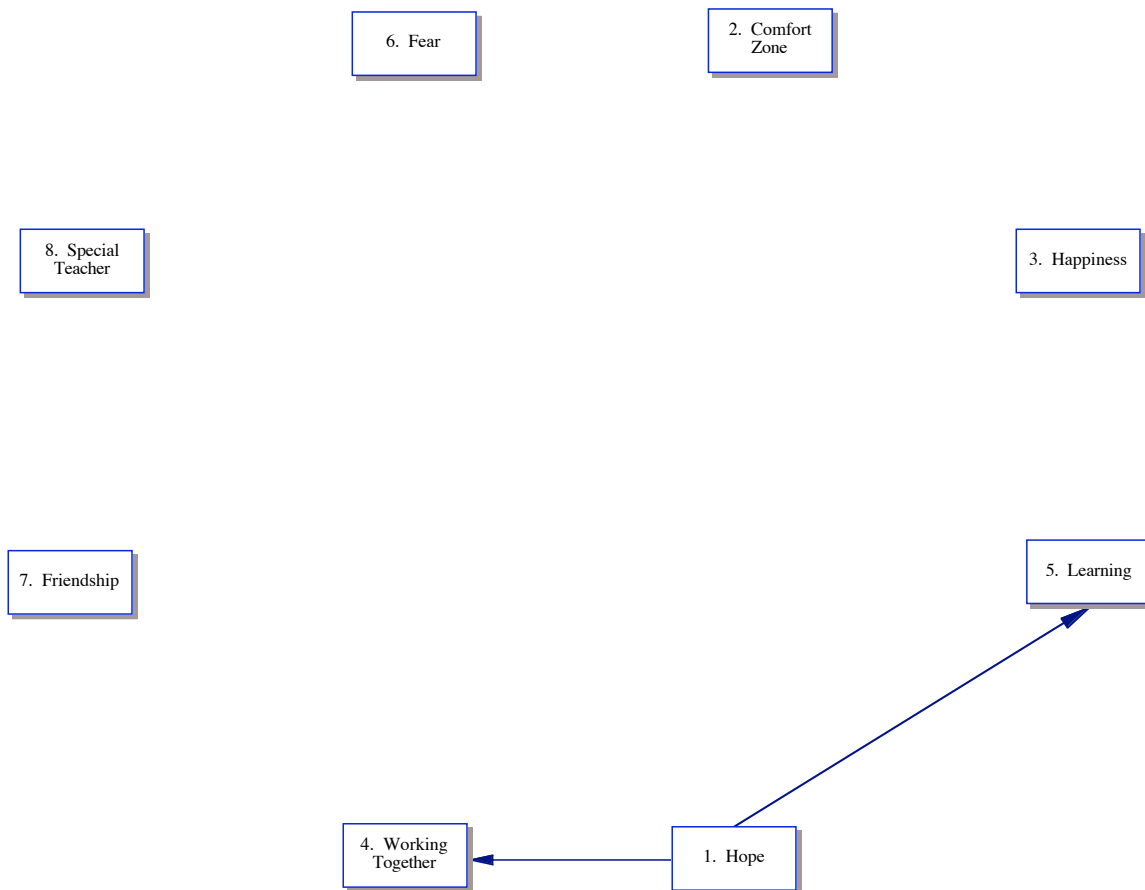


Illustration 5.02: Field-Independent Hope



Comfort Zone Influences

Student cognitive groups had widely divergent views on the role of Comfort Zone in the learning community. Field-dependents believed the affinity had a wider influence on both Working Together and the primary outcome of Learning. On the contrary, field-independent students saw the affinity only affecting the secondary outcome of Hope. These two cognitive groups differed in their belief on the influences of this affinity.

Illustration 5.03: Field-Dependent Comfort Zone

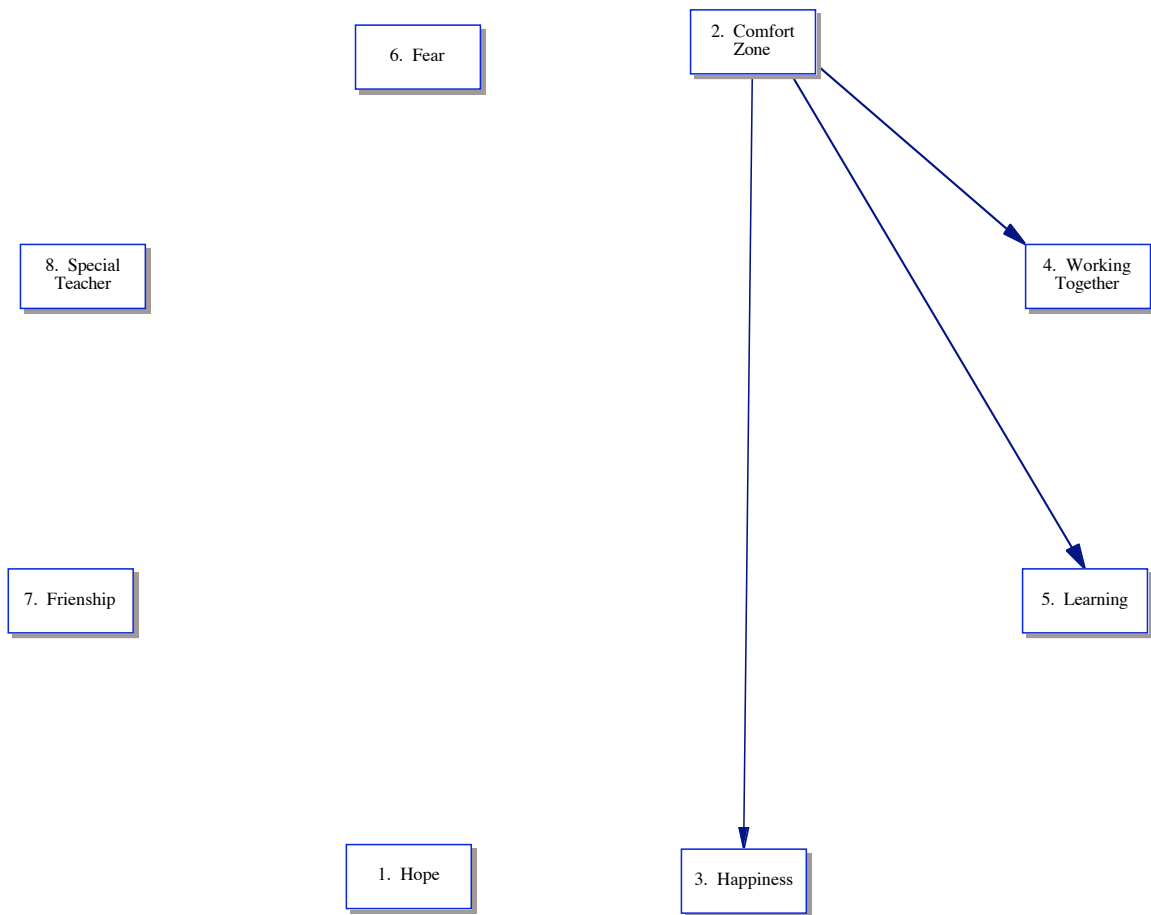
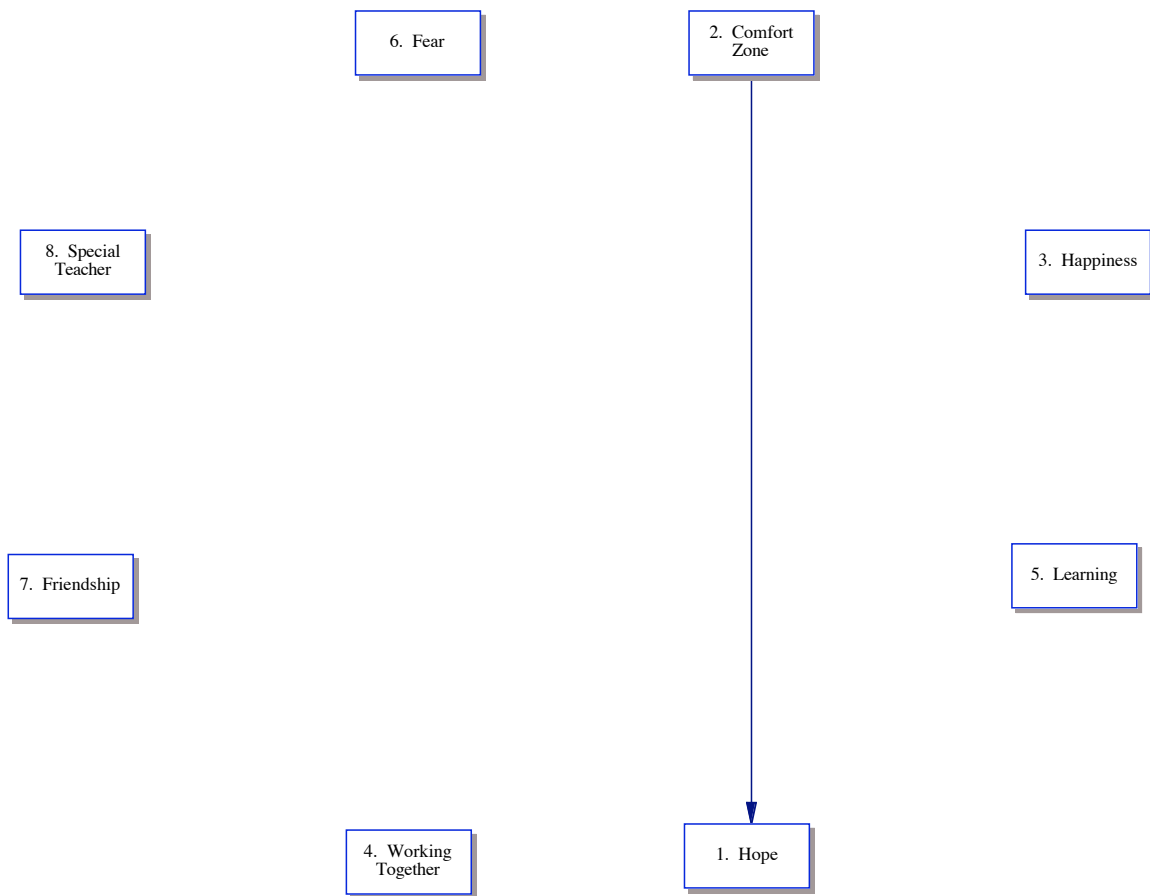


