EARLY-CAREER MUSIC TEACHERS’ PERCEPTIONS OF THE FACEBOOK BAND DIRECTORS GROUP AS PROFESSIONAL INDUCTION

BY

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DISSERTATION

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ABSTRACT

The dissertation investigates how early-stage teachers choose to engage with Facebook Band Directors Group (FBDG) and their perceptions of FBDG as a form of teacher induction. This study will contribute to understanding of FBDG participation’s consequences for instrumental teacher development and success. To realize this purpose, this study describes early-stage FBDG members’ demographic background, engagement and satisfaction with the group, and the group’s contribution to their professional induction.

An online survey of early-stage teacher members of FBDG was made available for 28 days to gather information about demographics, engagement and satisfaction with the group, and perceptions about the group’s contribution to professional induction. Data analysis of survey responses (n = 208) shows that FBDG can serve as a teacher-driven, effective, content-area and grade-level specific induction support for early-stage band directors.

Analysis reveals that FBDG provides effective emotional and practical support to early-stage teachers, helping reduce feelings of isolation and being overwhelmed, potentially improving teacher success in the classroom. Members provide informal professional development for users whose levels of participation vary widely, underscoring FBDG’s value and effectiveness as a community of practice. The report of the study concludes with discussion of issues raised and implications for early-stage band directors, facilitators of school-sponsored induction programs, and music teacher preparation programs.
~To Megan~
My best friend, my love, the one in whom my soul delights.
~And to Gran and Pop~
For your generosity and belief that education is the key to an open mind.
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CHAPTER 1

INTRODUCTION

Currently in the United States, the makeup of the teaching profession is far less experienced than it was three decades ago. The modal, or most common, length of teaching experience in the United States dropped from 15 years to just 5 years during this period. While the proportion of first-year teachers has experienced a modest increase from 3% to 4% of the total work force, because the teaching force has also increased by 46.4%, numerically there are far more beginners than before (Ingersoll, Merrill, & Stuckey, 2014).

As early-career teachers have become the largest portion of one of the largest professions in the country, new teacher induction programs have also grown considerably. The percentage of beginning teachers who reported participating in some kind of first-year induction program rose from 51% in 1990 to 91% by 2008 (Ingersoll, 2012). Additionally, as of the 2015-16 academic year, 29 states required some type of support for new teachers (Goldrick, 2016) as part of the overall program for professional development for all teachers.

Professional development for teachers encompasses a wide array of both formal and informal activities and interactions that provide practical improvement and personal growth for educators. Induction represents a unique, formative phase in learning to teach and includes opportunities for professional socialization often carried out via support programs and policies designed for early-stage teachers (Feiman-Nemser, 2010). Professional teacher induction is a specialized form of professional development designed to meet the needs of the profession’s newest members. Induction is primarily about building effective teachers who provide optimum learning for students and contribute to the strength of the teaching force. Secondarily, induction
seeks to retain the most skilled early-stage teachers in order to maintain the vitality of the profession (Paine & Schwille, 2010).

**Needs of Early-Stage Teachers**

Following several years of collective learning and preparation in teacher education programs, early-stage educators face significant challenges in their first three years of elementary and secondary school teaching. Though their job demands intensive interaction with young students, these newcomers are frequently left on their own among their professional colleagues to succeed or fail within the confines of their classrooms (Bell-Robertson, 2014; Conway & Christensen, 2006; Ingersoll, 2012; Jacobs, 2008).

Music teachers in their first three years must meet the same challenges, but, compared to their general education counterparts, they report a wider range of responsibilities including being charged with larger class sizes, management of large budgets and inventories, and production of multiple public performance events (Conway & Zerman, 2004; DeLorenzo, 1992; Haack, 2003; Krueger, 2000). It is this collection of challenges that effective programs of professional music teacher induction must address if early-stage teachers are to be helped not merely to remain in the profession, but to grow into reflective master educators.

**Induction of Early-Stage Teachers**

Induction for early-stage teachers is a longstanding focus within education research and reform in general education (Ingersoll, 2011) and music education (Conway, 2006). The concept driving induction is that teaching is a complex job, and although preservice teacher education can be quite substantial, a significant portion of the knowledge and skills necessary for successful teaching can only be gained on the job full time (Feiman-Nemser, 2003; Krueger,
At its most effective, professional induction is sustained, intensive, practical, collaborative, and participant driven (Rutherford, 2010).

While nine out of ten early-stage teachers take part in some type of induction program (Ingersoll, 2012), the objectives and content of the programs provided vary considerably (Conway, Krueger, Robinson, Haack, & Smith, 2002; Feiman-Nemser, 2012). Some of the most prevalent emphases of induction programs are teacher socialization, individualized professional development, and teacher performance assessment (Feiman-Nemser, 2012; Ingersoll & Strong, 2011). Induction programs can include orientation sessions, collaborative planning time with same-subject colleagues, meetings with supervisors or administrators, professional workshops, extra classroom assistance, and reductions in workload (Ingersoll, 2012; Ingersoll & Strong, 2011). A prevalent form of induction is mentoring (Ingersoll, 2012), which will be examined next.

**Traditional mentoring of early-stage teachers.** Mentoring is so regularly a part of teacher induction programs that it has almost become synonymous with induction (Ingersoll, 2012). Mentoring is personal guidance for an early-stage teacher typically provided by a seasoned veteran teacher within the same school or district (Klecka, 2004). As with all programs of teacher induction, teacher mentoring programs vary in duration, intensity, the number and type of early-stage teachers served, and how mentors are selected, prepared, assigned, and compensated (Ingersoll & Strong, 2011).

**Communities of practice.** Another medium of induction that has grown in use since the early 2000s is the formation of communities of practice. Communities of practice are “groups of people who share a concern or a passion for something they do and learn how to do it better as they interact regularly” (Wenger, 2006, p. 1). There is a great deal of flexibility in the ways that
communities of practice function. Participants voluntarily interact and learn together regularly though they may not always work together in the same building or even district. Unlike traditional mentoring, learning within a community of practice is not dependent upon the presence of a single authoritative teacher mentor, but spreads opportunities for both teaching and learning among the community members (Wenger, McDermott, & Snyder, 2002).

Communities of practice devoted to teaching and the teaching of music specifically already exist in many forms and locations. Some such communities of practice serve the creation, discussion, and sharing of music and musical practices (Brewer & Rickels, 2014; Rickels & Brewer, 2017), while others are devoted to the professional growth of music educators (Blair, 2008; Smith, 1994). Each of these groups must exhibit three crucial characteristics: domain – an identity defined by a shared area of interest; community – member engagement in joint activities like discussion, mutual help, and information sharing; and practice – development of a shared repertoire of resources such as experiences, tools, and ways of addressing common problems (Wenger, 2006).

**Effects of induction programs.** Studies of early-stage teacher induction programs provide empirical support for the claim that induction positively influences teacher retention (Ingersoll & Smith, 2004a, 2004b; Ingersoll & Strong, 2011), teaching performance (Ingersoll & Strong, 2011), and student achievement (Glazerman, Isenberg, Dolfin, Bleeker, Johnson, Grider, & Jacobus, 2010; Ingersoll & Strong, 2011). An exception was the mixed results of Glazerman, et al.’s (2010) large, randomized, and controlled trial. This study found that, after early-stage teachers had undergone two years of induction, there were significant beneficial differences in their students’ achievement, but no differences in teacher classroom practice or teacher retention. These conflicting findings may be due to differences in when variable effects were measured.
since student scores were measured across the full two years but the teachers were only observed one-quarter of the way through the program. Generalizability may also have been an issue since Glazerman et al. intentionally focused on large, urban, public school districts with a majority of students from families below the federal poverty line. Ingersoll and Smith (2004b) support the suggestion that school context may play a significant role in the effectiveness of teacher induction programs.

In addition to differences in school setting, the diversity of content within individual induction programs and the ways in which programs are administered can create inconsistencies in the quality and quantity of teacher induction (Conway, 2003; Gallo, 2015; Glazerman et al., 2010; Ingersoll & Smith, 2004; Ingersoll & Strong, 2011). Studies suggest that more comprehensive and intense induction programs applied over longer periods of time reap the most meaningful benefits for early-stage teachers (Glazerman et al., 2010; Ingersoll & Smith, 2004). It remains unclear, however, as to how long or intense induction should be.

Implementing induction programs is a complex task, potentially straining the financial resources and human capital of schools and districts. This is particularly true for schools in urban and rural areas where it is difficult to hire enough teachers. These school districts also often engage larger numbers and percentages of new teachers (Ingersoll et al., 2014). One means of carrying out induction that may assist any school district, but particularly those larger or rural ones, is to take advantage of online technological resources (Spicer & Dede, 2006).

**A Distributed Community of Practice as a Context for Induction**

Since the 1990s, information/communication technologies and network-based learning have significantly expanded, offering flexible approaches to support professional teacher induction programming in an online environment (Lock, 2006; Spicer & Dede, 2006). Online
learning communities can be well suited to urban and rural school districts in that they provide avenues for teachers to interact across distance, often asynchronously, allowing them to find and access the expertise of mentors and peers who are teaching the same grade levels and content areas. Using web-based platforms, groups of teachers from different regions and localities can share their concerns and passions for education with one another and discuss how they can improve their own practice. In doing so, they constitute a community of practice as defined above. Because these groups do not rely on face-to-face meetings and interactions for connecting members (Wenger et al., 2002, p. 115), they are viewed as distributed communities of practice (Brewer & Rickels, 2014; Laumann, 2010; Mackey & Evans, 2011, Wenger et al., 2002).

Distributed communities of practice (DCP) are characterized by their distance, size, organizational affiliation, and cultural differences. These four factors not only distinguish communities as being DCP, they also make them more challenging to cultivate and sustain (Wenger et al., 2002). Geographic distance between members makes the community more reliant upon the technology that supports it in order for individuals to interact with one another. Additionally, this reliance may create a psychological distance since the community may not have a consistent presence for all members. Since DCP typically draw from a larger membership base, it can be difficult to know every community member personally, particularly when compounded by issues of distance and technology. This can be further complicated by organizational and cultural differences among community members that reveal themselves through conflicting priorities or communication difficulties (Wenger et al., 2002).

As technologies that support DCP continue to expand and evolve, studies have shown that DCP are capable of providing social, emotional, practical, and professional support to educators (DeWert, Babinski, & Jones, 2003; Donna, 2009; Maxwell, Harrington, & Smith,
DCP also have the potential to provide additional opportunities for increased sensitivity to others’ comments and development of in-depth supportive relationships through exchange of personal information, persistent reflection on the writings of others, and learning practical experiences and theoretical insights from others (Maxwell et al., 2006).

Without having a shared teaching context that is part of face-to-face induction models, an online program may represent different levels of relevance to different participants that may result in multiple levels of member participation (Klecka, 2004; Stanley, Snell, & Edgar, 2014; Wenger, McDermott, & Snyder, 2002). Some members may seek to develop a shared learning agenda, other may be drawn in by the value of having a community, and others may simply wish to improve their own practice.

This diversity of DCP member motivations manifests itself in categories of community participation: core, active, occasional, and peripheral (Wenger-Trayner & Wenger-Trayner, 2011). Within communities of practice theory, these categories are all viewed as necessary and valued components of a DCP, with no connotation as to their induction potential or whether learning is occurring relative to participation level (Wenger et al., 2002). Existing research in music education has found that FBDG members’ production of content does mimic these participation categories (Brewer & Rickels, 2015) but members’ satisfaction and engagement (whether producing or consuming content) as indications that the group is a viable community of practice capable of aiding early-stage teachers’ induction has yet to be examined.

**Possible limitations and challenges of DCP.** Utilizing DCP as contexts for teacher induction challenges traditional thinking about the nature of teacher induction. The relatively synchronous in-person interactions with mentors and on-site induction activities can benefit early-stage teachers, whereas asynchronicity of communication and the lack of a locally shared
teaching context in online induction and mentoring may not (Klecka, 2004). Although a possibly
disadvantageous time lag exists with asynchronous DCP; this delay may provide additional
beneficial time for participants to process new knowledge and information, apply it to new
contexts, and potentially make connections between diverse ideas to better structure reflective
responses (Maxwell et al., 2006). With the possible exception of emojis to express an idea or
emotions, online engagements that are limited to written text do not enable participants to read
valuable forms of non-verbal communication.

Finally, DCP potentially support relationships for the exchange of knowledge, but
without also establishing a hierarchy through which that knowledge must travel (Wenger et al.,
2002). This structure is both an asset and liability. The flat nature of expert knowledge within
DCP allow both novice and master teachers to function as peer mentors (Blair, 2008; Holmes et
al., 2013; Maxwell et al., 2006; Wenger, 1998). This can instill professional confidence and
empower early-stage teachers, providing specifically sought, content-relevant feedback from
multiple professional peers (Blair, 2008; Rickels & Brewer, 2017; Stanley et al., 2014). At the
same time, it is difficult to control the type and quality of the knowledge made available in this
context. This leaves open the question of whether that shared knowledge is being used for
constructive self-reflection or is simply perpetuating ingrained practices and beliefs (Abramo,
2016; Klecka, 2004; Stanley et al., 2014).

**Induction of early-stage teachers via social network services.** One type of web-based
information and communication technology, social network services, appears particularly well
positioned to support online teacher induction due to its widespread accessibility (Al-jarf, 2006;
Holmes, Preston, Shaw, & Buchanan, 2013). The pervasiveness of social network services in
contemporary life enables interactive online participation and collaboration on a scale that was
impossible during the last century (Pilgrim & Bledsoe, 2011; Schlager, Farooq, Schank, & Dwyer, 2009).

The social networking service Facebook has more than one billion daily active users (Facebook, Inc., 2016). Facebook allows a user to create and share an online identity, create and join groups based on interests, and connect to others though a range of avenues. Originally created to facilitate social interaction and communication among Harvard University students, Facebook can now be used by anyone over the age of 13 with an email address to share information, knowledge, and documents through built-in applications (Rutherford, 2010; Wang, Scown, Urquhart, & Hardman, 2014). Teachers too are using Facebook not just as a means of socializing with peers, but for collaborating and sharing information relevant to issues within their classrooms (Bissessar, 2014).

In music education, a notable example of a DCP is the Facebook Band Directors Group (FBDG). Any member of Facebook can ask to join FBDG or be invited to join by a member, but as a “closed group,” only members can see what other members post to the group. Originally formed in November 2010 under the moniker “I’m a Band Director,” the group was created by Brian Wis, an Illinois music educator, to combat declining participation in then-current discussion forums and bulletin boards related to music education related to the growth of Facebook’s popularity (Brewer & Rickels, 2015). According to Wis, the group was designed to bring the wind band area of the music education profession under one virtual roof to focus on exchanging teaching methods and experiences to provide informal professional development (BDG Advisory Board, 2013; Wis, 2013). FBDG has grown from 2,500 members in its first six months to more than 19,000 practicing teachers (as of June 10, 2017) of all experience levels (BDG Advisory Board, 2013; Brewer & Rickels, 2014; Wis, 2013).
Studies of FBDG have explored the frequency of curricular, co-curricular, and community-oriented content, demonstrating that the group’s activity was representative of the everyday professional duties and concerns of practicing band directors (Brewer & Rickels, 2014; Rickels & Brewer, 2017). In addition, an analysis of the FBDG’s structure and dynamics by Brewer and Rickles (2014) found that the group meets the criteria for a functional community of practice as defined by Wenger (2006).