Illustration 5.04: Field-Independent Comfort Zone



Happiness Influences

Both groups believed that Happiness had a limited direct impact on the learning community. The student groups believed it influenced two other affinities. Regardless of cognitive style, the students believed Happiness influenced Hope, but differed on the remaining relationship. Field-dependent students believed it influenced the primary outcome of Learning, while field-independents believed it affected the secondary outcome of Comfort Zone. Overall, the two groups had similar views of this affinity.

Illustration 5.05: Field-Dependent Happiness

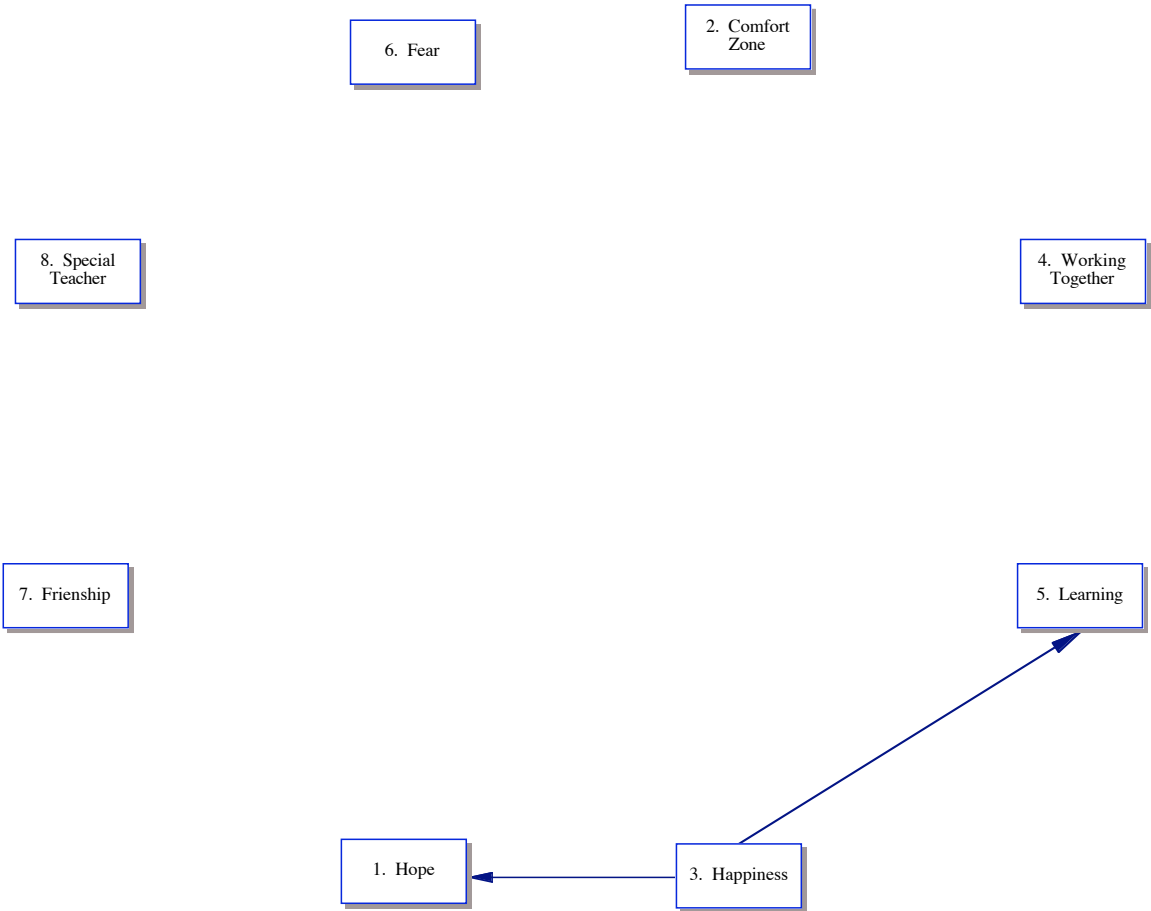
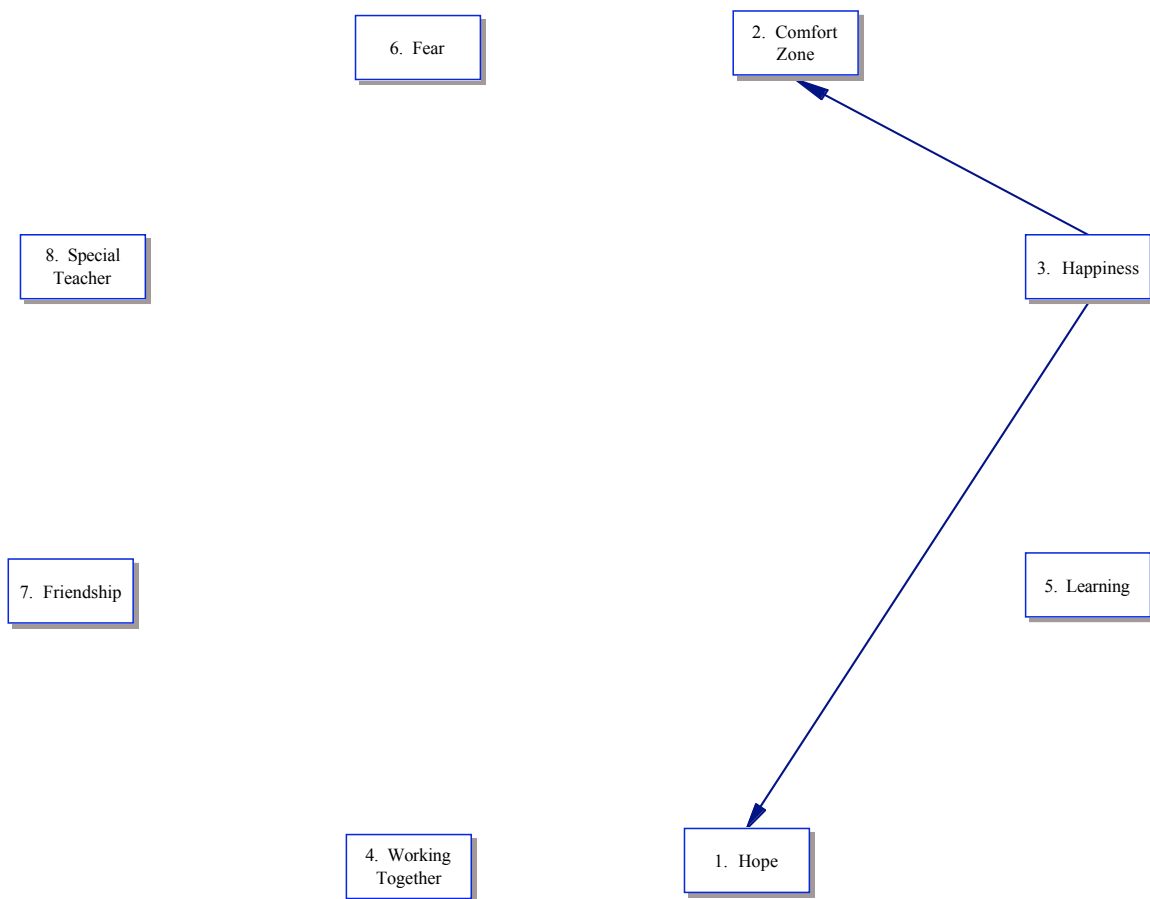


Illustration 5.06: Field-Independent Happiness



Working Together Influences

When examining the role of Working Together, both groups believed it influenced Happiness. On the other hand, field-dependent students believed it also influenced Friendship, while field-independents named Comfort Zone. Additionally, field-dependent students also believed there was a direct link to the primary outcome of Learning. In short, both groups agreed Working Together influenced Happiness, but differed in the other influences of this affinity.

Illustration 5.07: Field-Dependent Working Together

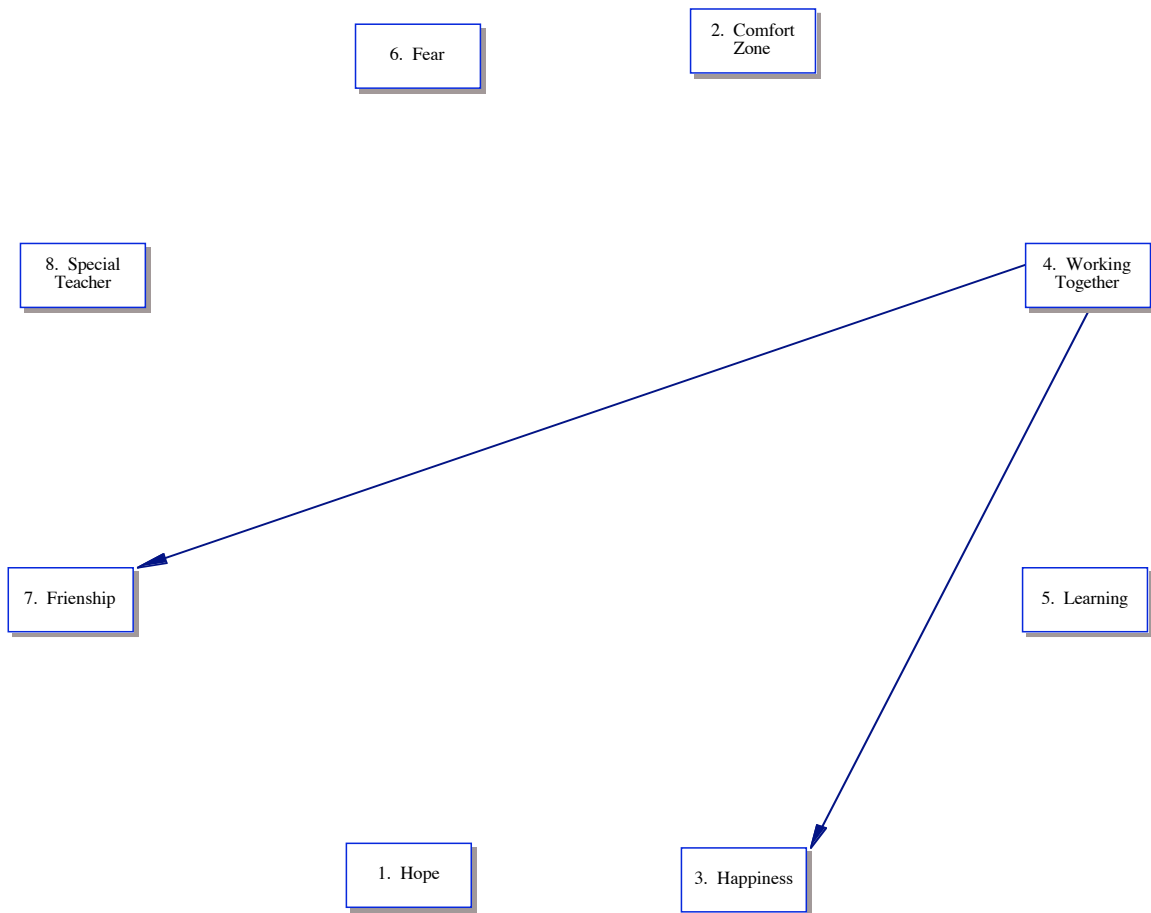
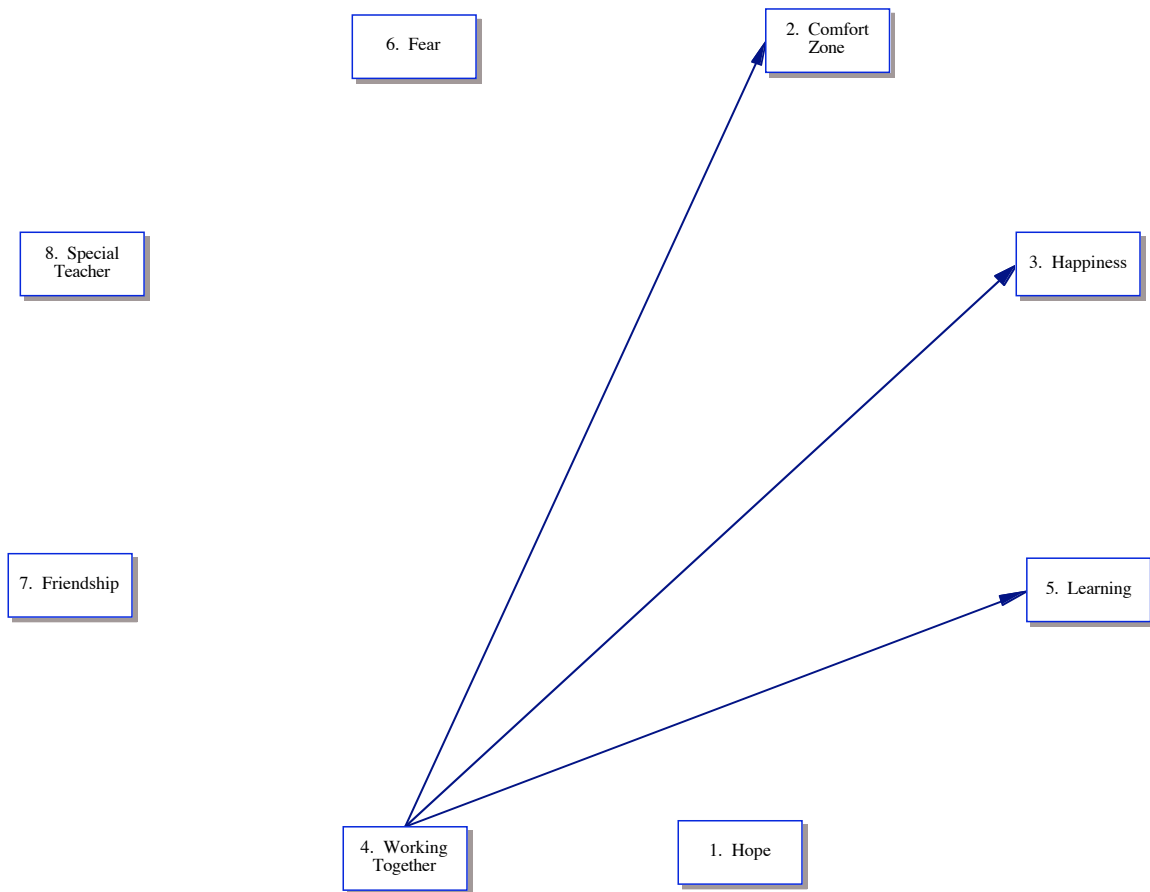


Illustration 5.08: Field-Independent Working Together



Learning Influences

Both field-dependent and field-independent students cited Learning as the primary outcome of the learning community experience, but differ on how this affinity influences the system. Field-dependent students believed only Learning influenced Working Together. On the contrary, field-independents believed Learning influenced Happiness and Comfort Zone. Both cognitive groups believed the primary outcome influenced secondary outcomes, but differed on the number and specifically which ones.