Significance of the Study

With many more early-stage teachers taking part in a variety of professional induction programs, research on the induction needs of early-stage teachers continues to be an area of need (Conway et al., 2002; Feiman-Nemser, 2012; Ingersoll, 2012). Early-stage music teachers in particular experience not only the professional isolation commonly felt by early-stage teachers, but are often challenged by a number of additional content-specific responsibilities (Conway & Zerman, 2004; DeLorenzo, 1992; Haack, 2003; Kreuger, 1996). Unlike much formal induction, DCP supported by social network services such as Facebook offer opportunities to break down traditional informational hierarchies and provide effective, content-area and grade-level specific support (Brewer & Rickels, 2014; DeWert et al., 2003; Donna, 2009; Maxwell, Harrington, & Smith, 2010). However, scholars are able to offer only limited understanding of the demographic characteristics, motivations, and behaviors of the early-stage teachers using these services. In particular, previous research determined FBDG members’ production of content corresponds with community of practice participation categories. However, early-stage teacher members’ engagement and satisfaction (whether producing or consuming content) as signs of a DCP capable of supporting induction has not yet been investigated.
Unlike some other online platforms and professional groups, the community of teachers engaged in FBDG, and other groups like it, is notable in that it has achieved a critical mass of membership to become nearly self-sustaining and highly user-driven (Brewer & Rickels, 2014). FBDG’s content is a direct reflection of the daily work of band directors, and members value it as a form of content-specific professional development (Rickels & Brewer, 2017). Despite inherent limitations of asynchronous, text-based communication, varied member participation, limited control of the quality or value of the knowledge available, and how that knowledge is being used, FBDG and groups like it are playing a role in the professional induction needs of early-stage music teachers.

**Purpose of the Study**

The dissertation investigates how early-stage teachers choose to engage with FBDG and their perceptions of FBDG as a form of teacher induction. This study will contribute to understanding of FBDG participation’s consequences for instrumental teacher development and success.

**Research Questions**

The research questions to be addressed by the methods of the study are:

1. What are the personal and professional demographics of early-stage teacher participants in FBDG?
2. How do early-stage teacher participants perceive FBDG as a form of professional induction?
3. How do members engage with FBDG and what is their satisfaction toward the group’s activities?
4. To what extent does one’s category of participation in an online professional community of practice (Wenger-Trayner & Wenger-Trayner, 2011) result in differences in group engagement (consumption and production) and satisfaction among early-stage teachers?

5. Do demographic and contextual characteristics of early-stage teachers represent differences in: a) the circumstances leading to participation, b) the perception as a form of professional induction, or c) the type of participant interaction?

**Definition of Key Terms**

The following definitions are provided to clarify the meanings of terms as used in the study.

*Early-stage teacher.* A newly certified school educator in his or her first three years teaching elementary or secondary school. Early-stage teachers are referred to by a variety of names (beginning, novice, new, etc.). Although definitions of teacher career cycles vary, the first stage commonly concludes following the third year of experience, at which point many teachers become eligible for tenure or to serve as a cooperating teacher for a student teacher (Eros, 2011).

*Professional induction.* A specialized form of professional development specifically targeting teachers who are new to the field. Induction is a unique, formative phase in learning to teach and a process of professional socialization that often takes shape as support programs and policies for early-stage teachers (Feiman-Nemser, 2010).

*Mentoring.* Personalized professional guidance provided by seasoned veterans to beginning teachers in schools. Having become the dominant form of educator induction, “mentoring” and “induction” are often used interchangeably (Ingersoll & Smith, 2004a). In the current study, these terms will be used in that way.
**Professional development.** Formal and informal activities and interactions that may provide practical improvement and personal growth for educators (Feiman-Nemser, 2010).

**Social network site.** A web-based service that allows individuals to construct a public or semi-public profile within a bounded system, articulate a list of other users with whom they share a connection, and view and traverse their list of connections and those made by others within the system (Boyd & Ellison, 2007).

**Community of practice.** Groups of people who share a concern or a passion for something they do and learn how to do it better as they interact regularly (Wenger, 2006).

**Distributed community of practice.** A community of practice that “…cannot rely on face-to-face meetings and interactions as its primary vehicle for connecting members” (Wenger et al., 2002, p. 115).

**Levels of participation for members of communities of practice.** Categories of membership and participation within communities of practice based upon individuals’ frequency and type of engagement (Wenger, 2006). In the current study, the following four levels as developed by Wenger-Trayner & Wenger-Trayner, 2011, are used: Core, Active, Occasional, and Peripheral. **Core** members are the smallest group and their passion and engagement nurture the community. **Active** members are slightly more numerous and participate regularly but with less intensity than core participants. **Occasional** members are much larger in number and participate only when a topic interests them or they have something specific to contribute. **Peripheral** members are the largest group and maintain a connection to the community, but rarely participate visibly.
CHAPTER 2
REVIEW OF LITERATURE

As described in the previous chapter, early-stage music educators’ first professional teaching experiences influence whether they are successful in the classroom and remain in the profession. Many schools and districts have therefore implemented formal teacher induction programs that are required of newly hired educators (Goldrick, 2016). However, inconsistency in how induction programs are implemented and a lack of content-area-specific support can result in poor job performance and attrition for early-stage music educators facing distinctive responsibilities and professional and physical isolation from other music teachers.

Context specific, social, emotional, practical, and professional support to early-stage teachers can potentially be provided by DCP that use computer networking technologies, such as social media. In an effort to provide informal professional development, FBDG is one such community that brings together new and experienced band teachers, distributed by time or geography, under one virtual roof in order to exchange teaching methods and experiences.

This chapter presents an overview of the literature relevant to this study. The literature is presented in three primary sections: (a) professional induction of early-stage music educators; (b) online supports for early-stage teachers; and (c) teacher professional development through social network services. Following each section, a synthesis is provided of the research addressing the specific area and its relationship to this study.

Due to the rapid pace of change in computer technologies and social media platforms, the scope is focused on contemporary literature, specifically research that has been conducted within 15 years of this study. Exceptions have been made for less recent studies that are critically relevant to this investigation.
Professional Induction of Early-Stage Music Educators

Professional induction for early-stage teachers has become a significant focus within teacher education in general education and in music education. This section presents relevant research on induction programs specifically geared toward beginning music teachers and the influence these programs may have on teaching performance and teacher retention.

In an examination of a traditional professional induction program that utilized primarily face-to-face mentoring, Smith (1994) investigated Project 2000, a program for beginning music teachers in Minnesota. This two-year study involved 14 mentees representing all content areas (i.e. instrumental, choral, general music) and grade levels of music instruction and seven mentors chosen based upon recommendations and matched to the mentees’ content areas and grade levels. Each year there were seven meetings of all the participants, including one informal dinner that was followed by six more structured sessions, held from the second to the eighth month of the school year. Individualized mentoring took place between meetings over the telephone and in participants’ schools. The program was described and evaluated using four collections of data: a needs survey, which provided a ranking of common areas of beginning teacher concern; program evaluation forms, regarding relative strengths and weaknesses of the program and completed at the last meeting of each year; a Mentoring Scales Questionnaire, given at the end of the second year regarding the amount and quality of mentoring activity in a mentoring relationship; and a Mentoring Style Indicator¹, designed to reveal appropriate mentoring methods for helping young professionals, completed halfway through the second year of the program.

¹ The Mentoring Style Indicator was based upon Gray’s mentor-protégé relationships model (Gray, 1988). This model was designed to anticipate the growth in competence and independence of a protégé and recommends effective mentoring styles to meet such shifting needs over the course of the relationship. The end goal of the model, and the end goal of many
Participants in Smith’s study indicated that adequate mentoring opportunities and meaningful assistance were provided through several key program components: the informal dinner portion of each month’s meeting; opportunities provided to visit one another’s classroom situations in a supportive and non-evaluative manner; and the professional development presentations provided at the monthly meetings. Analyses indicated that the mentors and mentees highly valued the mentoring relationships facilitated by Project 2000. Analysis of the Needs Survey data pointed toward desired improvement in the professional areas of classroom management, lesson planning and organization, problem solving, knowledge of literature and materials, special learner accommodations, technology skills, and knowledge of political structures. Data from the Mentoring Style Indicator suggested that while all participants favored a collaborative mentoring approach, first-year mentees preferred receiving slightly more prescriptive help than mentors liked to provide.

Mentoring triads, consisting of a first-year mentee, a second-year mentee, and a mentor, were one of the program features deemed particularly effective, informing and strengthening the perspectives of the other music teachers. In addition, the most successful pairings seemed to be between individuals who shared similar teaching assignments in terms of content area and grade level.

With regard to the current study, based upon the professional induction program’s effectiveness in supporting and nurturing beginning music teachers, Smith suggested that because Project 2000 was designed for a metropolitan context, (1) future research might consider what program elements could help participants meet as a large group or observe one another’s teacher induction methods, was to help the protégé function effectively without the aid of the mentor by increasing the level of protégé freedom and responsibility over time.
classrooms when faced with greater geographic separation, (2) what personal and professional needs might be different in another setting, and (3) what roles technology might play in long-distance mentoring.

The role of context-specific mentoring of music teachers transitioning from novice to professional was investigated by Montague (2000). This collective case study involved four public school music teachers, two women and two men, in their initial year of teaching. It also included their three mentors, all of whom had music education as their teaching specialty but had not all served as mentors previously. The seven participants were selected by the researcher in collaboration with district administrators of three school districts in Oregon and Washington. The teachers taught in a variety of settings and taught various specializations, including middle school band, elementary through high school strings, and elementary-middle school general music and strings.

One or two semi-structured interviews were conducted with each participant over a period of 10 weeks between March and May. The decision to conduct the interviews in the spring was informed by other research findings that suggested beginning teachers’ need for mentor teacher support decreased over the course of the first academic year. Montague employed a grounded theory analysis to allow themes to emerge through continuous interaction between analysis and data collection.

Montague found that the situational contexts of the mentoring pairs’ interactions varied widely and that mentors and mentees viewed their roles very differently. Two of the mentees felt subservient to their mentors and restricted interactions to professional information, while the other two were more friendly and open to discussing an array of personal and professional topics. Although some mentors perceived their role as meeting the mentee’s needs for information and
support, others saw themselves in a position of higher status whose job was to impart what they believed the mentee needed. The complex interactions of each mentor-mentee pair led some first-year teachers to flourish while others struggled due to preexisting relationships with mentors and district-wide mentor program guidelines and scheduling. These results suggest that providers of mentor programs must be aware of differences in mentee and mentor expectations, and provide strategic accommodations when obstacles arise.

Early-stage music teacher mentor practices were examined by Conway (2003) within public school districts in central Michigan. Participants included 13 first-year music teachers, their assigned mentor teachers, and their building principals. Data collection included beginning music teacher focus groups, in-class observations, and individual interviews with each of the participants. In addition, some of the beginning teachers kept journals of their experiences throughout the year, and the investigator kept a log of all interactions with participants.

Despite the state of Michigan requiring all school districts to provide mentors for beginning teachers, Conway found a lack of consistency in the types of mentor programs being offered. These variations were associated with the type of school, the teachers’ responsibilities and their classroom settings, the type of mentor assigned, and the amount of compensation and training provided to the mentors. The level of beginning teacher satisfaction with the programs also varied depending on the degree of contact each mentee had with their assigned mentor, and whether the mentor and mentee were matched by subject area. Content of the mentor/mentee interactions included: administrative duties, classroom management, parent interaction, building and district policies, and personal issues. Conway observed that there was little focus on curriculum discussion due to many participants not being assigned a content-specific mentor.
Because one of the inconsistencies in music teacher mentor programming is the timing of mentor assignment, Conway (2003) suggested identifying the mentors well in advance of the start of school to better aid new teachers with the first days of school or summer music camps. To boost beginning teachers’ satisfaction with and sense of value of the mentor programming, and offer more guidance regarding curriculum, Conway further recommended scheduling time for mentors to observe beginning teachers actively teaching in their classrooms. Finally, Conway concluded that opportunities should be provided for the mentor and mentee to get to know one another outside of the work context in order to establish clearer expectations about what the relationship could be, thereby potentially enabling teachers to focus on important professional issues earlier in the process.

In 2015, Conway revisited this 2003 investigation into the mentoring experiences of early-stage music teachers by examining the current reflections of the original 13 participants who were by then experienced teachers. The purpose was to understand whether the findings of the original study remained relevant more than 10 years later, and to seek possible additional insights into mentoring. Participants were the same 13 teachers who were entering their first full-time public school music education positions in the fall of 1999 and 2000 in a variety of school contexts in central Michigan. Eleven years later, four participants were still in their original positions and one had left the teaching field. In addition, ten participants had recently served as a cooperating teacher and/or a mentor teacher for a first-year teacher.

Conway’s comparison of the 2003 report with this 2015 analysis found several points that remained consistent. Mentor programs lack consistency from program to program and context to context resulting in conflicting perceptions of such programs’ value among teachers and administrators. Beginning teachers still rarely ask curricular questions during the first year of
classroom experience. Beginning music educators still need not just mentoring from another teacher, but from a music teacher due to the distinctive needs of music teachers. Ample time for mentor-mentee interaction is also necessary for both parties to spend time observing in the classroom and to have informal time together as well.

The participants found mentoring to be valuable professional development not just for the mentee but also for the mentor. There was disagreement among the participants regarding just who should mentor, particularly when it came to the use of retired teachers as mentors. The participants all suggested that early-stage teachers need to take some responsibility for their own professional induction by being proactive in seeking out help. Conway found that these findings mirrored other current research studies on mentoring in education.

Conway and Zerman (2004) examined the perceptions of a first-year instrumental music teacher, Tavia, regarding professional induction and the first year of teaching. This case study drew on the teacher’s written journal, mentor/mentee email communications, classroom teaching observations, an open-ended questionnaire, and individual interviews with the teacher, mentor, and building principal.

In the early months of the job, Tavia became overwhelmed and concerned due to multiple issues: professional isolation as music teacher, managing large numbers of students, the variety of student needs based on the instrument they play, a lack of down time during class, very public evaluations, handling large sums of money from many sources, and many outside-of-school requirements like festivals, trips, and fundraisers. She took it upon herself to find an experienced teacher mentor who was teaching the same content and grade level within the school district. Though the mentor was not able to address building specific issues, the two did have a successful mentor-mentee relationship based on personality, moral support, and assistance with content-
specific concerns. Since both Tavia and the mentor were working very similar jobs, many of Tavia’s questions related to issues the mentor had previously experienced and thus the mentor could easily guide her. The similarity of their teaching experiences was credited for helping Tavia move beyond the doubts and concerns that brought her future in the profession into question.

The district-sponsored induction program seminars provided some benefit as well, but failed to provide opportunities to interact with other music teachers or experiences focused specifically on the music classroom. Conway and Zerman concluded that because of the differences between music and general classrooms in terms of size and content, as well as the professional isolation and required public performances, generic beginning teacher programs alone do not provide adequate support.

In a similar study, Conway and Christensen (2006) examined the perceptions of a first-year middle school instrumental music teacher, Stephanie, regarding professional induction, specifically probing the quality of programs provided by the school district, programs offered by the state music organizations, programs attended by the teacher, and informal experiences found to be helpful by the teacher. Conway and Christensen explored which programs were most useful during the first year, what improvements could be made to the programs, how Stephanie described her growth over the year, and how Stephanie’s growth interacted with her professional induction experiences. The study was a narrative inquiry case study in which Stephanie was selected as a critical case. Critical cases are those that can make a very vivid point due to how they relate to the larger order of their context. Stephanie was selected because she had been a strong undergraduate student who minored in a non-music teaching field, was completing her masters degree, and came from a family of teachers. Conway’s belief was that Stephanie would
provide more depth of understanding due to her background outside the field of music and professional expectations tempered by growing up with teachers as parents.