Illustration 5.09: Field-Dependent Learning

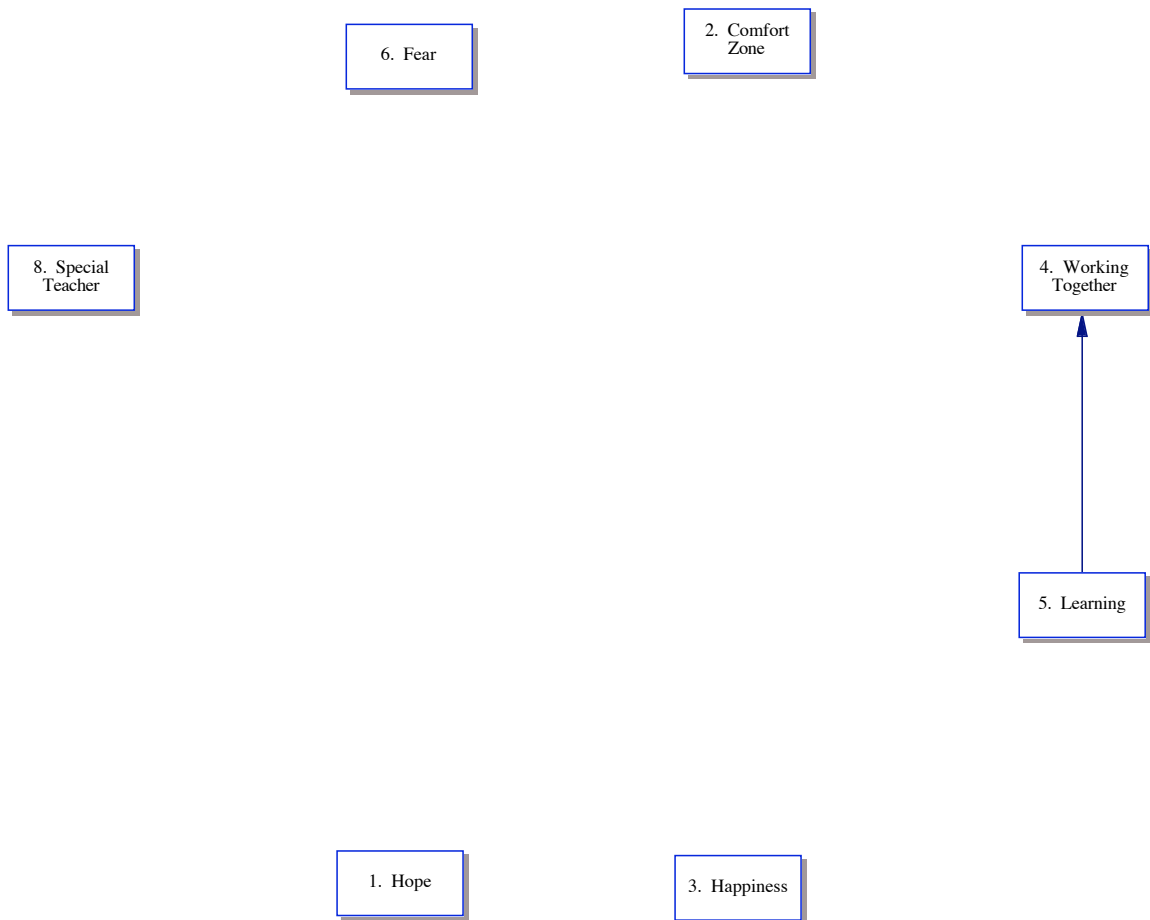
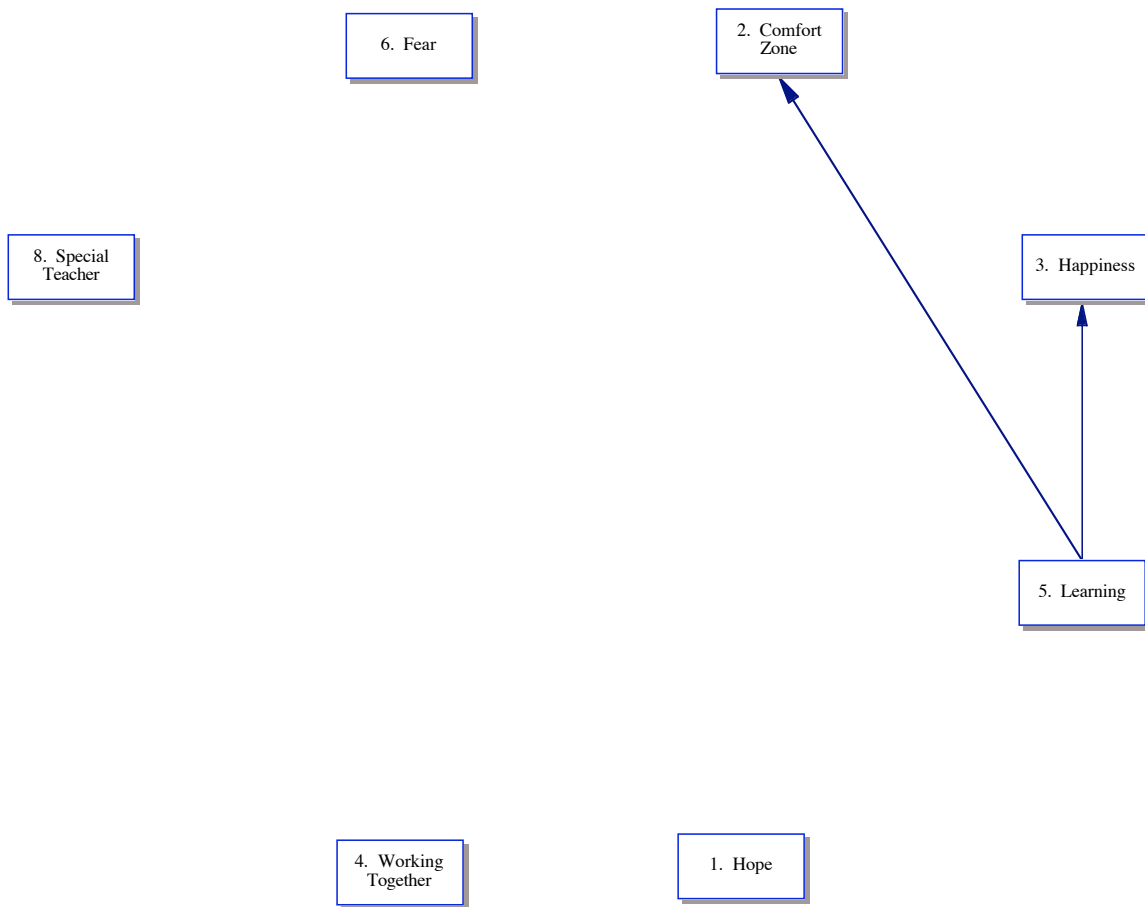


Illustration 5.10: Field-Independent Learning



Fear Influences

For both field-dependents and field-independents, fear is a limited secondary driver. This affinity only directly influenced two other affinities, but there was one difference. Both cognitive groups believed Fear influenced Learning, but differed in the second affinity. Field-dependent students identified Fear as influencing Working Together, while field-independent students believed it to influence Comfort Zone. When examining the affinity of Fear, both groups believed it influenced the primary outcome of Learning, but differed on the secondary outcome it influenced.

Illustration 5.11: Field-Dependent Fear

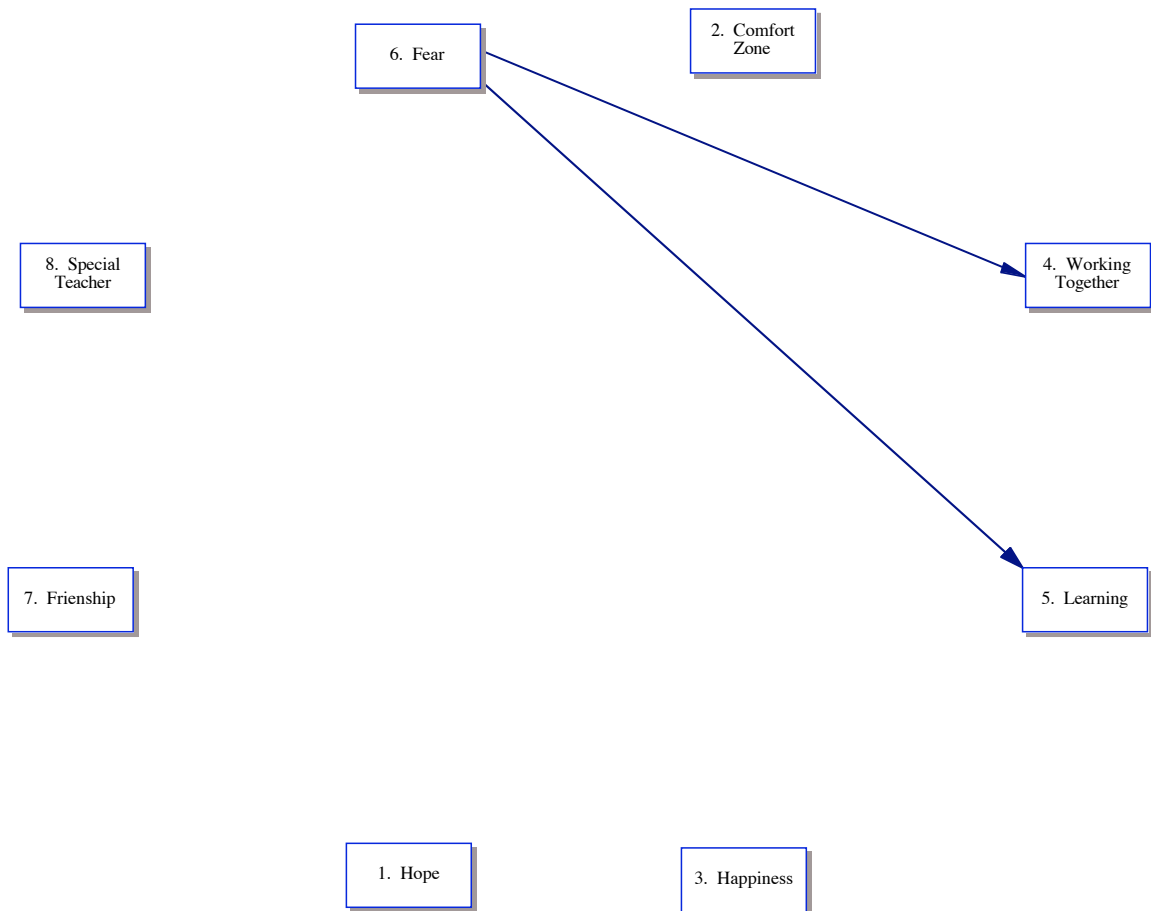
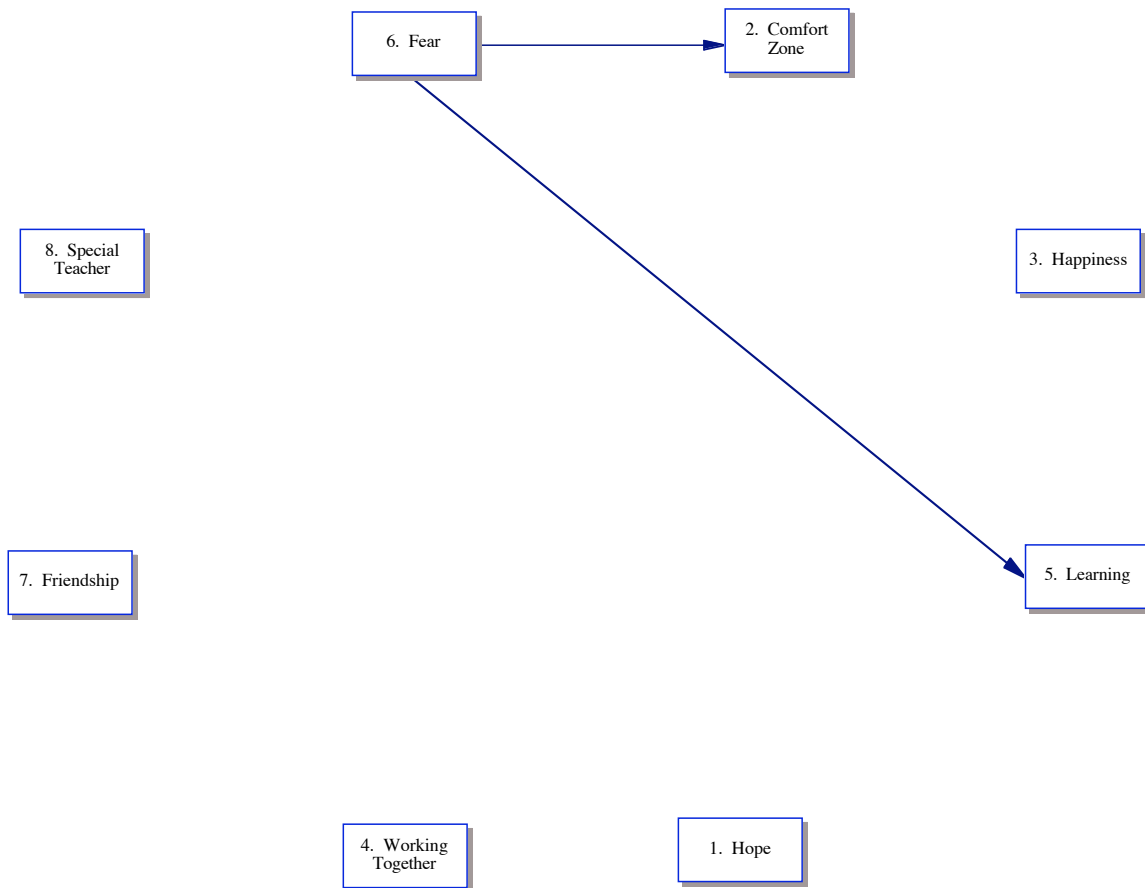


Illustration 5.12: Field-Independent Fear



Friendship Influences

When examining the affinity Friendship influences, both cognitive groups were almost exactly the same. For both field-dependent and field-independent students, Friendship influenced Comfort Zone, Happiness, Learning and Hope, but the only difference was Working Together. In the case of field-dependent students Friendship did not influence Working Together. In both SIDs Friendship was a powerful secondary driver and the only difference was field-dependent students did not view Friendship as influencing Working Together.

Illustration 5.13: Field-Dependent Friendship

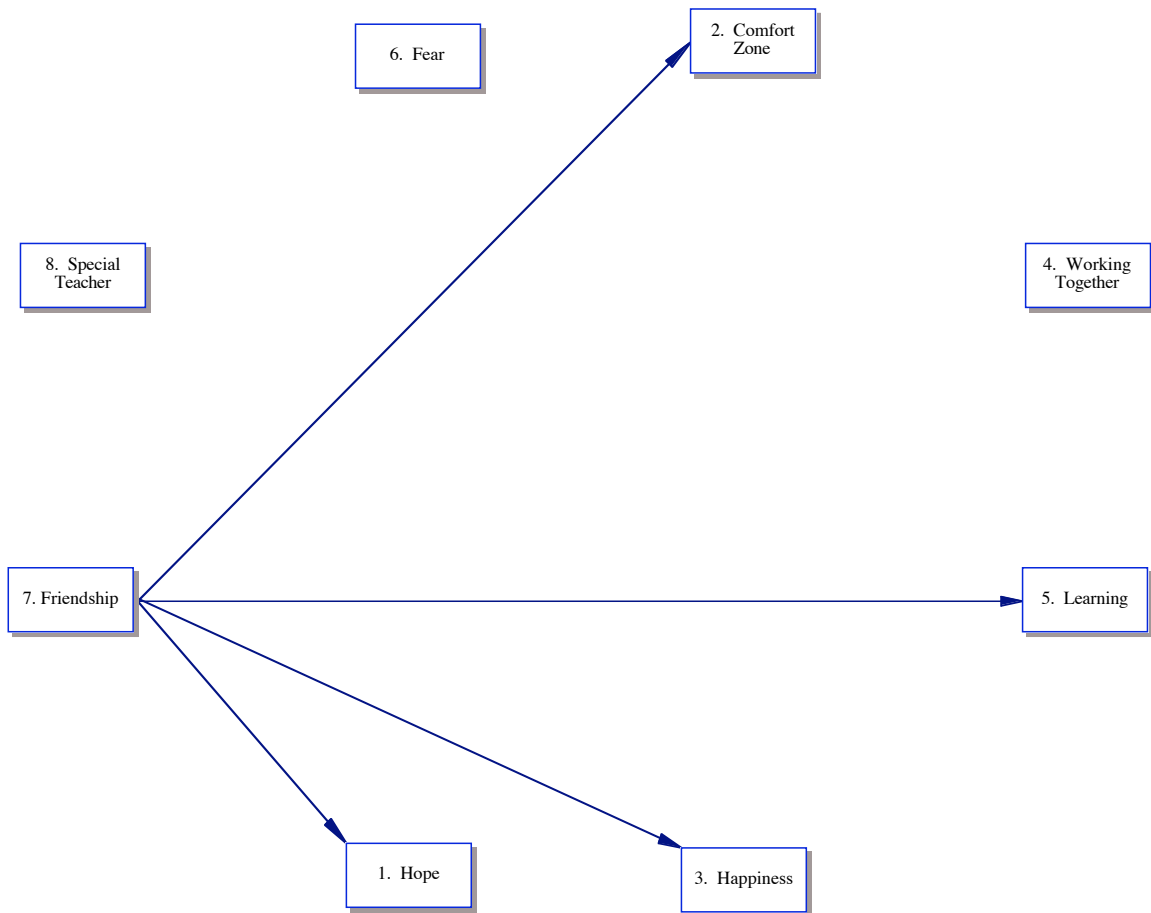
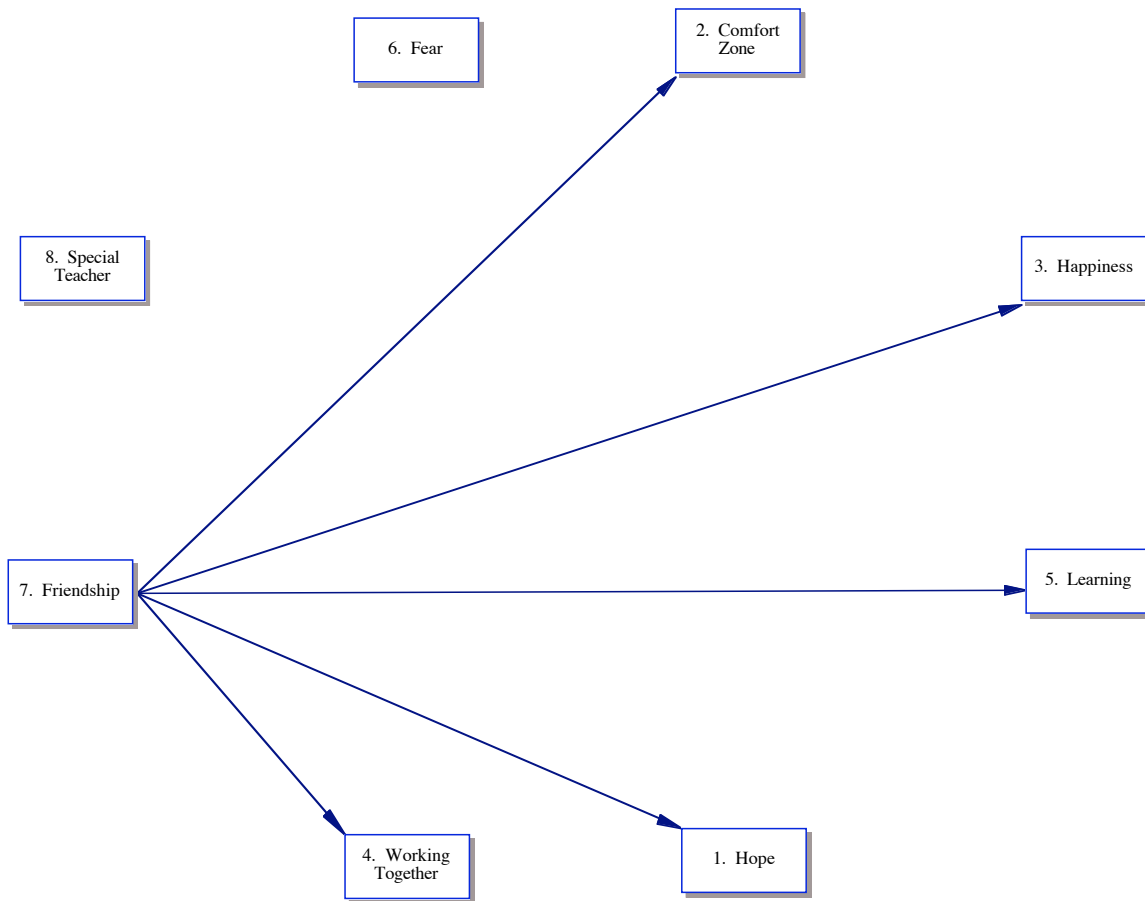