The primary data source was Stephanie’s 150-page, single-spaced journal written over the second half of her first year of teaching. Approximately three-quarters of the way through the year, the researchers observed Stephanie teaching in her classroom for one day. Prior to the researchers having read any journal entries, they also interviewed her regarding her teaching and professional development experiences to that point.

Conway and Christensen found Stephanie perceived that generic professional induction offerings were less useful than those designed to be music specific. Though some school districts compensate for this lack of music-specific content through supporting attendance of conferences and workshops, even if these are within music, they do not offer what is needed most. Conway and Christensen also found addressing issues of isolation to be a necessary improvement in professional induction. Based upon Stephanie’s descriptions, the authors asserted that professional induction should help early-stage teachers find a sense of physical, emotional, and intellectual belonging in a school before delving directly into issues of student learning. Additionally, for those teachers in contexts that involve participation in adjudicated ensemble events, professional induction may need to include clinicians or mentors to address both the technical and emotional aspects of that participation.

The first study reviewed here to examine the effects of induction on early-stage band directors specifically, Jacobs (2007) investigated the perceptions of beginning band directors and their mentors regarding their mentor-mentee relationships. Interviews were conducted with five first-year high school band directors and their mentors, all in Florida, over a six-month period. Criteria for selection of the first-year directors included possession of a bachelor’s in music
education and a teaching license, employment as the head director at a public high school, and participation in a mentoring program operated by the school, district, or state music organization. Mentors from subject areas outside of music who were assigned to first-year directors were not included due to their lack of expertise in music education. The researcher worked with state music organizations and school music supervisors to identify prospective participants. Attempts were made to include a variety of school, teacher, mentor, and band program demographics.

Jacobs found a lack of consistency among the mentoring programs, even those being operated by the same supervisory organization. As a group, the mentees believed their role was to ask their mentors questions over the phone or email, and the mentors believed their job was to respond to such questions with advice and examples rather than telling the mentees exactly what to do. The mentors expressed an additional belief that it was important to establish a relationship outside of the workplace via informal meetings to get to know their mentees on a more personal level. As time passed, the mentees became more comfortable interacting with the mentors and asked questions more related to pedagogy rather than class management. Over time, the mentoring pairs were also in contact less often, as mentees expressed less need for confirmation of their actions. The mentees believed their mentor relationships positively impacted their teaching technique, primarily citing the successful performances of their ensembles. The mentors, however, were unsure how effective or ineffective their interactions had been, largely due to insufficient time spent observing their mentees either in the classroom or in performance.

Through a local school district, Blair (2008) offered a year-long, voluntary, professional induction program geared specifically toward early-stage elementary general music teachers. The data collected over the course of the program were used to explore the experiences of the early-stage music teachers and to assess the success of the program as a community of practice. There
were five initial participants, all beginning their first year teaching elementary general music for a district in the Midwestern United States. Only three of the teachers continued with the program for the entire academic year. Data included email correspondence of participants, end-of-year reflective journals, the researcher’s log about topics discussed at meetings and the researcher’s reflections, and a year-end, group interview that was recorded. Data were analyzed using a narrative inquiry approach to consider the lived experiences of the participants.

Blair found two critical issues that impacted the personal and professional self-efficacy of the teachers over the course of the first year. Frustration over the participants’ perceived lack of classroom management skills created significant self-doubt about themselves as music teachers. Gradually, through ongoing email communication with the researcher, bi-monthly meetings with all the program participants together, and classroom observations of a more experienced teacher, that frustration subsided and the participants’ confidence grew. This new sense of confidence and competence dropped, however, in the face of being evaluated by the district fine arts director who provided immediate and negative feedback. Their self-efficacy once again rebounded over time through shared reflections about videotaped teaching episodes of each participant, collaborative lesson planning, and ever-increasing contact and trust among the three new teachers independent of the researcher.

By continually meeting and supporting each other in person, through email, and over the phone, a community of practice began to develop among the participants. What began as early-stage teachers coming together with a designated mentor evolved into a group who shared concerns, problems, and passions about music and teaching, in effect mentoring one another. Blair concluded that while traditional mentor-mentee relationships can prove effective, the
development of communities of practice that include teachers at all levels of expertise would be more conducive to collaborative growth and mutual engagement.

**Summary.** From the literature on induction of early-stage music teachers, a number of important themes emerge that relate to the current study. To begin, multiple studies found that early-stage teachers derived more satisfaction and meaning from content-specific support (Conway, 2003, 2015; Conway & Zerman, 2004). Interaction with a like-subject mentor moves conversations beyond issues of class management and promotes discussion of curricular issues and pedagogy (Blair, 2008; Conway, 2003; Conway & Christensen, 2006; Jacobs, 2007). In turn, pedagogical discussions occur earlier and more effectively in induction programs that provide opportunities for participants to get to know one another outside of a working relationship in a supportive, non-evaluative setting, in which the hierarchy of “mentee” and “mentor” labels are removed at least in part (Blair, 2008; Conway, 2003, 2015; Jacobs, 2007; Montague, 2000; Smith, 1994). This decentralization of authority has proven successful both in forming mentoring triads (including one first-year, one second-year, and one mentor teacher) and larger communities of music teaching practice (Blair, 2008; Smith, 1994).

The personal and professional needs of early-stage music teachers may vary depending on the context of the school, district, or community (Smith, 1994). These needs also change over the course of time spent in a particular context (Blair, 2008; Jacobs, 2007), and yet formal mentoring appears to sometimes be the only type of professional induction offered. Regardless of context, if early-stage teachers desire professional support, it is more beneficial for them to act proactively to find help and mentoring in order to be prepared for the challenges of the initial years (Conway, 2003, 2015; Conway & Zerman, 2004). An early-stage teacher’s music teaching context can make finding a discipline-specific mentor or community of practice challenging, to
say nothing of establishing a supportive relationship of mutual understanding. However, in providing direction for future research, Smith (1994) suggested investigating the potential of technology to overcome the challenges that separations of time or geography pose to establishing and sustaining professional mentoring.

From a methodological standpoint, Jacobs (2007) narrowed the focus of his population to first-year band directors’ experiences with mentoring as a part of the formal professional induction process. It is worth noting that his findings were strikingly similar to many of the other studies reviewed, even those that used broader populations of music educators. In addition, Jacobs and Smith (1994) conducted studies that involved evaluating induction programs by gathering self-reported perceptions of the program participants.

Each of the studies in this section provide a close up perspective on multiple dimensions of the formal professional induction of early-stage music educators. Through the methodologies of case studies and narrative studies, emphasis has been placed on the mentoring experiences of those early-stage teachers directly involved in formal induction programs. However, there have been no larger-scale studies of the influence of formal induction on early-stage music teachers. The wider perspective such research might provide could enhance the reliability of the findings within the current body of literature.

**Online Professional Teacher Induction Support**

Information and communication technologies have been explored for their potential to support professional teacher induction since the 1990s. The evolution and expansion of online technologies continue to offer innovative ways for teachers to interact across distances of all sizes, often asynchronously, with peers and mentors teaching in the same grade and content settings. This section presents research focused on the use of online technologies specifically to
support the professional induction of early-stage teachers in various grade levels and content areas.

Merseth (1991) sought to determine whether an interactive computer network would provide personal, emotional, and technical support to beginning teachers in diverse geographic settings. The Beginning Teacher Computer Network (BTCN) provided members with both private and public message capacity, as well as public discussion forums categorized by school subject. The BTCN was tailored specifically to offer support to its geographically distributed first-year teacher members. BTCN included 39 first-year middle and high school teachers from three different teacher education programs, who were joined by a faculty member, two teacher education program administrators, a graduate assistant, and, occasionally, invited experts. The data collected included: (1) a mailed survey focused on how the network was used and its effectiveness in meeting the teachers’ needs, (2) frequency of use statistics obtained from the host computer, and (3) structured follow-up interviews of 10 individuals with varying levels of participation (low, medium, or high) based upon the computer’s participation data and the teachers’ survey self-reports.

The network was used steadily by participants except on holidays. Merseth determined that the beginning teachers were most pleased with the moral support provided by their interaction with the BTCN. This was attributed to the network’s accessibility at any time of day, its ability to reduce feelings of isolation, and the private, non-evaluative environment it created. Due to the low ratings the beginning teachers gave regarding BTCN’s ability to assist with lesson and curricular planning, Merseth suggested that the network may have served more as an emotional support group than a structured induction program. The researcher pointed out,
however, that the low ratings may have been the product of the network’s technical limitations in that there were no scanning, fax, or file sharing capabilities.

Merseth concluded that an interactive computer network can provide emotional support, help reduce isolation, and provide limited assistance with curricular issues for geographically distributed beginning teachers. Without firsthand knowledge of a teacher’s context, computer networks are unable to provide some forms of support that an on-site mentor may provide. Merseth suggested that providing emotional support may be more important in a network of this type since on-site induction programs often do not offer that type of support. The author recommended further investigation of the supportive capacities of networks linking different groups such as new teachers only, new teachers and experienced teachers, and experienced teachers only.

Based in part on Merseth’s study, DeWert, Babinski, and Jones (2003) linked new and experienced teachers in a statewide network called the Lighthouse Project that provided “social, emotional, practical, and professional support to beginning teachers” (p. 312). In an effort to better connect student teaching experiences to the first years as full professionals, the project involved 12 beginning teachers, four experienced teachers, and eight collegiate education faculty, who provided one another with assistance and support via an online collaborative community.

At the start, there was a half-day orientation session addressing technical issues, the goals and objectives of the group, participant roles and responsibilities, and implementation of a specified problem-solving process. In this process, a beginning teacher would present a concern that the group would then help frame before generating possible solutions. The beginning teacher and the group would produce an action plan, and, after implementing the plan, the teacher would
report back to the group on the results. For six months, the participants communicated with one another through email and a threaded discussion forum. The research team collected and analyzed data from the messages created by the participants, follow-up phone interviews with the individual beginning teachers, and a survey of all the participants asking them to rank the effectiveness of the group in achieving its goals and objectives.

DeWert et al. concluded that online, collaborative consultation supports new teachers as they construct their own understandings about the issues of professional interaction in teaching. It also led to a decrease in feelings of isolation while increasing emotional support, professional confidence, enthusiasm for work, constructive reflection and criticism, and problem-solving skills. The authors suggested that other teacher educators should pursue developing and studying similar groups to more deeply probe some of the key issues. Are new teachers’ relational and political issues a prerequisite for resolving issues involving curriculum and instruction? Can online peer support help beginning teachers transition from a position of uncritically applying the knowledge of others to one of acting on self-constructed knowledge in ways that on-site mentoring might not?

In studying a statewide program called the Novice Teacher Support Project (NTSP), Klecka (2004) sought to provide a comprehensive picture of what activities were taking place and what types of knowledge were available to the community’s participants within a specific DCP. Klecka also hoped to uncover what issues and tensions were raised from participating in an electronic conferencing support medium.

Data were collected from open-ended surveys, focus group interviews, and discussion and content analysis of the online discussions. Over a two-year span, e-mentors and novice teacher participants in the NTSP were surveyed about their perceptions of the online component,
and in particular, what encouraged or discouraged the new teachers’ participation. As the online moderator for the e-conferences, Klecka kept a journal about issues and tensions that arose. In addition, website statistics regarding participant log in, posting data, and page views were another source of data. Finally, focus group interviews were conducted to better understand the participant perspectives expressed via the survey.

Klecka concluded that the e-conferences evolved into a problem-solving distributed community of classroom teaching practice. The professional network gave participants access to diverse perspectives from different districts and teachers at various points in their careers. They encountered issues for consideration they had not previously recognized, and found validation of personal experiences by learning about others’ practices. The tensions related to how online roles and responsibilities were defined between new teachers and mentors, as well as the degree of information available about other participants (content, years of experience, etc.). The author recommended clearly articulating a structure that pulls participant conversations together rather than compartmentalizing them into duplicate or similar discussions. Policies must also be created and enforced to provide a context of community responsibility, safety, and trust. Klecka recommended occasional face-to-face interactions; clear communication of online identities; conscious decisions regarding who may or may not participate in the community; the ability for participants to retain some anonymity; and faith that when one posts, others will read it and respond in a respectful manner.

Similar to Klecka’s examination of NTSP’s e-conferences, Hough, Smithey, and Evertson (2004) investigated the use of an asynchronous web-based conferencing system to facilitate beginning teachers’ reflective thinking. Over three years, 35 elementary and secondary intern teachers (10 men, 25 women) participated in a training program that combined full-time
teaching under a mentor teacher with graduate coursework. Each year, data were collected during the first semester that each intern group was required to use the computer-mediated communication. Messages in the online conference were analyzed each year including the text of each message, the number of messages posted by each participant, and the gender and year of each intern’s participation. Recordings were also made of all face-to-face seminars and interviews with participants about their use of the online conference.

The authors concluded that while all the participants in the computer-mediated communication did engage in some professional reflection, there were three essential supports and constraints that encouraged more depth of thought. Hough et al. found that the most successful asynchronous web-based conferences do the following:

(a) have a more focused versus less focused purpose or problem base for discussions, (b) frame the directions for discussions and suggest to participants what kinds of discussions and suggest to participants what kinds of discussions are expected, and (c) tend to support trust among the members through efforts to build community and encourage feelings of ownership. (p. 383)

The authors further suggested that asynchronous conferences can impact beginning teachers by helping to provide professional interaction, problem-solving, and space to further develop beliefs about successful teaching.

Langley (2008) explored how online mentoring, or e-mentoring, could be used to improve beginning teacher induction and support as part of a comprehensive induction program for new educators coming from alternative certification programs into teaching positions in a large urban district. The University of Florida Mentors and Online Support for Teachers (MOST) program offered induction programming to 15 alternatively certified teachers who all completed
the same program. The eight teachers who opted to take part and taught in five low socioeconomic status schools in Jacksonville, Florida.

All eight beginning teachers were assigned building-based mentors, but few ever had contact with them due to lack of shared planning time as well as mismatches between grade levels being taught by the mentor and mentee. Mentor consultants were also available at the district level, but this resource was not well advertised to the beginning teachers. To provide additional instructional and psychological support, MOST used the Moodle online course management system to conduct formal forums, open formal and informal communication channels, and compile a bank of educator resources. The participants also met face-to-face one time each month. To evaluate MOST’s effectiveness as a means of mentoring support, Langley conducted surveys and interviews with all eight teachers after the program ended.

Langley found that all participants recommended the MOST e-mentoring program over the district’s standard induction program. Trust and providing meaningful support were believed to be critical to the environment’s success. All the participants and one of the facilitators had preexisting relationships outside the online community that were credited with beginning the program on a foundation of trust. In addition, MOST filled a void in the district’s program in that it provided emotional support any time of day and all throughout the week. The participants also found the discussions and tasks within MOST to be useful and meaningful, particularly the monthly assignments and video provided of expert teaching.

There were program weaknesses identified in Langley’s analysis as well. In using the open-source software of Moodle, participants expressed frustrations about the inflexibility of the MOST site design. Relative to the issue of design, the eight different options for communication with mentors and peers within the site ended up adding congestion to the site rather than
streamlining communication as had been the goal. Regardless of the platform, certain assumptions were made regarding the participants’ level of technological expertise which led to issues with understanding and confident use of some features and options within Moodle. Although ideas for improvement were prevalent after this first year, Langley concluded the program had been successful in meeting the induction needs of beginning alternatively certified teachers.