Illustration 5.14: Field-Independent Friendship



Special Teacher Influences

In both cognitive groups, Special Teacher was a powerful driver. When examining the two groups they were almost identical. This affinity influenced all the others, except for one notable exception — in the field-dependent SID Special Teacher influences Fear, but not in the field-independent. Special Teacher and Fear have no relationship. For field-independent students Fear was a separate force influencing the system.

The same trend continued when comparing relationships between the affinities. While there were individual variations between field-dependent and field-independents

students, overall the relationships were very similar. For example, the primary driver Special Teacher for each was almost identical with only one difference. While there were differences between the two, the influences of each group were similar.

Illustration 5.15: Field-Dependent Special Teacher

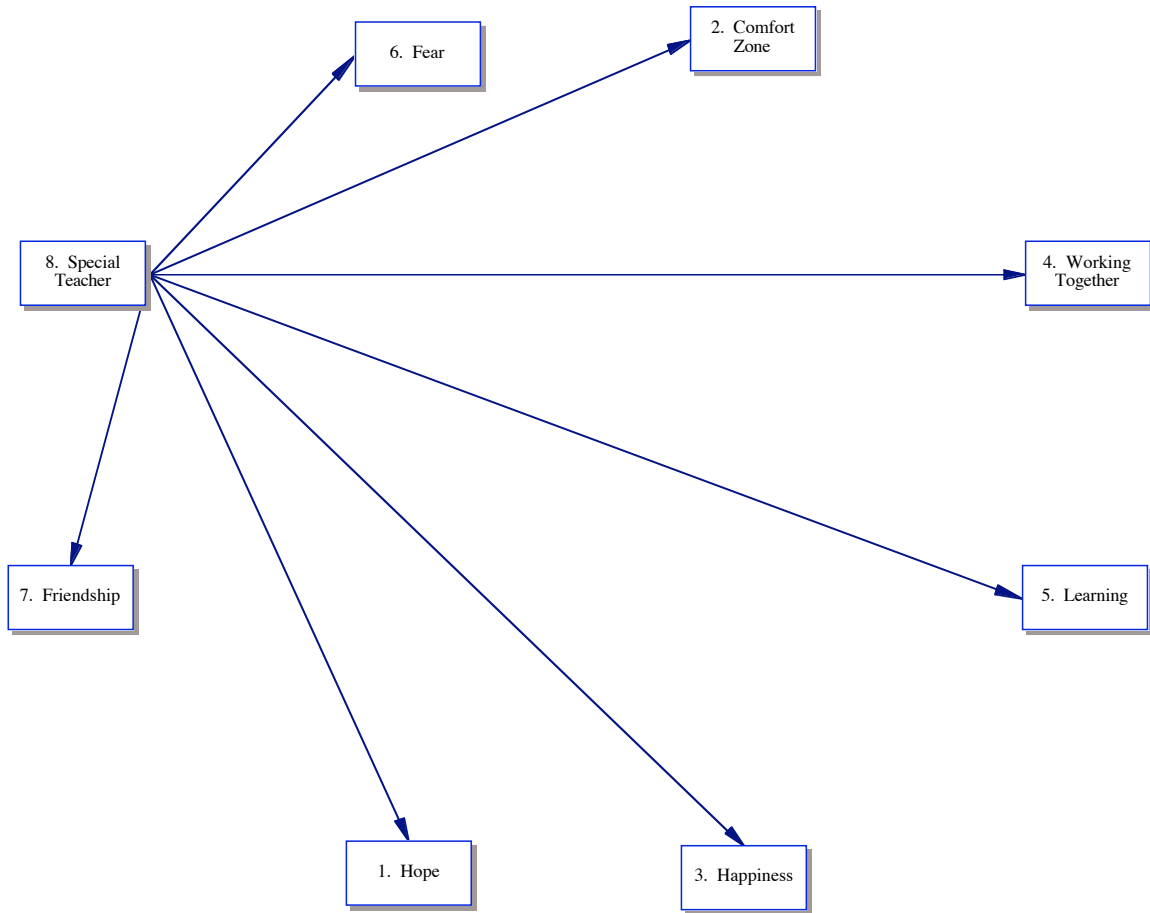
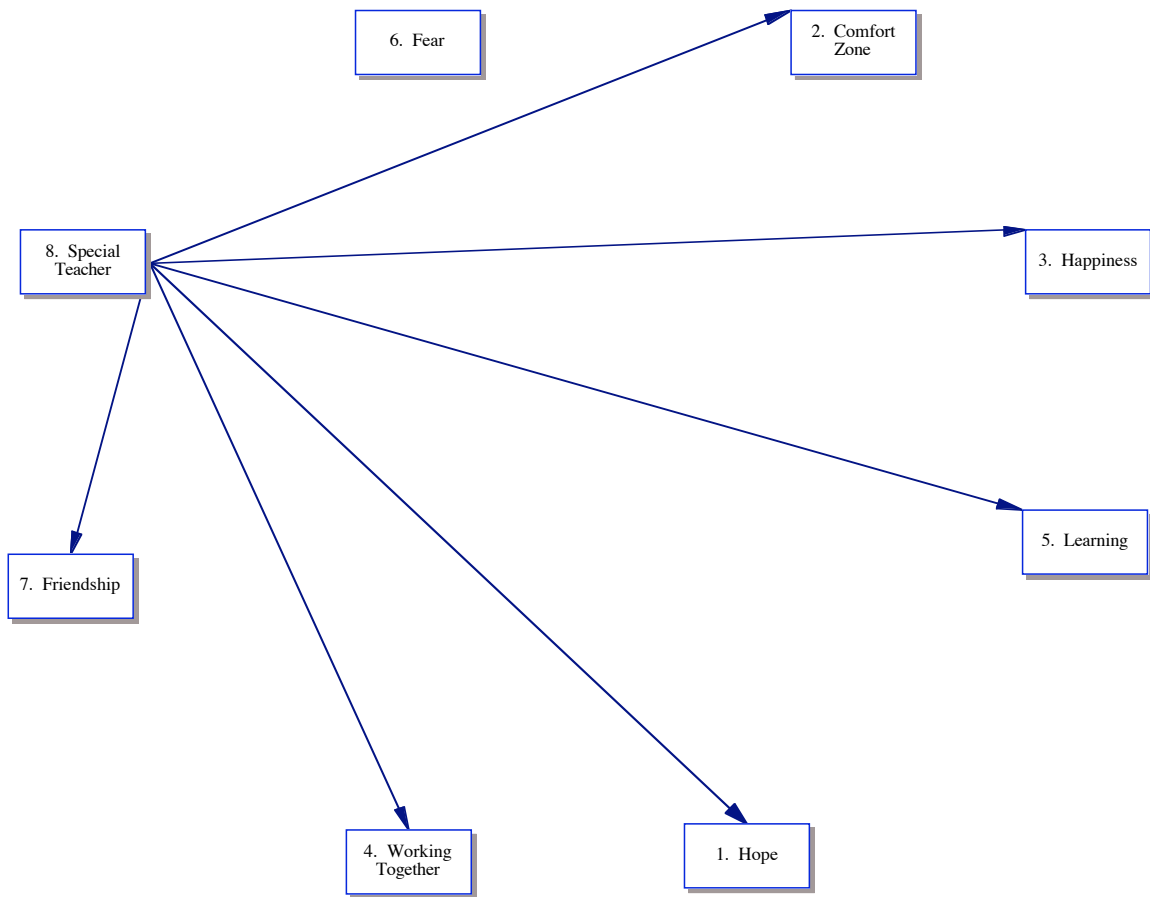


Illustration 5.16: Field-Independent Special Teacher



Comparison of Drivers and Outcomes

When comparing the SID of the field-dependent and field independent students, one must first compare the drivers and outcomes of the two systems. The following is a description of the drivers and outcomes for the field-dependent and field-independent students.

Field-Dependent SID Assignments	
8 – Special Teacher	Primary Driver
7 - Friendship	Secondary Driver
6 - Fear	Secondary Driver
1 - Hope	Secondary Outcome
2 – Comfort Zone	Secondary Outcome
3 - Happiness	Secondary Outcome
4 – Working Together	Secondary Outcome
5 - Learning	Primary Outcome

Field-Independent SID Assignments	
8 – Special Teacher	Primary Driver
7 - Friendship	Secondary Driver
6 - Fear	Secondary Driver
4 – Working Together	Circulator/Pivot
2 – Comfort Zone	Secondary Outcome
1 - Hope	Secondary Outcome
3 - Happiness	Secondary Outcome
5 - Learning	Primary Outcome

When comparing the system, both field-dependent and field-independent students share the same drivers and primary outcome, but the order of importance of the secondary outcomes differs. The following is a breakdown of these differences.

First, the major difference was the order of Hope. In the field-dependent SID Hope was ranked fourth as a secondary outcome, while in the other SID it was ranked sixth. Hope was a more powerful secondary outcome for field-dependents than field-independents.

Second, another difference was the order Happiness. When examining Happiness in the field-dependent SID, it was ranked sixth as a secondary outcome, while the other

cognitive group ranked it as seventh. There was only a slight difference between the ranking of these affinities between the two groups.

Last, the major difference was the order of Working Together. In the field-dependent SID, Working Together was ranked seventh as a secondary outcome, while the field-independent students placed more emphasis on it and ranked fourth as a pivot. Not only was the ranking different, but also the designation of the affinity.

When comparing the drivers and outcomes of the two there are slight differences in the ranking of the affinities between field-dependent and field-independent students. The two cognitive groups ranked Hope, Happiness and Working Together differently, but the remaining affinities were ranked exactly the same. The greatest difference in the ranking of the affinity for Working Together. Field-dependent students ranked it as a secondary outcome, while field-independent students ranked it as a pivot. Overall, while there were slight differences in the ranking of the affinities, they were basically the same. This demonstrates that regardless of cognitive style, students experienced the learning community similarly.

Comparison of SIDs

After comparing the drivers and outcomes of the system, one must then examine the systems themselves. The following is an examination of both the field-dependent and field-independent SIDs. For comparison, the two completed mind maps demonstrate the similarities and differences between the two cognitive groups experiences within the learning community.

```
graph TD; 1[1. Hope] --> 2[2. Comfort Zone]; 1[1. Hope] --> 3[3. Happiness]; 2[2. Comfort Zone] --> 4[4. Working Together]; 3[3. Happiness] --> 4[4. Working Together]; 3[3. Happiness] --> 5[5. Learning]; 4[4. Working Together] --> 5[5. Learning]; 4[4. Working Together] --> 7[7. Friendship]; 5[5. Learning] --> 7[7. Friendship]; 7[7. Friendship] --> 1[1. Hope]; 8[8. Special Teacher] --> 6[6. Fear]; 6[6. Fear] --> 2[2. Comfort Zone]; 6[6. Fear] --> 4[4. Working Together];
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```
graph TD; 1[1. Hope] --> 2[2. Comfort Zone]; 2 --> 3[3. Happiness]; 3 --> 4[4. Working Together]; 4 --> 5[5. Learning]; 5 --> 6[6. Fear]; 6 --> 7[7. Friendship]; 7 --> 8[8. Special Teacher]; 3 --> 2; 5 --> 1; 5 --> 2;
```

142

Teacher. The same was not true of the field-independent, where Fear was a separate driver influencing Comfort Zone. The first major difference was the placement of Fear in the SID, where for the field-dependent it was an intricate part of the SID, while it was not for the other cognitive group.

The next major difference was the role of Friendship in the SID. In the field-dependent SID, Friendship was a separate driving force that was influencing Hope. In contrast, the field-independent regarded it as integrated into the system and driven by Special Teacher.

Also, each SID has the secondary outcomes of Hope, Happiness, Working Together and Comfort Zone as an interrelated quadrate, which feeds into the primary outcome. While the ordering of these differs, it was still the same secondary outcomes that fed into Learning.

Next, both SIDs end with the primary outcome of Learning. The quadrate of both systems fed into Learning. Also, these systems had the primary outcome feeding back into quadrate. For the field-independent students, Learning fed back into Working Together, while for the field-independent it looped back to Comfort Zone. Both of the SIDs end with the same primary outcome, which had a feedback loop into the system.

Last of all, when comparing the systems of these two cognitive groups there were slight differences, but they were strikingly similar. The most notable differences were the role of Fear, which was integrated into the field-dependent SID, but a separate driving force for the field-independent. Also, the same was true of the role of Friendship, which was integrated into the field-independent, but a separate powerful force for the field-

dependent. While these differences existed in drivers, the systems both form quadrates of the secondary outcomes, which ultimately fed into the primary outcome. In addition to the formation of the quadrate, both systems have the primary outcome of Learning feeding back into the system. Overall, despite the differences in drivers for the two cognitive groups the systems were very similar.

Analysis of Experiences of Field-Dependent Student

First of all, one must examine why both cognitive groups in the learning community were examined, when studying the field-dependent students' experiences. First, one must understand how the field-dependent responds to the learning community environment. It is then important to compare these experiences with the field-independent students. This helps to determine how students of different cognitive types experience the learning community environment. This helps to understand the similarity and differences of these students' experiences. If field-dependents were the only students studied, then it would be impossible to determine what was unique to the field-dependent student and why these experiences matter. This is why a comparison group was developed. Through examination the comparison group, one is better able to understand the experiences of the field-dependent students and whether their experiences differ from the field-dependents. Ultimately, a composite SID was developed for all students regardless of cognitive style to explain the learning community environment.

When comparing the differences between the field-dependent and field-independent students, one can conclude, despite some differences, the experiences were relatively the same. The groups did differ in a few of the definitions of affinities, relationships between

affinities and slight differences in the SID, but overall they were strikingly similar. No matter the cognitive group, students had the same experiences in the learning community.

Last of all, when exploring what the experiences of field-dependent students, the field-dependent affinities and composite SID provide the answers. This is a community where peers and faculty are the most power influences in addition to the students' own fear. These forces mitigate with feelings and actions of Working Together, Hope, Comfort Zone and Happiness. All drivers and secondary outcomes produce the primary outcomes of learning. In a nutshell, these are the experiences of the field-dependent community college student in a learning community.

Learning Communities and Field-Dependent Cognitive Needs

When examining how the experiences of field-dependent students in a learning community relate to the cognitive needs of these students, it has been broken down into the categories of peer support, faculty student interaction, involvement and students with differing abilities. Each of these represents the major cognitive areas of support needed by field-dependent students. By examining each one of these areas, it can be determined whether the learning community met the needs of these students.

Peer Support

It is apparent that learning communities provide the support field-dependents need and support the literature in this area (Astin, 1993; Cross, 1979; Garbowsky, 1995; Grubb, 1999; National Institute of Education, 1984; Shapiro and Levine, 1999; Tinto, 1987; Tinto & Goodsell-Love, 1993; Tinto & Russo, 1994; Walker, 2001).. The affinities of Friendship, Comfort Zone, Happiness, and Working Together support this conclusion.

One way this is established is through the affinity of Friendship. This affinity states that the learning community provides students with peer support. When describing this affinity, students described the classroom environment as one where all students are friends with each other. According to the field-dependent composite Friendship affinity, “I feel comfortable, like somebody could help me out or something.” Then when examining the role of affinity in the mind map, it is a strong driver in the SIDs of the field-dependent and composite, which further illustrates its power. Through the students naming Friendship as an affinity, the field-dependent’s composite Friendship description and this affinity’s powerful role in the SID all substantiate how learning communities provide peer support.

Also, peer support is supported in field-dependent’s composite description of Comfort Zone. Students describe one aspect of Comfort Zone as being at ease with their peers. According to the Comfort Zone field-dependent composite, “And Comfort Zone is like you are comfortable with your members of your class. So you don’t feel like you’re strange in the class, so you feel good, you’ll feel that you belong there, that you can do anything that you’re supposed to do.” The comfort level students feel in the learning community provides peer support, as well.

In addition to the affinities of Friendship and Comfort Zone indicating peer support, Happiness also indicates it. Field-dependents describe being happy within the learning community because of the friendships they had formed with their peers. According to the field-dependent composite Happiness affinity, “We’re all excited to be in the class because it’s a different environment at least with the

other courses that I've taken. It's like I always interact with the other students here. I was just happy to be in class." It is evident in the field-dependent's description of Happiness, the learning community provides peer support.

In conclusion, it is obvious learning communities provide the peer support field-dependent students needs. This was established through the affinities of Friendship, Comfort Zone and Happiness, all of which explicitly describe how the IEP class provided peer support. Students experienced an environment where everyone was friendly with each other, they felt comfortable with their peers, and happy with the friendships they had established.

Faculty/Student Interaction

When examining if learning communities provide the faculty/student interaction support needed for field-dependent students, the research indicates it does (Astin, 1985; Cross, 1979; Sussman, 1994; Tinto, 1987; Tinto & Goodsell-Love, 1993; Tinto & Russo, 1994; Walker, 2001). In the affinities of Special Teacher, Comfort Zone and Happiness, the students described their relationship with their teacher.