An entirely online induction program for beginning Science, Technology, Engineering, and Mathematics (STEM) teachers was investigated in three parts by Donna (2009). A deeper understanding was sought of the environmental properties that created opportunities for action between individual participants and their online environment, and the affordances of the program that helped it meet its goals. Educational affordances were described as relationships between the learner and the environment that determined if and how learning took place, while social affordances permitted and encouraged collaborative learning. Technical affordances were technological aspects that facilitated the social and educational context so as to encourage particular learning behaviors. During the year of the study there were 35 beginning STEM teachers were served via synchronous and asynchronous technologies to provide content-specific mentors and a community of peers.

Donna’s initial study examined the affordances designed into an online induction environment before exploring what beginning teacher participants actually perceived the environment’s affordances to be, particularly as they related to technological support of beginning teacher induction. Analysis of mid- and post-program questionnaire responses, as well as the beginning teachers’ reflective papers, showed that through online induction environment the participants experienced a web of interdependent educational, social, and technical
affordances. Based upon this set of perceived affordances, Donna suggested the environment can create communities where participants learn from one another, constructively assess theory and practice, and lessen teacher isolation. These interactions with peers and experienced mentors through educational online activities can complement other face-to-face induction supports to help meet the induction goals of continued professional growth, improved student learning, and teacher retention.

The second portion of the study explored how external barriers (e.g., limited time, technology access, extrinsic rewards for participation) and internal barriers (e.g., perceived support value, purposes of participation, sense of online community) affected the beginning teacher participants’ engagement with the online community of practice. After analyzing open-ended questions from the mid-year and end-of-year questionnaires, Donna concluded that in designing the online induction program it was imperative to probe individual participant beliefs to create a common, yet evolving, set of goals that was open to practice-based discussion. The program also had to be mindful of the external demands placed on beginning teachers as they move from the student role to the teacher role. When the online induction program was perceived as being merely a survival tool and not a professional development solution, participants engaged less often or only for the short term.

Finally, Donna used the chat room exchanges between novice STEM teachers and their mentors to examine the collective challenges facing new science teachers. While the complete set of challenges derived by the research is quite complex and at times difficult to differentiate one issue from another, the most discussed issues related to pedagogical and content knowledge specific to the teachers’ subject areas. The author therefore argued that a content-specific mentor, in cooperation with other professional development supports, may better serve a beginning
teacher in successfully overcoming such challenges than a mentor who teaches content that is only generally related or unrelated. In addition, among the set of identified challenges were a number of factors related to the attrition of beginning STEM teachers. While some of the challenges, such as inadequate preparation time and large class sizes, are mostly beyond the scope of induction support, communities of practice that include novice and experienced teachers can provide empathy for such situations.

Hoping to provide an empirical warrant for online mentoring of beginning teachers, Maxwell, Harrington, and Smith (2010) studied the computer-mediated support provided by the Education Alumni Support Project (EdASP). EdASP was available to all 2005 graduates of the pre-service teacher program at the University of New England (UNE) in New South Wales, Australia. Within separate primary and secondary grade teacher environments, seven discussion forums were created based upon the structure of the UNE teacher education curriculum. Over the course of an entire school year, the investigators wanted to know in what areas beginning teachers would seek support and what mentoring processes would be demonstrated by both the academic mentors and the beginning teachers themselves. To that end, the 125 participants’ activity was tracked, the text of online postings was analyzed, and an evaluation questionnaire was disseminated.

The researchers concluded that an online environment can provide support to large numbers of beginning teachers, but that there were a variety of different participant responses to the online environment. Of the 20% of participants who completed the evaluation questionnaire, 44% indicated that they had read but did not post messages, and 64% expressed that they would have preferred the option of posting anonymously. Analysis also demonstrated that online support, like that provided by EdASP, could be effective at reducing professional, and to a
certain extent social, isolation. Student behavior and classroom management were prominent areas in need of support, particularly in the early weeks and months. As the school year progressed, the focus began to move toward more issues related to teaching and learning strategies and their resourcing, and the frequency of online interaction also declined, eventually leveling off.

Gentry (2011) looked at a five-month pilot project within the Electronic Mentoring for Student Success Program (eMSS) at the New Teacher Center (NTC) to determine whether private conversations between a beginning special education teacher and a mentor within a computer-mediated environment could serve as an effective tool for induction. To better understand who was participating, researchers gathered data from 50 special education teachers and 22 mentors about their certification status, experience with online technology, years taught, age, grade level currently teaching, and perceptions of preparedness. Participant survey self-reports and a tally of how often each participant was posting provided insight into the frequency of interactions within the site. Finally, the content of the messages exchanged was analyzed to identify themes and further depict the population being studied.

The majority of mentors involved in this study had previous mentoring experience and the majority of mentees participating were in their first year of teaching special education. Ten of the mentees reported not being certified to teach students in the disability area they were currently teaching. Over the five-month period, mentors interacted much more frequently with the site than the beginning teachers, accounting for 66% of the total postings. However, there was considerable variation within the two participant categories with some individuals not ever posting to the site. The mentees were more interested in the one-on-one interaction, while the mentors tended to post more often in areas more visible to all project members.
Gentry concluded that eMSS provided beginning special educators full support regarding professional standards and documented needs of beginning special educators, and therefore electronic mentoring should be viewed as a viable complement to face-to-face mentoring. In addition, there were abundant conversations about the common and wide ranging needs and concerns of beginning special educators. Interacting with adults, pedagogical concerns, and managing roles were all thoroughly discussed on the site. Despite the extensive research documenting the emotional and psychological support needs of beginning special educators, the least amount of data was coded for this theme category.

The Quality Teachers for Quality Students (QTQS) project, studied by Hwang and Vrongistinos (2012), connected 13 beginning teachers with 4 experienced teachers via an electronic mentoring system. The primary focus of QTQS was instructional skills unique to teaching English language learners (ELLs). The electronic mentoring used Blackboard’s system along with Skype’s videoconference feature. Participants were provided two days of face-to-face orientation at the start of the project. Over the course of three academic years, the QTQS project assigned 22 tasks for the mentees and mentors to complete. Six of these tasks required the beginning teachers to video record instruction and perform a self-evaluation utilizing a Video-Based Self-Reflection of Instruction (VSRI) checklist. The teachers’ mentors then also reviewed the recording using the same VSRI checklist and provided the mentee with feedback. At the end of each academic year, an open-ended survey soliciting perceptions of the QTQS electronic mentoring was collected and analyzed.

Based upon coding and analysis of the participants’ survey responses, Hwang and Vrongistinos (2012) concluded that using Blackboard and Skype reduced the time constraints of meeting face-to-face and allowed flexibility in terms of when feedback could be given and
received. A limitation of this mentoring approach was the time and effort involved in converting the video assignments into a format compatible with Blackboard’s system. The somewhat impersonal nature of Blackboard as a communication tool was diminished by using the Skype program. Skype allowed for a more personal, intimate, and efficient mentor-mentee relationship while still meeting individual scheduling needs.

In a rare study focused specifically on online supports for music educators, Bauer and Moehle (2008) performed a content analysis of the online discussion forums operated by MENC: The National Association for Music Education. At the time of the study these forums had been in continuous operation for three academic years, and those focused on band, chorus, general music, and orchestra all had electronic mentor monitors with expertise in their corresponding area of music education. Focusing on the 2004-2005 academic year, Bauer and Moehle used individual posts to examine the ways in which those four forums were being used. While these forums were not limited to early-stage music teachers, the authors did speak to the role of such teachers and the content they generated in the analysis.

Of the four MENC discussion forums, the Band forum was by far the most active, accounting for nearly half of all content posted. Bauer and Moehle posited that all the forums filled a need for some music teachers by providing a place for discussion of curricular and co-curricular issues specific to their work and life as music educators. The most discussed curricular area in the forums was Planning and Preparation, with the most prevalent item within that coding category being repertoire discussion. Other prominent discussion topics were Instruction and Learning Environment, with the latter being of major concern for early-stage music teachers. Discussion regarding assessment was seldom encountered within the forums.
Co-curricular issues were also frequently discussed, with particular attention paid to developing and maintaining positive relationships with administrators, colleagues, and others in the school community. Though there were many similarities between the various forums, there were also key differences, particularly in how frequently different curricular and co-curricular issues appeared. Bauer and Moehle suggested these differences point toward the need for professional development experiences to be tailored to the needs of specific teacher populations.

The authors point out multiple potential views of the data. The most frequent topics may indicate what music teachers are most interested in or areas in which they may need more assistance. Those topics seen less frequently may suggest an existing level of comfort for the teachers or constitute areas in which they would benefit from additional training. The overall frequency of a particular topic may not necessarily indicate that many teachers need help in that area, but may instead mean that more people felt they could provide advice on that issue. While these forums may be helpful in providing assistance with certain issues, it may not be ideal for others in which more face-to-face contact would be more beneficial.

A number of limitations exist for Bauer and Moehle’s findings. The population of teachers who utilized the MENC forums was self-selected, had computer and Internet access, enough technical knowledge to use the platform, and were willing to share their own professional issues in a public venue. These results can therefore not be assumed to be representative of the profession at large. In addition, having only analyzed a single academic year, the content of the forum discussions might have been quite different over the course of an earlier or later year.

Also specific to online supports for music educators, Bell-Robertson (2014) examined the degree to which an online community exclusively for instrumental music teachers at the middle
and high school levels with less than three years of teaching experience served as a source of emotional support for its members. Using a case study design, Bell-Robertson drew upon a variety of data including communications by participants within the online community, the researcher’s field log, and interviews with participants. Contact information for 100 music educators in their first three years of teaching was collected from multiple states and each was invited to participate via email. The final roster of study participants consisted of 11 middle and high school instrumental music teachers from four different states.

The asynchronous vehicle for the online community was a password-protected website where confidential discussions, lesson plans, and links to resources could be posted. To join this wiki, a website that allows users to collaboratively edit its content, participants had to be invited by the researcher and then create a username and password. Upon logging in, participants were asked to write an autobiography, comment on other members’ autobiographical posts, and contribute to a list of etiquette guidelines for the community. The goal of these steps was to begin to build relationships between members and to provide a sense of ownership for participants. Participants were then encouraged to use the site as much or as little as they were inclined.

In terms of the emotional support gained by the participants, Bell-Robertson found that involvement in the wiki provided comfort and relief through awareness that others had similar feelings and experiences to begin their teaching careers, even though individual curriculum and content area varied slightly. In addition, the forum functioned as a safe outlet for participants to vent frustrations and debate music education philosophies. Because they offered emotional support to other group members, the participants found altruistic reward in their peer interactions.
Bell-Robertson concluded that while the community had a positive effect on the emotional lives of participants, it did little to provide additional support in the areas of curriculum, pedagogy, or program management. This finding was in line with other research that indicated that emotional development and support may be the most significant contribution made by online music educator communities. Bell-Robertson found that this supports the necessity of engaging in multiple types of new teacher induction, since a single mentor cannot always fulfill the needs of a new teacher. This was particularly true when it came to gaining multiple perspectives from a team of peers in a supportive and anonymous environment.

**Summary.** The successes and struggles of online professional teacher induction support documented in these studies have important implications for the current project. The research clearly establishes that online networks of distributed early-stage teachers can provide increased professional confidence, problem-solving skills, and promote constructive reflection and criticism of practice (Bauer & Moehle, 2008; DeWert et al., 2003; Gentry, 2011). It also shows such environments are capable of offering emotional support and reducing feelings of isolation (Bell-Robertson, 2014; Maxwell et al., 2010; Merseth, 1991).

While the convenience and accessibility of these online induction supports is frequently noted (Hwang & Vrongistinos, 2012; Langley, 2008; Merseth, 1991), the complexity of their design and participant relationships with technology and other participants can strongly impact the network’s beneficial outcomes. Face-to-face induction tensions, such as establishing mentor-mentee roles and getting to know one another beyond the field of work, intermingle with issues of community safety, responsibility, ownership, and trust (Bell-Robertson, 2014; Hough et al., 2004; Klecka, 2004). There are also limitations to technological platforms and teachers’
individual technological expertise, which can help or hinder member participation (Bauer & Moehle, 2008; Hwang & Vrongistinos, 2012; Langley, 2008).

These authors largely position online induction as a beneficial complement to a comprehensive induction program that would include both online and face-to-face elements (Donna, 2009; Gentry, 2011; Hough et al., 2004). In particular, it is noted that the emotional support found within many distributed professional communities is typically not addressed in face-to-face induction programming (Bell-Robertson, 2014; Merseth, 1991).

Looking forward from this collection of studies, it is suggested that online induction networks with a narrower focus and purpose for discussion be examined, such as online environments for specialist teachers (Bell-Robertson, 2014; Maxwell et al., 2010). In addition, researchers recommend further investigating the elements of online teacher induction supports that encourage or discourage member participation (Bauer & Moehle, 2008; Klecka, 2004). To collect program evaluation data within these online communities of practice, the dominant sources were self-report surveys completed by the community members (DeWert et al., 2003; Donna, 2009; Hwang & Vrongistinos, 2012; Langley, 2008; Maxwell et al., 2010).

**Teacher Professional Development Through Social Network Services**

Social network services are one type of online information and communication technology that offers potential support for early-stage teacher induction. Such services are pervasive in contemporary life, are widely available, and offer multiple ways in which they can be accessed. This final section examines literature focused on how teachers are using social network services for induction and other professional development needs.

The literature is organized by the type of social networking platform. As described in Chapter One, Facebook allows users to create and share online identities, create and join groups
based on interests, and connect to others through a range of avenues. Twitter is a micro-blogging social network that enables its users to send and read text posts of up to 140 characters that are known as “tweets” (Macri & Tessitore, 2013). In comparison to Facebook, the time between one update and another on Twitter is very short. The time between comments and replies is also faster on Twitter. In addition, Twitter is based on “following” other users while Facebook is based on “friendship” with other users. Twitter users can follow celebrities and often interact directly with live television and radio. Finally, Facebook offers demographics about its users, but Twitter does not.

**Teacher professional development through Twitter.** Forte, Humphreys, and Park (2012) explored how social media are used in education by teachers who incorporate Twitter in their practice. They also sought to understand what impact appropriation of such technologies was perceived to have on teaching practice and educational organizations, and how the organizational contexts of teachers shaped their efforts to reappropriate social media for classroom work.

Forte et al. used Twitter to recruit educators for an open online survey. One of the authors tweeted the link to the survey on her own Twitter account. The link was then retweeted by other individuals with large user followings. Thirty-seven participants completed the survey, representing grades kindergarten through 12, one college instructor, one high school teacher who taught college classes, and a technology coordinator who instructed both students and teachers. Eight of the respondents agreed to take part in a telephone interview. Those interviews were recorded, transcribed, and analyzed thematically. Finally, a dataset of 2,000 education-related tweets was created using Twitter’s search interface. These were also coded to identify emergent patterns. One potential limitation of this study is its method of convenience sampling. To have
seen the survey link, the participants were likely already using Twitter a significant amount for professional purposes. Though this was the researchers’ intended sampling strategy, one cannot infer how widespread professional use of Twitter is among teachers, or how representative this particular sample is of the population of teachers as a whole.