First of all, the affinity of Special Teacher supports how learning communities provide faculty/student interaction. The naming of the affinity Special Teacher indicates this. The affinity description revealed students believed the teacher was a skilled instructor, caring and positive. According to the field-dependent composite Special Teacher, "Because Ms. X is really positive person. She's like when I come to school and I see her, I feel like something positive in me and like we're enthusiasts to come to school." The description of the teacher's caring quality indicates the field-dependent

students are able to get their needs of faculty/student interaction met. When examining the SID, Special Teacher was the most powerful driver in the field-dependent students' experience. This was true of each SID developed. Regardless of the students, Special Teacher was the single most powerful aspect of the learning community. Through the description of the affinity and the power of it in the SID, it is clear this curricular tactic provides faculty/student interaction.

Also, faculty student/interaction is part of the Comfort Zone affinity. Field-dependent students indicated feeling comfortable with the teacher as being apart of this experience. According the field-dependent composite Comfort Zone affinity, "And after a while, it's nice and comfortable with the teacher, with the way that she is." The contents of the affinity further demonstrate the increased faculty/student interaction and how it met the needs of the field-dependent students.

In addition to the affinities of Special Teacher and Comfort Zone, Happiness also demonstrates the role of faculty/student interaction. When students described feeling happy within this learning environment, they specifically defined being happy with the teacher. According to the field-dependent composite of Happiness, "The teacher makes the environment happy because she is so positive." Students describe how the teacher influences the contentment level of the class, which points to how the community provides the faculty/student interaction field-dependent students need.

In short, it is clear the learning community environment provides the faculty/student interaction field-dependent students needs. When describing their experiences, the students named Special Teacher as one of the most salient aspects of this learning

environment, which indicates strong faculty/student interaction exists. This was further indicated in the students' own descriptions of feeling both comfortable and happy with the teacher. All of these factors describe an environment where the cognitive needs of increased faculty/student interaction occurs substantially enough for the field-dependent student to succeed.

Involvement

The affinity of Friendship provides evidence that the learning community increases involvement for field-dependent students, thus meeting one of their critical needs (Astin, 1993; Gaff and Ratcliff, 1997; Tinto & Russo, 1994). Students named Friendship as one of the most salient aspects of the learning community environment; therefore, students are more socially involved when they have positive peer relationships. The composite field-dependent affinity of Friendship describes an environment where students felt friendly with everyone, which further demonstrates increased involvement. And friendship was the second most powerful driver in all of the SIDs. Thus, the learning community provided greater social involvement for students based on naming of the Friendship affinity, the description of social interaction and the power of this force in the SID.

Also, the affinity of Learning proves the students were more academically involved. Field-dependent students defined Learning as one of the most prominent aspects of the learning community environment. When defining this affinity, students defined one aspect of this as being the sheer amount of information they had learning. According to the field-dependent Learning composite, "And here it's just one semester and I think that

I have learned more than in high school.” This quote clearly demonstrates an environment where students are more academically engaged. When examining the SIDs, Learning is the primary outcome for all of the SIDs including, field-dependents. The most powerful outcome is Learning, which indicates increased academic engagement.

In short, the field-dependent students described an environment where they were more involved both socially and academically. This was clearly proven by the affinities of Friendship and Learning. The learning community environment involved the field-dependent students and helped to meet an important cognitive need.

Students with Differing Abilities

Also, examining the affinities reveals how the learning community facilitates teamwork, which allows students of differing abilities to succeed, which supports the literature (Cross, 1979; Tinto, Love and Russo's, 1994; Gaff & Ratcliff, 1994; Raftery & VanWagoner, 2002). The affinity of Working Together clearly describes the development of this environment. Working Together establishes the environment needed for students of different abilities to succeed. Not only does it define this environment exists, but the field-dependent composite describes how it helped differing students. In the field-dependent composite of Working Together, the students spoke about the power of teamwork, “So most of the times, I do work better when I'm with a group that I know. So I know them, so I do the job better and I try to like do them... like work better so I can improve the group. So I think the group helps us understand more.” Field-dependents described how collaboration helped everyone to succeed. It not only substantiates that learning communities enable students to collaborate, but it

also helps students of differing abilities. In short, the development of the Working Together affinities proves that teamwork is a salient part of a learning community environment, meaning this will help students of differing abilities.

Analysis of Cognitive Needs

It is clear based on the responses of the field-dependent students and the SID in the learning community that this curricular structure meets the cognitive needs of these students. The learning community provided peer support and faculty interaction, which students described as making them happy and comfortable. Students also felt more involved with the college because of increased interaction with students and faculty and an increased feeling of engagement with the curriculum. In addition to peer support, faculty interaction and involvement, students also felt there was an environment of collaboration, which existed and helped benefit students of differing abilities. In short, the learning community environment addressed all the major cognitive needs of the field-dependent, which included peer support, faculty student interaction, involvement and a collaborative learning environment that supports students of all levels. The experiences of field-dependent students at Illinois Community College substantiates that learning community met the needs of these students.

Findings

When one considers the dominant cognitive style of community college students, then learning communities are an appropriate applied model. This model increases peer group and faculty/student interaction and increases student involvement — all essential ingredient for the success of field-dependent students. This curricular tactic addresses the

specific needs of these students and will hopefully increase the persistence of community college students.

Learning communities are also especially appropriate for field-dependent community college students when one considers the typical environment, which is a “supermarket” approach to education. This type of environment is destructive to the field-dependent student. These students need to be a part of a supportive environment, not an environment where students are merely head counts in Fall Term Enrollments. This applied model would transform the community college educational environment from one that is harmful to field-dependent students to one that is designed specifically with them in mind.

Last of all, learning communities are especially geared to provide the type of environment field-dependent students of differing abilities need to succeed. The learning community provides a supportive environment with peer support, which enables both remedial and non-remedial students to excel. This is precisely the type of prescriptive curriculum field-dependent students need to succeed in higher education. It creates a community where students of differing abilities can come together, support each other, and all reap positive educational outcomes.

Conclusions and Recommendations

After examining the needs juxtaposed with the benefits of learning communities, it is obvious why this is an appropriate curricular tactic for the field-dependent community college student. The following are the reasons learning communities are recommended for the dominant cognitive style of community college students:

- Provides academic and social peer group development, which field-dependent students need.
- Facilitates a needed increase in teacher/student interaction.
- Increases student involvement with academic environment.
- Creates the ideal environment for remedial and non-remedial field-dependent students.

When one examines the needs of community college students and the benefits of learning communities, it is clear this is an ideal curricular reform. Alas, successful learning communities do not happen by accident. In order for learning communities to flourish there must be a deliberate change in the curriculum. The following are a list of recommendations for the successful implementation of learning communities:

- Create a “culture of evidence” to provide a rationale for the curricular change.
This includes qualitative and quantitative data, which will target the outcomes of curriculum tailored for a specific cognitive style.
- This should be a part of an overall curriculum reform to meet better the needs of community college students’ cognitive style.
- Professional development needs to be provided to faculty, staff, and administrators in creating these learning clusters.

In addition to this study, there must be additional research conducted in this area.

While this case study provides a fascinating glimpse of the possibilities, there still needs to be more research examining the effect of cognition and curriculum. The following is a list of recommended areas for further investigation:

- There must be more research conducted in the representation of field-dependent students in community colleges. It is imperative to understand how community college students differ cognitively compared to their four-year counterparts. While there is substantial research detailing everything from income to age of community college students, there is a dearth of information on, whether these students think differently.
- Additional research is needed to examine how best to support field-dependent community college students. Learning communities are one way, but how else can colleges address eliminating the supermarket approach, which is working against these students?
- Further research is needed to examine the effects of learning communities and field-dependent students. While the results of this study provide fascinating evidence, further investigation in this area is needed to examine this issue.

As the body of literature grows on cognitive styles and learning, higher education institutions will be compelled to alter curriculum to serve students better. The traditional cookie-cutter method of education will one day be a thing of the past. Instead, curricular tactics like learning communities will be employed to target the specific cognitive needs of students.

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Vita

Jonathan David Carroll was born in Abilene, Texas on March 18, 1977 to John and Paula Carroll. After graduating from Hawley High School, in Hawley, Texas in 1995, he entered Western Texas College in Snyder, Texas where he earned an Associate of Arts degree in Journalism in 1997. He then transferred to the University of Texas at Austin. While at UT, Jonathan was a member of the Americorps, where he tutored 1st and 3rd graders in reading and math. In 2000, he earned a Bachelor's in Journalism. The following year, he worked for AIDS Services of Austin as Volunteer Coordinator and as a freelance journalist for the *Austin Chronicle* before leaving for graduate school at the University of Michigan at Ann Arbor. In 2002, he earned a Master of Education in Higher Education. In September 2002, he entered the doctoral program in Educational Administration at The University of Texas at Austin where he specialized in Community College Leadership.

Jonathan moved to Chicago, Illinois in 2004 to serve as the presidential intern to Dr. Brent Knight at Morton College. After completing his internship, he was hired full-time as the Assistant Dean of Academic Affairs at Morton.

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