Forte et al. (2012) found that through Twitter, educators are creating and maintaining professional connections outside of their immediate organizational contexts, thus becoming conduits for innovative ideas and practices for their local schools. While Twitter is often associated with the sharing of personal thoughts and daily activities, teachers participating in this study used it as a forum to share resources and to request or provide professional aid or information. Such information was credited by the participants with improving their classroom practice. These teachers did not view the Internet as dangerous, but instead as a resource for educators and students alike. The respondents who taught in high schools in particular voiced frustrations regarding policies prohibiting use of social media in the classroom.

To determine what teachers might gain from social media content and if such pursuits are time well spent for teachers professionally, Holmes, Preston, Shaw, and Buchanan (2013) examined the Twitter streams of 30 of the most followed educators as well as the popular educational hashtags: #edchat and #edtech. For each of the educators and hashtags, a sample of 20 consecutive tweets was collected at random times within a one-week span. The content of all the tweet samples was analyzed according to their purpose, resulting in eight distinct categories.

Holmes et al. concluded that, via Twitter, professional learning for teachers that is sustained, practical in nature and context, related to student learning, collaborative, and provided participants a certain degree of control, could be accomplished. Based upon their content analysis, the authors stated that any teacher, at any level of experience, who follows leading
educators via Twitter can come in contact with a fertile network of other educators and a wealth of relevant and current educational material. This professional development resource can be accessed at any time on any day, and allows one to focus on those issues that are most relevant to him or her. Individuals can actively contribute by posting their own tweets or simply follow the offerings of others.

To better understand the role of social media in educator professional development, Carpenter and Krutka (2015) examined how and why educators reported using the microblogging service Twitter for professional development. The researchers designed a survey to collect qualitative and quantitative data about all educators’ uses and perceptions of Twitter. An invitation and link to the survey was posted every day for five weeks resulting in a convenience sample of 755 participant responses. Approximately two-thirds of the respondents were female, 92% were white, 86% were from the United States, and most were teachers in social studies, English, mathematics, or science.

The respondents described intense use of Twitter in multiple ways, and reported using it more frequently for professional development activities than for interaction with students or family. The social microblogging platform was praised as efficient, accessible, and interactive, and was credited with providing access to cutting edge ideas and trends in education. Among the respondents, Twitter compared favorably to more traditional professional development opportunities such as in-service clinics and conferences, particularly the ways in which it could be personalized and differentiated. Sample members also liked how it connected them with educators outside their schools who offered them diverse perspectives. Respondents also appreciated the ways in which Twitter facilitated collaborative professional activity, at times helping to combat feelings of isolation.
With the survey sample being one of convenience, strong criticisms of professional development through Twitter were rare. Some respondents struggled with the time commitment they believed Twitter required of them to get the most out of the platform. Others were critical of the lack of evidence-based content as well as the lack of complex conversations on topics due to the platform’s 140-character limit. Nevertheless, Carpenter and Krutka suggested that Twitter and similar organic, participatory social media platforms can play a meaningful role in educator professional development. According to Carpenter and Krutka, many participants found Twitter to be “a space of enthusiasm, invigoration, empowerment, and connection” (p. 722). While some suggest social media may limit personal growth through too many interactions among people who share the same beliefs (Friesen & Lowe, 2012), Carpenter and Krutka found nearly equal numbers of respondents who valued connecting with like-minded educators and encountering diverse, contradictory, and challenging points of view. They also concluded that Twitter supported professional development that aided the participating teachers’ autonomous learning and improvement, citing respondents’ references to direct impacts that professional Twitter interactions had on their classroom practices.

**Teacher professional development through Facebook.** Rutherford (2010) examined the public Facebook group *Ontario teachers – resource and idea sharing group* to determine if it matched the established parameters of effective teacher professional development. *Ontario teachers* was a typical example of Facebook teacher groups, and was moderate in size with more than 8,000 members. From over the course of a single academic year, the content of 278 discussion topics and 1,867 discussion posts generated was analyzed.

The informal nature of Facebook participation assured that control of the discussions was held by the participants. Seventy percent of the discussion topics revolved around teacher
knowledge, leading Rutherford to conclude that the discussions were practical in nature and therefore had the potential to impact teacher practice. Each discussion topic post generated, on average, 10 comments from other group members, which the researcher felt highlighted the collaborative nature of the group discussions. These discussions gave participants the opportunity to serve both as a novice, when posting new issues, and as an expert, when offering strategies or resources to aid others. Though active participation in *Ontario teachers* was sustained for a few months, member posting did tend to taper off. It is important to mention that this research only documented active group participation by tracking when a participant produced posted content. This does not account for “lurkers” (Rutherford, 2010, p. 68), those members who consume others’ posts but do not produce additional posts of their own. With only 384 of the 8,000 Facebook group members creating measurable production, this content analysis is unable to measure the potential additional duration and scope of participation via consumption by these lurkers.

Five Facebook groups of teachers focused primarily on sharing resources and practices about Italian school-related issues were researched by Ranieri, Manca, and Fini (2012). The 1107 group member respondents were selected without applying strict sampling rules, but used acquaintances of the researchers to contact the groups’ administrators to, in turn, help disseminate the survey. The researchers specifically investigated the mechanisms of group membership and their participatory dynamics in terms of group types, duration of membership, and the interplay between offline and online activities.

Initially, Ranieri et al. surveyed the group founders and administrators about their socio-demographic data and the characteristics of groups and behaviors related to group management. Based upon the survey data, the authors found two distinct group types: generic, whose main
objective was sharing school experience in general, and thematic, whose existence is tied to a particular school project or who are interested in distinct overarching themes (e.g., learners with special needs). The second survey of the wider group populations investigated use of digital technologies and participation in Facebook groups, in addition to socio-demographic data.

Ranieri et al. found that different thematic characterizations of the groups impacted their membership. In generic groups, members found sharing their own ideas and projects for others to adopt as more important. This resulted in loose connections between members based upon exchanging practical information but not emotional support. In thematic groups, members adhered strongly to the main topic of the group often feeling a need to belong resulting in more emphasis on sharing emotions. Those who were members for more than a year in either group type displayed more active and confident behaviors in comparison to more junior participants, and the legitimation of members and the materials they shared was primarily based on personal acquaintance and general approval by the membership. With regard to the impact that group participation might have on professional practice, Ranieri et al. found that generic group members reported a greater impact of the virtual activity on their real life professional work, which the authors credited to the difference in motivation for joining the generic group in the first place.

Bissessar (2014) sought to determine members’ and administrators’ perceptions of the 4,895-member Trinidadian closed Facebook group *A Teacher’s Voice* (ATV) as a professional and personal development tool. Purposive sampling was used to interview four of the six members of the group’s administrative team, and convenience sampling resulted in 22 regular group members responding to email interview questions. Each subject was asked questions about ATV and its role and function in teachers’ professional and personal development both now and
in the future. A content analysis of the interviews was conducted to validate the emerging themes of professional development.

Bissessar stated that the members of the ATV Facebook group were very much concerned with their individual and collective professional development since they shared information on curriculum, pedagogical methods, instructional technology, ethical and general concerns, and both local and global topical issues. The participant surveys also indicated that the group promoted personal development through online mentoring, social support and collaboration for educators of all experience levels, celebrations, shared humor, and prayer. Because of the diversity of the group’s membership, such participation surpassed geographic, ethnic, and hierarchical barriers. Indeed, Bissessar suggested that ATV’s Facebook group transcended stereotypical perceptions of Facebook and social media by encompassing not just personal but also professional development “in the form of shared, lived experiences that typify everyday classroom activity” (p. 133) through teachers’ contributions of prayers and ideas in a forum that offers teachers at all grade levels opportunities to improve their skills and learn from peers.

Based upon the content analysis undertaken by Bauer and Moehle (2008) detailed earlier, Palmquist and Barnes (2015) examined a DCP specifically for music teachers on Facebook called the School Orchestra and String Teachers v2 (SOST v2) group. All member posts, 1,676 in all, from the group’s inception in March 2011 until August 2012, were coded and analyzed resulting in 24 categories. The authors also investigated the geographic distribution of the group’s members. To do so, the member profiles of approximately half of the more than 2,000 group members were examined. Subsequently a request for this information was also posted to the group.
Approximately 20 percent of SOST v2 members contributed posts over the course of the 18 months. Palmquist and Barnes categorized participants by their rate of posting into, in ascending order of size, high/frequent posters, medium/occasional posters, single posters, and non-posters. The size of these categories was found to be consistent with previous research. The three topics that accounted for nearly half of all postings were discussions of repertoire, teaching advice, and articles/web links. These findings were also consistent with related studies.

Within the second largest overall category of teaching advice, Palmquist and Barnes identified 14 subcategories which were found to be reflective of general teacher concerns in the United States, including classroom management and motivation, assessment, and curriculum. There were also many topics unique to teaching music and to the idiom of string instrument education. Membership in SOST v2 was distributed among 46 states within the United States as well as five other countries. Over the course of the study, SOST v2 membership numbers continued to grow at a high rate and comprised more than a quarter of the estimated number of string teachers in the United States. The authors believed this illustrated an interest and need for this form of DCP among string and orchestra teachers.

Having analyzed only content posted by group members, Palmquist and Barnes were not able to speak to the perceptions of SOST v2’s users. It is therefore difficult to draw conclusions regarding how one’s level of participation in the group may impact the experience of the individual members. It may be that the informal nature of the group as well as the platform of Facebook are more conducive to addressing certain topics and issues more than others.

In an examination of the same Facebook group for music teachers as the current study, Band Directors Group (FBDG), Brewer and Rickels (2014) investigated the application of Wenger, McDermott, and Snyder’s (2002) definition of communities of practice and its
corresponding degrees of community participation to member activity in FBDG. The researchers collected all data content posted by members in FBDG over two months. The retrieved content of 1,656 original posts and 13,198 associated comments was analyzed for curricular, co-curricular, and community issues.

The members of FBDG posted an average of 225 entries each day, seven days per week, during the two months Brewer and Rickels examined the group. The results of the analysis showed that 87% of the posts within the group related directly to the profession of band directing, leading Brewer and Rickels to conclude that the group was clearly professionally oriented. Curricular codes represented 51.7% of the activity, co-curricular codes were 37.9%, and community codes were 10.2%. Due to the types of activities represented, such as problem solving, requests for information, seeking experience, reusing assets, and discussing developments, Brewer and Rickels concluded that FBDG functioned as a community of practice.

The level of participation in the group varied widely among its members, another common feature of communities of practice. The user participation structure articulated by Wenger et al. (2002) did not directly align with Brewer and Rickels analysis, but the authors believed that the same community of practice principles were at work. Notably, just over 20% of FBDG members were measurably active during the time data was collected, leaving the remaining users unaccounted for. As it is an online community, Brewer and Rickels speculated that some members of the group may be lurkers, who read and observe the activity within FBDG but do not participate through measurable contributions. The authors also pointed out that because college music education students are permitted to join but are prohibited from posting until they are employed as band directors, this prohibition results in a group of unknown size of users forced into lurking.
Of unique interest to the study were those topics Brewer and Rickels coded under the category of “community” as they demonstrated that FBDG was not simply operating as an information exchange, but resembled a community with professionally tinged social interactions. The practice of sharing humor, inspirational stories, links, or pictures, common on Facebook more generally, permeates this group yet remains relevant to teaching band. Such activity is a positive contribution under the theory of communities of practice.

As they specifically analyzed the posted content, Brewer and Rickels do not capture the perspectives of the FBDG participants themselves regarding their satisfaction with the group experience or the value derived from participation. Nor is it clear what impact participation in the group has on members’ practice in the classroom or their sense of professional belonging. Also left unexplored are the demographics of FBDG’s membership and how group usage might differ based upon those variables.

As a follow-up to their previously completed content analysis of the member actions within FBDG, Rickels and Brewer (2017) examined members’ demographic profiles, self-reported group usage behaviors, and member perceptions of how FBDG activity met their personal and professional development needs. Over six weeks, data were collected via an online survey that used forced-choice, open numeric, and scale responses. An initial email invitation and two reminder emails were sent to 9,866 FBDG members chosen because their privacy settings allowed their membership status to be displayed to other members. A random subsample of 1,000 of these members were also sent a private Facebook message. The survey link was also posted to the FBDG newsfeed three times over the course of a month. At the end of the collection period, 336 usable responses were received.
Because of the privacy-related technical issues involved in contacting strangers via Facebook, it was not possible to calculate a meaningful response rate. To examine potential response bias, Rickels and Brewer compared those who responded after the final survey reminder with those who completed it before then on four variables: teaching status, gender, age, and average minutes per day reading FBDG content. No significant difference was found between the late and primary responders, leading the authors to assume the total sample was a valid representation of FBDG members.

Rickels and Brewer found that the membership of FBDG is diverse across multiple variables of interest, including gender, grade level taught, years taught, and urbanicity. The authors posit that this diversity creates quantity and variety in the responses users see from the group, decentralizing professional expertise unlike many other sources of teacher professional development. Rickels and Brewer noted a considerable lack of ethnic diversity among the respondents, but point out that this was an accurate representation of the makeup of a teaching force which is strikingly White.

Based upon both this data and their previous study, the authors found members were using FBDG as form of professional development. Due to the nature of the platform, a broad range of discussions pursuing collegial support and feedback are ongoing and current on FBDG. Nevertheless, FBDG participation was not recognized by respondents’ administrators as a formal type of professional development. The respondents did, however, perceive FBDG participation as contributing to their professional growth, often more so than regular and periodic professional development events held in their own districts. Rickels and Brewer’s analysis suggested the participants desired more content area-specific professional support and appreciated the
interaction with professional colleagues, both of which contributed to feelings of lessened professional isolation.

Rickels and Brewer clearly stated that their study was limited just to participants in FBDG and is not representative of the broader population of band directors or of other music educators. They also did not generalize the results to any other online group or platform. It should be additionally noted that, since it is not possible to calculate a meaningful response rate, these results may not necessarily be wholly representative of the FBDG membership.

**Summary.** The studies of professional development though social network services described above are integrally related to the current investigation. The research strongly supports the conclusion that teachers are engaging in informal professional development through both Facebook and Twitter due in large part to the pervasive discussions of teachers’ professional knowledge on both platforms (Bissessar, 2014; Brewer & Rickels, 2014; Carpenter & Krutka, 2015; Forte et al., 2012; Holmes et al., 2013; Palmquist & Barnes, 2015; Rickels & Brewer, 2017; Rutherford, 2010). Some of the strengths offered by these professional development tools is that they are self-directed and customizable (Carpenter & Krutka, 2015; Holmes et al., 2013; Palmquist & Barnes, 2015), they provide teachers opportunities to serve both as novices and as experts (Bissessar, 2014; Rickels & Brewer, 2017; Rutherford, 2010), and can help overcome feelings of isolation (Bissessar, 2014; Carpenter & Krutka, 2015; Rickels & Brewer, 2017).

In spite of these assets, social network services are encouraged to be used more as an effective supplement to traditional on-site teacher professional development rather than a replacement as they are not universally appealing (Cain & Policastri, 2011; Carpenter & Krutka, 2015; Rutherford 2010). Even the professional development activity level of social network users has been shown to be inconsistent for reasons ranging from intrinsic versus extrinsic
motivations for taking part to newness and unfamiliarity with a particular community (Cain & Policastro, 2011; Carpenter & Krutka, 2015; Ranieri et al., 2012).

The body of existing research points toward important considerations for future studies. Examining FBDG specifically, there is not currently any information on how much of the body of membership is comprised of early-stage and experienced teachers. Such demographic information, along with other early-stage teacher variables like age and teaching emphasis, may lead to better understanding of members’ usage behaviors in FBDG and perhaps other similar settings. The content of this community has been shown to be dominated by discussions of teachers’ professional knowledge, and while there is no central expert, participants still find the advice and expertise offered by the group to be reliable (Brewer & Rickels, 2014; Rickels & Brewer, 2017). Additionally, FBDG participants believe the group to be an important professional development activity, even more so than many school sponsored professional development activities (Rickels & Brewer, 2017). It remains unclear if these feelings of reliability and value are consistently held by the group’s early-stage teacher members or if such feelings also apply to activities specifically related to professional induction.

It is important to note two methodological considerations originating from the literature. Traditional survey sampling guidelines, especially those surrounding convenience samples, must be carefully thought through to insure the design employed is intentional, valid, and reliable (Carpenter & Krutka, 2015; Ranieri et al., 2012; Rickels & Brewer, 2017). And as is the nature of online communities, particular attention must be paid to accounting for the presence of lurkers among the membership (Brewer & Rickels, 2014; Palmquist & Barnes, 2015; Rutherford, 2010). Interaction with social media relies fundamentally on reading posted content. Therefore, it is important to consider not just individuals who participate visibly, but also those who consume
content produced by others, and are affected by such posts, without ever producing content themselves. This phenomenon is an essential part of communities of practice theory, which passes no judgment on more passive behaviors as being negative, nor assumes that learning is not occurring for such individuals (Brewer & Rickels, 2014; Rutherford, 2010).

In Chapter Three, the particular population of FBDG being examined for this study is defined, and the method for sampling FBDG is specified. Then the online survey methodology is described, including the form of the survey and a discussion of its validity and reliability.
CHAPTER 3
RESEARCH DESIGN AND METHODOLOGY

Survey methodology has proven effective in previous research about professional teacher Facebook groups focusing on school-related issues (Ranieri et al., 2012; Rickels & Brewer, 2017). Survey methodology has also been successfully employed in investigations of early-stage teacher perceptions of online communities such as university sponsored online supports for general beginning teachers that utilized email and threaded discussion forums (DeWert et al., 2003; Maxwell et al., 2010; Merseth, 1991). However, there are special methodological considerations for the online surveying of members of an online community.

In this chapter, I provide information related to these issues as part of my accounting of the methodology used in the study, including the development and dissemination of the survey instrument. The chapter ends with a discussion of the limitations of the study.

Facebook Band Directors Group as a Dynamic, Web-Based Research Population

Facebook is one of many web-based platforms for social networks that serve music education and music educators. Web-based platforms, such as FBDG, that are related to professional development also exist. However, FBDG was selected as the site of this study of how early-stage teachers choose to engage with FBDG and their perceptions of it as a form of teacher induction because it stands out for reasons beyond the study’s focus on early-stage music educators who specialize in teaching band.

FBDG possesses a large number of participants whose membership has kept their online, professional discussions continuously active over a period of nearly seven years (Brewer & Rickels, 2014). Facebook Band Directors Group is not overtly restricted by years of teaching
experience or grade-level taught as experienced elementary, secondary, post-secondary, and pre-service teachers may join, although pre-service teachers are asked only to observe and not post.

**Development of Survey**

Important to this study is the group’s use of an application process that verifies that members are current or retired career directors of wind bands. Individuals wishing to join FBDG must request that the moderator add them to the group, and then must submit an online application that requires one’s name, email, membership qualification, employer name, job title, location, and at least one source of information that can be used to verify this information, such as a website or professional reference. Although this mechanism for membership qualification verification is better than not having any process, it is unknown how carefully each application is examined; and once admitted, members’ ongoing status in the profession is not monitored by the groups’ organizers. To address the first concern, FBDG members who wished to participate in the study had to complete three questions to verify their qualifications for participation in the study. Only after their current type of work in music, the school-level settings in which they work, and their years of teaching experience were confirmed were they allowed to continue on to the main survey.

The survey instrument developed for this study featured 42 questions grouped in six sections (Appendix A). The sections and the number of questions within each section were: qualifications for study participation (3 questions), participants’ demographics (14 questions), participants’ general usage of Facebook (4 questions), participants’ usage of FBDG (7 questions), participants’ views of FBDG (8 questions), and participants’ experiences with professional induction elements other than FBDG (6 questions).
In January 2017, a pilot of the survey instrument was sent to three FBDG members familiar to the researcher whom are not early-stage teachers. In turn, those three members each shared the survey draft with one other FBDG member who was unfamiliar to the researcher and not an early-stage teacher. During this pilot testing, particular attention was paid to whether the instructions were clear, whether the questions were clear, and whether there were problems understanding what kind of answer to provide (Fowler, 2014). The comments and concerns of the six FBDG members were shared with the researcher and revealed a few minor typographical errors as well as a need to refine the layout of some questions to better convey the relationship of the query to the response options. A suggested revision of the demographic response options was added and some response option layouts were adjusted to make them more logical to the respondent. No issues were found with the hyperlink to the online questionnaire, nor did the pilot reveal issues with survey item nonresponse or the Likert-type scales of measurement used. The organization of the final survey was based on the five research questions, including the necessary constructs (Table 3.1).

Table 3.1

*Research Questions, Constructs, and Survey Questions*

<table>
<thead>
<tr>
<th>Research Questions</th>
<th>Construct</th>
<th>Survey Items</th>
<th>Survey Question #</th>
</tr>
</thead>
</table>
| 1, 5               | personal demographics | • age  
|                    |                    | • gender  
|                    |                    | • education level  
|                    |                    | • race/ethnicity  
<p>|                    |                    | • length of Facebook membership                   | 4-7, 18            |</p>
<table>
<thead>
<tr>
<th>Research Questions</th>
<th>Construct</th>
<th>Survey Items</th>
<th>Survey Question #</th>
</tr>
</thead>
</table>
| 1, 5                | professional demographics    | • location of school employed in  
• type of school employed in  
• employment status (full- or part-time)  
• years of teaching experience  
• licensure status and time  
• grade level(s) taught currently  
• music education specialty  
• number of professional Facebook group memberships  
• receipt of formal face-to-face mentor  
• receipt of in-person induction classes and workshops | 8-17, 21, 37, 40       |
| 2, 5                | perception of FBDG as professional induction | • reasons for joining  
• frequency of topic types  
• trustworthiness of other members  
• perceived professional development value to self and to others  
  o effective assistance with professional concerns relative to formal face-to-face mentor  
  o effective assistance with professional concerns relative to in-person classes and workshops | 24, 30-32, 34-36, 38, 39, 41, 42 |
| 4                   | categories of participation for DCP members | • categorization of own FBDG participation | 28                    |
Survey questions were developed from salient points found in research studies that are strongly related to the current study as reviewed in Chapter 2. Information about the survey questions, their connections to previous research, and the data for each research question is provided next.

**Research question 1: What are the personal and professional demographics of early-stage teacher participants in FBDG?**

To address this research question, participants were asked to describe aspects of their personal demographics, as well as their current professional demographics and work setting. These questions were adapted from Ranieri, Manca, and Fini’s (2012) *Professional Facebook Use Survey*. (See Appendix B for the translation of the survey and a summary of the modifications made.) In order to categorize their school’s urbanicity, participants were asked to provide the ZIP or postal code of the school district in which they did most of their teaching.
Those codes from within the United States were cross-referenced with the National Center for Education Statistics database of school locale types and recoded according to their corresponding classifications. Answers to these survey questions generated the descriptive statistics used to answer this research question.

**Research question 2: How do early-stage teacher participants perceive FBDG as a form of professional induction?**

Questions regarding early-stage teacher participants’ perception of FBDG as professional induction were based upon items from the *Professional Facebook Use Survey* (Ranieri et al., 2012), and DeWert, Babinski, and Jones’ (2003) Lighthouse Project survey, which was in turn modeled after Merseth’s (1991) *Beginning Teacher Computer Network Survey*. These items sought to describe the participants’ initial motivations for joining, their perceptions of what topics regularly appear, and their views of the trustworthiness of other members’ knowledge and expertise. Respondents were also asked to rate the group’s effectiveness at helping them in a number of professional areas that were previously identified in Brewer and Rickels’ (2014) content analysis of FBDG postings as the most frequent discussion topics. Analyses to answer this research question generated descriptive statistics.

One of the ways that members’ views about the professional induction value of FBDG was considered was how FBDG’s value compared to that of other sources of professional induction, specifically face-to-face mentor programs and beginning teacher seminars. An inspection and comparison of calculated mean scores of the 12 relevant survey questions was

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2 NCES Locale Types: City – territory located within principal cities of metropolitan areas; Suburban – territory inside an urban area that is located outside the boundary of the principal city of a metropolitan area; Town – territory inside an urban cluster; Rural – Census-defined non-urban territory (Geverdt, 2015).
conducted. To promote and report reliability for these means, data from only respondents who responded to all of the 36 relevant questions were used (listwise exclusion), yielding $N = 98$. Internal consistency (Cronbach alpha) was established to be $\alpha = .93, .97, \text{and} .98$ for effectiveness scales for FBDG, face-to-face mentoring, and beginning teacher seminars, respectively.

**Research question 3: How do members engage with FBDG and what is their satisfaction toward the group’s activities?**

To assess respondents’ engagement, questions were designed to gauge the self-reported amount of time participants spent within the group and the frequency of taking various possible user actions. To determine respondents’ satisfaction with the group, respondents were asked questions about their perceptions of the group’s activities as a whole. The behavior of the moderator and criteria for trusting other members and the materials they post were also probed. Survey questions were adapted from the Professional Facebook Use Survey (Ranieri et al., 2012). Analyses to answer this research question generated descriptive statistics and bivariate comparisons.

**Research question 4: To what extent does one’s category of participation in an online professional community of practice (Wenger-Trayner & Wenger-Trayner, 2011) result in differences in group engagement (consumption and production) and satisfaction among early-stage teachers?**

To determine how respondents’ engagement and satisfaction might relate to one’s category of participation in an online professional community of practice, respondents were asked questions about their overall level of group participation. Survey questions incorporated Wenger-Trayner and Wenger-Trayner’s (2011) levels of participation for communities of
practice. Primary analyses to answer this research question generated descriptive statistics and bivariate comparisons.

Two exploratory factor analyses were conducted in order to uncover any latent factors within the data while also reducing the number of variables to be used in analyses. These resulted in factors score of members’ activity within the group (Question 27) and of their satisfaction with group (Question 29). Details about these procedures used are described next.

Principal component analysis served as a means to summarize the set of variables, while still preserving the dimensionality of the data. Theoretically, this meant there was no assumption of an underlying structure and any resulting component would be a composite of all seven observed variables (Beavers et al., 2013). Because unrotated factors can be indistinct, factors are rotated to produce a simpler structure in which each variable loads onto as few factors as possible (Young & Pearce, 2013). Orthogonal rotation is considered most appropriate for principal component analysis where the goal is to create factor scores (Beavers et al., 2013). Of the common orthogonal techniques, Varimax was chosen to minimize the number of variables with high loadings on each factor (Young & Pearce, 2013). So as not to overestimate the number of extracted factors while also preserving useful common variance, both the Kaiser-Meyer-Olkin criterion and examination of the scree plot were used to determine and confirm the number of factors to retain (Young & Pearce, 2013). Once identified, regression factor scores to maximize validity were computed for use in subsequent analyses (DiStefano, Zhu, & Mindrila, 2009) that were conducted to answer this research question.
Research question 5: Do demographic and contextual characteristics of early-stage teachers represent differences in: a) the circumstances leading to participation, b) the perception as a form of professional induction, or c) the type of participant interaction?

To collect demographic and contextual information, questions were designed to find out the general demographic characteristics of respondents, as well as more specific information about their teaching setting and music education specialization. Questions about teaching context and concentration were adapted from Ranieri, Manca, and Fini’s (2012) survey of Professional Facebook Use and informed by the response options for categories of teaching levels and areas used on the membership application of the National Association for Music Education (2015). Primary analyses to answer this research question generated descriptive statistics and bivariate comparisons, as will be reported in Chapter 4.

An exploratory factor analysis was conducted of members’ ratings of the group’s effectiveness in aiding users in a variety of professional areas, using the 12 variables under Question 34.a-l, “Rate the effectiveness of the FBDG in helping you in the following ways,” answered on a Likert-type scale (1 = not at all effective, 5 = extremely effective). The goal was to reveal any latent factors, reduce the number of variables, and produce factor scores for use in analyses (Young & Pearce, 2013). To that end, and as detailed under Research Question 4, principal component analysis with Varimax rotation was used (Beavers et al., 2013; Young & Pearce, 2013). The Kaiser-Meyer-Olkin criterion and scree test determined the number of factors to be retained, and regression factor scores were calculated to maximize validity (DiStefano, Zhu, & Mindrila, 2009; Young & Pearce, 2013).
**Data Analysis Considerations**

Theoretical arguments exist regarding the appropriateness of using parametric tests such as factor analysis and ANOVA with ordinal data. Some consider the use of ordinal scales inappropriate with any analysis technique that utilizes means and standard deviations (Stevens, 1966). Others argue that most scales used effectively by social scientists are not good fits with an interval scale, but neither are they truly ordinal scales (Borgatta & Borhnstedt, 1981). Variables of interest to social scientists, while conceptualized at the latent level as continuously distributed, are measured at the manifest level in discrete categories. However, Borgatta and Borhnstedt (1981) contended that “the level of measurement is not a requirement for the use of parametric statistics” (p. 28), and if a variable is considered continuous, it must by definition be classified as interval. Furthermore, Newton and Rudestam (2013) asserted that if the underlying conceptual model of a variable is continuously distributed and reasonable attempts to assess other underlying assumptions of the statistical technique are being employed, then parametric methods using scaled ordinal data will tend to be robust.

Procedures following the suggestion of Newton and Rudestam for collecting data via valid and reliable scales and recording data so as to maximize information retention have been applied in the current study: Haphazard creation of single-item indicators of concepts have been avoided; nonparametric statistics were used for truly nominal and ranked data; and careful attention was paid to the comparative size of groups within a fairly large population sample. For these reasons, application of parametric statistics did not seriously bias the results.

**External Validity of Surveys Involving Online Social Networks**

In this section, literature related to survey methods designed for web-based groups will be discussed, followed by the particular decisions made regarding the protocols of the study. The
topics considered are sampling methods, recruitment of responders, and procedures for data collection.

The proliferation of social networks has prompted social scientists to reconsider established sampling methodologies and to develop new techniques specific to the Internet (Fowler, 2014; Tsatsou, 2014). Macri and Tessitore (2013) go so far as to claim that in the case of implementing an internet survey, classic sampling methods are not effective. They also suggest a hierarchy of four different types of populations to consider when working with cyberspace-based populations, each with its appropriate use and limitations: population of inference—individuals who are the objects of the study in a defined time interval; target population—a finite set of individuals targeted by the study; frame population—a list of units used for drawing the sample; survey population—set of individuals who will be, if selected, polled (p. 35).

Specifically regarding Facebook-based sampling, at the 2011 conference, “New Techniques and Technologies for Statistics,” these same researchers summarized the challenges involved with Facebook-based sampling, and noted that one “can use a Facebook [classic] sampling method when the respondent population and the target Facebook population are quite the same.” Although this is the case in this study, the subgroup under investigation is limited to early-stage teachers who are members of FBDG in order to satisfy the need for the study and meet its purpose as described in Chapter One. This necessity creates challenges to the external validity of the study that are discussed next.

The sample drawn from the group of individuals eligible for invitation to participate in this study represents a self-selected, non-probabilistic, convenience sample population. There is no way to employ a probabilistic sample and there are limits to the external validity of the
responses obtained. First, it is not possible to develop a corresponding sampling frame from the population of FBDG members because, beyond the initial request to join, the group does not track the sociodemographic or professional characteristics of its users, including if they leave the profession but remain in the group. Furthermore, a comparison cannot be made of these early career members, regardless of response status, against an external reference group because there is no research identifying the sociodemographic or professional characteristics of early career band directors.

The design of the study did incorporate strategies derived from the sampling methodology in order to improve the study’s generalizability value. The survey collected data to keep respondents within the population of interest and provide demographic information about the respondents so that the results would allow some conclusions about the population to be drawn to a certain degree. Also, the choice of strategy for contacting potential respondents was determined from an examination of the research literature regarding ways to increase the likelihood that an early career teacher would respond to the invitation to complete the survey.

Verification of frame population. In order for the sample frame to closely correspond to the population this study sought to examine, three initial screening questions narrowed potential survey respondents to the frame population of band directors in their first, second, or third year of teaching. Screening questions included inquiries about participants’ years of teaching experience, current type of work in music, and the school-level settings in which they work.

Nonresponse extrapolation. In order to better determine the sample’s validity, potential sources of response bias were investigated. As demonstrated by Rickels and Brewer (2017), the literature describes several methods for estimating nonresponse bias, including extrapolation methods that “are based on the assumption that subjects who respond less readily are more like
nonrespondents” (Armstrong & Overton, 1977, p. 397). Put another way, extrapolation methods determine whether participants who complete the survey late in the collection timeframe, following multiple follow-up notices, are more similar to those who do not respond at all, and can be used to estimate the characteristics of nonrespondents (Pace, 1939). In the current study, a time trends method of extrapolation was utilized to estimate nonresponse bias (Ferber, 1948-1949), from a point where the number of survey responses tapered off. Those participants who responded after that point were identified as late responders and compared with the primary responders on variables that could introduce response bias. The results of this comparison are detailed in Chapter Four.

**Recruiting responders.** One of the significant challenges in Facebook surveys is selecting a contact strategy that will maximize response likelihood\(^3\) (Macri & Tessitore, 2013). When a study focuses on a subgroup, there are several different internet-driven strategies for contacting members about participation in a survey. Focusing on a subgroup within a known group, as is the case in the proposed study, enables a researcher to choose among several massive contact approaches (p. 42). Macri and Tessitore put forth six strategies across two types for contacting members of known Facebook groups recommended for their level of perceived professionalism, simplicity of use, and effectiveness of each for minimizing the likelihood of non-response (Table 3.2).

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\(^3\) I have modified the term response rate to response likelihood given that the number of potential respondents is unknown, thus making the rate of response indeterminable.
Table 3.2

*Contact Strategies for Maximizing Likelihood of Survey Participation*

<table>
<thead>
<tr>
<th>Type</th>
<th>Strategy</th>
<th>Strength; Weakness</th>
<th>Expected Response Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>User by User</td>
<td>Personal Message Without Friendship Request</td>
<td>allows for a convenience sample to be drawn from within a field of interest; users may be less prone to participate</td>
<td>undetermined</td>
</tr>
<tr>
<td></td>
<td>Personal Message With Friendship Request</td>
<td>requires acceptance of friendship request; respondents more prone to participate</td>
<td>undetermined</td>
</tr>
<tr>
<td>Massive Group</td>
<td>Group Email Message (GEM)</td>
<td>quickly reach large number of people; group administrators may be slow to communicate or uncooperative</td>
<td>20%</td>
</tr>
<tr>
<td></td>
<td>Page Status Change</td>
<td>could require a lot of time to reach a sufficient number of people; page status remains at the top for a short time, not allowing less active users to encounter it</td>
<td>0.1% to 6%</td>
</tr>
<tr>
<td></td>
<td>Wall Message in Groups or Pages (WMGP)</td>
<td>does not have long-term visibility; can be marked as spam by group administrators</td>
<td>&lt; 0.1%</td>
</tr>
<tr>
<td></td>
<td>Two-stage: Friendship and request</td>
<td>can be effective in maximizing response rate; time-consuming</td>
<td>variable</td>
</tr>
</tbody>
</table>

Source: Macri & Tessitore (2013)

**Data Collection Procedures**

A variation on the Wall Message in Groups or Pages contact strategy was used to invite early-stage teachers in FBDG to complete the survey (Macri & Tessitore, 2013). Though the contact strategy of Group Email Messaging was recommended by the literature since the online survey focused on a known group and typically produces the highest response rate compared to similar massive contact strategies with Facebook groups, it was not an option in this instance.
Because FBDG had more than 250 members, Facebook would not permit group members, including the moderators, to send messages to the entire group.

An initial message explaining the research project’s purpose and focus on the sub-group of early-stage band directors (Macri & Tessitore, 2013), as well as inviting members to complete the online survey by following the included URL, was posted to the FBDG wall using the researcher’s personal member profile. This initial wall message was posted in mid-afternoon Eastern Time on a Tuesday in an effort to capitalize on potential participants just finishing their day of teaching and possibly logging on to Facebook and FBDG. Since such posts are often displaced quickly by other member posts that follow, they often lack long term visibility do not allow less active members to encounter it. To combat this effect in part, the FBDG moderators agreed to pin my post about this project to the top of the group’s wall for the duration of the survey’s availability.

While FBDG posts often appear in members’ personal newsfeeds shortly after being posted to the group’s wall, the pinning of the post does not necessarily cause it to remain visible in personal newsfeeds long term. In addition, if one were to view the group on a mobile device such as a smartphone, the pinned post does not automatically appear and must be selected for it to be seen. Therefore, five reminder messages were posted to the FBDG wall using the researcher’s personal member profile. Slightly altering the day of the week and the time of day of each reminder was intended to reach as many different member usage patterns of Facebook and FBDG as possible while still respecting the group’s intentional focus on professional development.

The second message was posted at noon Eastern Time, seven days after the first. Like those that followed, it contained the same information and URL as the first message but with an
added thank you to those who had already taken the time to complete the survey. The third message was posted on a Sunday morning, five days after the second. The fourth was posted on a Saturday morning, six days after the third. Six days later, the fifth was posted on a Friday in the mid-afternoon. The sixth and final reminder message was posted on a Sunday morning, two days after the fifth, and emphasized the previous participation of other FBDG members and the limited time remaining to participate. The survey was available to FBDG members for a span of 28 days.

The invitational message about the online survey clearly stated the project’s purpose and that completion of the survey was voluntary and anonymous. This notification was repeated in the consent section of the survey. Those who consented were allowed to start the survey, and those who passed the qualifying questions related to their current type of work in music, the school-level settings in which they work, and their years of teaching experience moved on to the remaining survey questions.

The online survey platform, Qualtrics, hosted the data collection at a unique and secure (https) URL protected by SSL encryption. A dummy identification number was issued by Qualtrics for each respondent, allowing for tracking over time. Survey responses, whether on Qualtrics or the researcher’s local storage space, were password protected. All data and related documents were stored on the University of Illinois’ secure Box Cloud Service.
During the 28 days the survey was open, 274 members followed the invitation link with 68% (n = 185) doing so within the first two weeks, and 32% (n = 89) over the last two weeks (see Figure 3.1). Even with the survey invitation pinned to the top of the group newsfeed, the days when a survey invitation or reminder was initially posted (n = 6, 21%) produced 47% (n = 130) of all survey traffic, while the intervening 22 days (79%) produced 53% (n = 144) of survey traffic. The amount of traffic produced by the six survey invitation or reminder posts reflected the overall decline in survey traffic with the first three posts producing a mean of 34 link followers per day and the last three posts producing a mean of only nine link followers per day. The recorded time it took participants to complete the survey ranged from 5 minutes to 15 hours (M = 27 minutes; Mdn = 11 minutes; SD = 74 minutes).

Of the 274 FBDG members who followed the invitation link, 267 individuals (97%) provided their consent and proceeded to the survey. The qualification questions screened out 45
individuals, and another 14 quit the survey before answering any questions about FBDG, leaving 208 valid respondents.

**Institutional Review Board**

The research procedure, survey instrument, and all consent language were reviewed and approved by the University of Illinois Institutional Review Board on January 18, 2017 (Protocol Number 17369; Appendix C). The study met the criteria for exempt research.

**Limitations of the Study**

Any nonprobability sample, such the one used in this study, creates bias based on availability and willingness to participate (Fowler, 2014). In this study, then, only those members who were available by actively logging on to Facebook and encountering the researcher’s posts to the wall of FBDG, either within the group directly or within their personal newsfeeds received the invitation; and those who read the invitation self-selected into the sample based on their willingness to participate.

The population targeted by this study was early-stage band director members of Facebook who are also members of Facebook’s Band Directors Group. Results of the study should not be seen as accurately representing the population of early-stage teachers that exists beyond this group. Because the respondents represent a self-selected, convenience sample, caution must be exercised in generalization of results to all early-stage teachers in the FBDG.
CHAPTER 4

RESULTS

In this chapter, results of the study are presented in six primary sections. The first section details the process of validating the sample of survey respondents. The remaining five sections are organized by research question. Results address the demographics of early-stage teacher members of FBDG, their engagement and satisfaction with the group, and the group’s contribution to their professional induction. A summary and discussion of the results can be found in Chapter Five.

Sample Validity

As detailed in Chapter Three, because there is not a way to determine a meaningful response rate for the online survey of closed Facebook group, potential sources of response bias were investigated in order to better estimate the sample’s internal validity. Utilizing the time trends method of extrapolation to estimate nonresponse bias (Ferber, 1948/1949), a point was identified after the fourth survey reminder where the number of responses tapered off. Of the 208 respondents in the current study, 7.7% were identified as late responders. The late responders were compared with the primary responders on four variables from the survey that could potentially introduce response bias when interpreting results: gender, years of teaching experience, frequency of FBDG access, and age.

Chi-square tests of independence were performed to examine the distribution between late and primary responders and their gender, years of teaching experience, and frequency of FBDG access. The distribution of participants between late and primary responders did not significantly differ by any of the three variables (Table 4.1). Use of ANOVA to investigate differences between early and late responders by age showed no significant difference between
late and primary responders, $F(1, 206) = .322, p = .571$ (late responders $M = 25.06$, primary responders $M = 25.57$). Based upon this extrapolation method, it was inferred from the late responders that nonrespondents would not have a biased distribution on any of the four variables compared with the primary responders (Armstrong & Overton, 1977). The full sample of 208 respondents was therefore assumed to be a valid representation of the early-stage teacher population of FBDG.

Table 4.1

*Crosstabulations of Primary and Late Survey Respondents on Variables of Potential Bias*

<table>
<thead>
<tr>
<th>Timing of Survey Response</th>
<th>df</th>
<th>N</th>
<th>$\chi^2$</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender</td>
<td>2</td>
<td>208</td>
<td>3.43</td>
<td>.18</td>
</tr>
<tr>
<td>Years of experience</td>
<td>3</td>
<td>208</td>
<td>1.44</td>
<td>.70</td>
</tr>
<tr>
<td>Frequency of FBDG access</td>
<td>4</td>
<td>207</td>
<td>3.29</td>
<td>.51</td>
</tr>
</tbody>
</table>

Research Question 1: What are the personal and professional demographics of early-stage teacher participants in FBDG?

This section provides results of data analyses related to the first research question. Data from 208 valid responses provides the following description of personal and professional demographics, including characteristics of current employment and of their professional induction. (Table 4.2)
Table 4.2

*Description of Survey Respondents*

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Response Option</th>
<th>Count</th>
<th>Valid %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender</td>
<td>Female</td>
<td>110</td>
<td>52.9</td>
</tr>
<tr>
<td></td>
<td>Male</td>
<td>97</td>
<td>46.6</td>
</tr>
<tr>
<td></td>
<td>Gender non-specific</td>
<td>1</td>
<td>0.5</td>
</tr>
<tr>
<td></td>
<td>Valid n</td>
<td>208</td>
<td></td>
</tr>
<tr>
<td>Race/Ethnicity</td>
<td>American Indian/Alaskan Native</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>Asian</td>
<td>5</td>
<td>2.4</td>
</tr>
<tr>
<td></td>
<td>Black/African American</td>
<td>3</td>
<td>1.4</td>
</tr>
<tr>
<td></td>
<td>Hispanic/Latino</td>
<td>8</td>
<td>3.8</td>
</tr>
<tr>
<td></td>
<td>Native Hawaiian/other Pacific Islander</td>
<td>1</td>
<td>0.5</td>
</tr>
<tr>
<td></td>
<td>White</td>
<td>185</td>
<td>88.9</td>
</tr>
<tr>
<td></td>
<td>Multiple Races</td>
<td>6</td>
<td>2.9</td>
</tr>
<tr>
<td></td>
<td>Valid n</td>
<td>208</td>
<td></td>
</tr>
<tr>
<td>Education Level</td>
<td>High school diploma or equivalent</td>
<td>1</td>
<td>0.5</td>
</tr>
<tr>
<td></td>
<td>Associate degree</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>Bachelors degree</td>
<td>180</td>
<td>86.5</td>
</tr>
<tr>
<td></td>
<td>Masters degree</td>
<td>26</td>
<td>12.5</td>
</tr>
<tr>
<td></td>
<td>Professional degree (PsychD, MD, JD)</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>Doctoral degree (EdD, DMA, PhD)</td>
<td>1</td>
<td>0.5</td>
</tr>
<tr>
<td></td>
<td>Valid n</td>
<td>208</td>
<td></td>
</tr>
</tbody>
</table>
Table 4.2 (cont.)

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Response Option</th>
<th>Count</th>
<th>Valid %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Licensed to Teach</td>
<td>Yes</td>
<td>205</td>
<td>98.6</td>
</tr>
<tr>
<td></td>
<td>No</td>
<td>3</td>
<td>1.4</td>
</tr>
<tr>
<td></td>
<td>Valid n</td>
<td>208</td>
<td></td>
</tr>
<tr>
<td>Years of Experience</td>
<td>Less than 1 academic year</td>
<td>64</td>
<td>30.8</td>
</tr>
<tr>
<td></td>
<td>1 academic year</td>
<td>32</td>
<td>15.4</td>
</tr>
<tr>
<td></td>
<td>2 academic years</td>
<td>62</td>
<td>29.8</td>
</tr>
<tr>
<td></td>
<td>3 academic years</td>
<td>50</td>
<td>24.0</td>
</tr>
<tr>
<td></td>
<td>Valid n</td>
<td>208</td>
<td></td>
</tr>
<tr>
<td>Country</td>
<td>Canada</td>
<td>2</td>
<td>1.0</td>
</tr>
<tr>
<td></td>
<td>China</td>
<td>1</td>
<td>0.5</td>
</tr>
<tr>
<td></td>
<td>Germany</td>
<td>1</td>
<td>0.5</td>
</tr>
<tr>
<td></td>
<td>Kenya</td>
<td>1</td>
<td>0.5</td>
</tr>
<tr>
<td></td>
<td>Malaysia</td>
<td>1</td>
<td>0.5</td>
</tr>
<tr>
<td></td>
<td>United States of America</td>
<td>202</td>
<td>97.1</td>
</tr>
<tr>
<td></td>
<td>Valid n</td>
<td>208</td>
<td></td>
</tr>
<tr>
<td>School Locale</td>
<td>Rural</td>
<td>54</td>
<td>27.1</td>
</tr>
<tr>
<td></td>
<td>Town</td>
<td>32</td>
<td>15.4</td>
</tr>
<tr>
<td></td>
<td>Suburban</td>
<td>67</td>
<td>33.7</td>
</tr>
<tr>
<td></td>
<td>City</td>
<td>46</td>
<td>23.1</td>
</tr>
<tr>
<td></td>
<td>Valid n</td>
<td>199</td>
<td></td>
</tr>
</tbody>
</table>
Table 4.2 (cont.)

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Response Option</th>
<th>Count</th>
<th>Valid %</th>
</tr>
</thead>
<tbody>
<tr>
<td>School Type</td>
<td>Public, non-charter</td>
<td>189</td>
<td>90.9</td>
</tr>
<tr>
<td></td>
<td>Public, charter</td>
<td>6</td>
<td>2.9</td>
</tr>
<tr>
<td></td>
<td>Private, non-religious</td>
<td>3</td>
<td>1.4</td>
</tr>
<tr>
<td></td>
<td>Private, religious</td>
<td>10</td>
<td>4.8</td>
</tr>
<tr>
<td></td>
<td>Valid n</td>
<td>208</td>
<td></td>
</tr>
<tr>
<td>Teach Multiple</td>
<td>Yes</td>
<td>138</td>
<td>66.3</td>
</tr>
<tr>
<td>School Settings</td>
<td>No</td>
<td>70</td>
<td>33.7</td>
</tr>
<tr>
<td></td>
<td>Valid n</td>
<td>208</td>
<td></td>
</tr>
<tr>
<td>Main School Setting</td>
<td>Pre-school</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>Elementary/primary</td>
<td>26</td>
<td>12.5</td>
</tr>
<tr>
<td></td>
<td>Middle/junior high</td>
<td>92</td>
<td>44.2</td>
</tr>
<tr>
<td></td>
<td>High</td>
<td>84</td>
<td>40.4</td>
</tr>
<tr>
<td></td>
<td>University</td>
<td>1</td>
<td>0.5</td>
</tr>
<tr>
<td></td>
<td>Professional/technical</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>Valid n</td>
<td>203</td>
<td></td>
</tr>
<tr>
<td>Teach Specialties in</td>
<td>Yes</td>
<td>138</td>
<td>66.3</td>
</tr>
<tr>
<td>Addition to Band</td>
<td>No</td>
<td>70</td>
<td>33.7</td>
</tr>
<tr>
<td></td>
<td>Valid n</td>
<td>208</td>
<td></td>
</tr>
</tbody>
</table>
### Table 4.2 (cont.)

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Response Option</th>
<th>Count</th>
<th>Valid %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Main Specialty</td>
<td>Band</td>
<td>172</td>
<td>82.7</td>
</tr>
<tr>
<td></td>
<td>Choral/voice</td>
<td>2</td>
<td>1.0</td>
</tr>
<tr>
<td></td>
<td>General music</td>
<td>25</td>
<td>12.0</td>
</tr>
<tr>
<td></td>
<td>Guitar</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>Jazz</td>
<td>2</td>
<td>1.0</td>
</tr>
<tr>
<td></td>
<td>Marching Band</td>
<td>3</td>
<td>1.4</td>
</tr>
<tr>
<td></td>
<td>Orchestra</td>
<td>1</td>
<td>0.5</td>
</tr>
<tr>
<td></td>
<td>Theory/composition</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>Music technology</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>Special learners</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>Teacher education</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>Percussion</td>
<td>2</td>
<td>1.0</td>
</tr>
<tr>
<td></td>
<td><strong>Valid n</strong></td>
<td>207</td>
<td></td>
</tr>
<tr>
<td>FB Activity Level</td>
<td>Multiple times/day</td>
<td>182</td>
<td>87.5</td>
</tr>
<tr>
<td></td>
<td>Once a day</td>
<td>21</td>
<td>10.1</td>
</tr>
<tr>
<td></td>
<td>A few times/week</td>
<td>3</td>
<td>1.4</td>
</tr>
<tr>
<td></td>
<td>Once a week</td>
<td>2</td>
<td>1.0</td>
</tr>
<tr>
<td></td>
<td><strong>Valid n</strong></td>
<td>208</td>
<td></td>
</tr>
</tbody>
</table>
Table 4.2 (cont.)

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Response Option</th>
<th>Count</th>
<th>Valid %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Professional FB</td>
<td>FBDG only</td>
<td>30</td>
<td>14.4</td>
</tr>
<tr>
<td>Group Memberships</td>
<td>2–3</td>
<td>103</td>
<td>49.5</td>
</tr>
<tr>
<td></td>
<td>4–9</td>
<td>64</td>
<td>30.8</td>
</tr>
<tr>
<td></td>
<td>10 or more</td>
<td>11</td>
<td>5.3</td>
</tr>
<tr>
<td>Valid n</td>
<td></td>
<td>208</td>
<td></td>
</tr>
</tbody>
</table>

**Personal demographics.** There were 110 female respondents (52.9%), 97 male respondents (46.6%), and 1 gender non-specific respondent (0.5%). Respondents ranged from 22 to 48 years of age, with an average age of 25.5 years. Respondents were predominantly White (185, 88.9%), with eight Hispanic/Latino respondents (3.8%), six respondents from multiple races (2.9%), five Asian respondents (2.4%), three Black/African-American respondents (1.4%), and one Native Hawaiian or Other Pacific Islander (0.5%).

**Professional demographics.** While 26 respondents held master’s degrees (12.5%), one had a doctoral degree (0.5%), and one had earned a high school diploma or equivalent (0.5%), 180 respondents (86.5%) possessed a bachelor’s degree as their highest completed level of education. Respondents were overwhelmingly likely to be certified to teach music by a governmental agency (98.6%, n = 205). At the time of the survey, 30.8% (n = 64) had taught for less than one academic year, 15.4% (n = 32) had taught for one academic year, 29.8% (n = 62) had taught for two academic years, and 24.0% (n = 50) had taught for three academic years.

**School geography.** The majority of respondents were teaching within the United States (97.1%, n = 202), while 2.9% of the respondents were based in other countries (n = 6) including...
two in Canada, and one each in China, Germany, Kenya, and Malaysia. Among respondents in the United States more than one-third taught in suburban territories (33.7%, n = 67), while more than a quarter taught in rural territories (27.1%, n = 54). Another 23.1% were located in cities (n = 46), and 15.4% were teaching in towns (n = 32).

**Employment characteristics.** Though there were 10 participants from religious private schools (4.8%), six respondents from public charter schools (2.9%), and three from non-religious private schools (1.4%) most respondents taught in non-charter public schools (n = 189, 90.9%). Full-time employed teachers made up 94.2% (n = 194) of the respondents, with the remaining 5.8% (n = 12) teaching part-time.

Two-thirds of respondents held teaching responsibilities across multiple school settings (66.3%, n = 138), whereas the remaining third taught in only one school setting (33.7%, n = 70). In regard to which school setting respondents performed the majority of their teaching duties, 44.2% (n = 92) were in middle/junior high schools, 40.4% (n = 84) were in high schools, 12.5% (n = 26) were in elementary/primary schools, and 0.5% (n = 1) were in universities.

Almost all respondents were currently teaching band in some capacity (98.6%, n = 205), however, while one-third taught solely band (33.7%, n = 70), two-thirds also taught other music specialty areas in addition to their band specialty (66.3%, n = 138). The three participants not currently teaching band (1.4%), had taught band previously but were now teaching primarily general music. Respondents reported their primary teaching areas as bands (82.7%, n = 172), general music (12.0%, n = 25), marching band (1.4%, n = 3), jazz (1.0%, n = 2), percussion (1.0%, n = 2), vocal music (1.0%, n = 2), and strings/orchestra (0.5%, n = 1).

**Characteristics of Facebook membership.** Respondents’ length of Facebook membership ranged from less than a year to 13 years, with an average length of 11 years. The
vast majority of survey participants (97.7%, n = 211) check their Facebook account at least once a day, with 182 (88.7%) checking multiple times a day.

Those respondents whose only professional Facebook group membership was FBDG were in the minority (14.4%, n = 30). Half of the participants belonged to two or three professional Facebook groups (49.5%, n = 103), 30.8% (n = 64) belonged to four to eight, and 5.3% (n = 11) were members of 10 or more.

Research Question 2: How do early-stage teacher participants perceive FBDG as a form of professional induction?

This section provides results of data analyses related to the second research question. Based upon the literature, perceptions of professional induction were characterized in terms of FBDG’s value as a source of professional induction, effectiveness as a source of assistance with professional concerns, their reasons for joining the group, and the trustworthiness of the information provided by the membership.

Reasons for joining. Survey respondents were asked to rank, in order of importance, seven reasons for joining FBDG. The response options were based upon options from a previous survey of teachers engaging in professional use of social networks and their reasons for joining groups much like FBDG (Ranieri et al., 2012).

Examining the mean ranking of each option, the three most important reasons for joining were “to keep myself informed” (M = 2.07), “to share information” (M = 2.63), and “to share ideas/projects” (M = 3.00). Frequency of option rankings showed that, 46.9% of respondents ranked “to keep myself informed” as the most important reason for joining, while “to share information” and “to share ideas/projects” were chosen as most important by 18.4% and 16.9% of respondents respectively. (Figure 4.1)
Figure 4.1. Top-ranked reasons for joining FBDG (Q21).

Note. Valid N = 208.

Topics frequently addressed. When asked how often (1 = never, 5 = very often) they thought high frequency topics from Brewer and Rickels’ FBDG content analysis (2014) appeared as group posts, respondents found “humor, story sharing, or group moderation” posts to be most prevalent ($M = 4.11$) followed by “relationships with adult program stakeholders” ($M = 3.84$), “equipment and facilities” ($M = 3.70$), and “curricular instruction” ($M = 3.67$). These results need to be considered not as an exact representation of FBDG’s content, but as a testament to individual respondents’ encounters with that content, because while FBDG posts can be viewed directly through the closed group page, the algorithms implemented by Facebook will sometimes
also include FBDG posts in individuals’ personal newsfeeds. Thus, it is not possible to know in what Facebook context such posts were viewed.

In order to view topic frequency more broadly, supplemental analyses were conducted to compare results of the current study to Brewer and Rickels’ (2014) three overarching FBDG content categories: curricular (including planning, instruction, learning environment, and assessment); co-curricular (including equipment and facilities, scheduling, finances, and relationships with adult stakeholders); and community (humor, story sharing, and group moderation). In the current study, community posts were seen most frequently ($M = 4.11$), followed by co-curricular posts ($M = 3.55$), and finally curricular posts ($M = 3.38$).

**Trust in members’ knowledge.** Respondents largely trust that the other members of FBDG are knowledgeable about the topics most often seen within the group, with 81.3% ($n = 198$) finding them “very trustworthy” or “trustworthy” (see Figure 4.2). This belief in the other members’ knowledge or expertise about these popular topics was largely founded upon the “relevance of members’ posts and comments” (66.8%, $n = 139$). These beliefs were also bolstered in part by “approval from other members” (35.6%, $n = 74$) and “membership screening by the moderator” (33.2%, $n = 69$). The least cited trust response option was the “accuracy of the information on members’ profiles” (12.5%, $n = 26$), and 15.9% ($n = 45$) reported being unconcerned about other members’ knowledge or expertise.
Participation in professional induction. Existing literature suggests that professional induction for early-stage music teachers, while often beneficial, is implemented inconsistently from program to program (Conway, 2003; Jacobs, 2007). Results of the current data analysis shows such variation among the types of induction provided to the study participants. While the majority of survey respondents (73.1%, \( n = 141 \)) reported having had or currently having a formal mentor with whom they met face-to-face, 26.9% \( (n = 52) \) did not have such a relationship. Similarly, 66.7% \( (n = 128) \) reported having had or currently having classes, workshops, orientations, or seminars for beginning educators at their school or district, while
33.3% \( (n = 64) \) had not experienced any of those. Just less than half the respondents had experienced both categories of professional induction (47.1%, \( n = 98 \)).

**FBDG as valuable professional development.** A pair of questions (Q 33, 34) were designed to measure the value of FBDG as a form of professional development. For the respondents personally, FBDG was seen as a valuable form of professional development by 81.1% of respondents \( (n = 155) \) who strongly agreed or agreed. When the participants were asked more broadly if time spent in FBDG would be a valuable form of professional development for any music educator, the respondents again largely strongly agreed or agreed (73.2%, \( n = 139 \)), while only 4.7% disagreed and no one strongly disagreed.

**FBDG’s areas of effectiveness.** Effectiveness of FBDG at providing assistance with 12 outcomes attributed to communities of teacher practice (see, DeWert, et al., 2003; Merseth, 1991) was measured was using a 5-point rating scale (1 = not at all effective, 5 = extremely effective). In addition to scores reflecting the effectiveness of FBDG, the group’s overall effectiveness relative to that of two other common inductions methods was also investigated. Using the same rating scale, respondents considered the effectiveness of face-to-face mentors (Q35) and classes, workshops, orientations, or seminars for beginning teachers (Q38) at supporting the same 12 expectations of DCP. In the next section, results for each of the twelve outcomes are reported followed by comparison of the FBDG effectiveness relative to the two other sources.
Figure 4.3. Mean effectiveness comparison of FBDG, face-to-face mentors, and beginning teacher seminars in achieving outcomes attributed to communities of teacher practice (Q32, 36, 39).

Note. 1 = Not effective at all. 2 = Slightly effective. 3 = Moderately effective. 4 = Very effective. 5 = Extremely effective
FBDG was judged to be “very effective” in helping with nine of the 12 outcomes, and “moderately effective” with the remaining three (Figure 4.3). Participants felt they received the most aid in “sharing teaching techniques” with 77.2% ($n = 146$) receiving “very effective” or “extremely effective” help. Nearly two-thirds of respondents also felt they had been provided very or extremely effective assistance with their “ability to solve similar problems in the future” (67.4%, $n = 128$) and with “viewing problems from multiple perspectives” (66.7%, $n = 126$). Though respondents considered FBDG to have provided moderately effective help overall, respondents felt the group was least effective at helping with “feeling less overwhelmed,” “improving classroom management,” and “providing emotional support.” More than half of the respondents (54.7%, $n=104$) rated FBDG as extremely or very effective at helping them feel less isolated.

**Effectiveness of other induction methods.** Two of the most common approaches to inducting beginning teachers, face-to-face mentoring programs and beginning educator classes, workshops, orientations, or seminars (Ingersoll, 2012; Ingersoll & Strong, 2011) were probed regarding their effectiveness (1=not effective at all, 5=extremely effective) on a dozen characteristics of quality induction. Formal mentors were perceived to be “very effective” in their help for all 12 outcomes. The participants expressed that they had received the most benefit in the areas of “feeling more confident in your ability as a teacher” ($M = 3.99$), “providing emotional support” ($M = 3.98$), and “sharing teaching techniques” ($M = 3.96$).

Beginning teacher seminars were perceived to be less effective at aiding early-stage FBDG members. Classes, workshops, or seminars were deemed to have provided no more than “moderately effective” help on any of the outcomes, and, of the 12, just five rose to that level. Group-based induction mediums had most supported respondents in “sharing teaching
techniques” ($M = 2.63$), “developing broader perspectives on teaching and learning” ($M = 2.62$), and “feeling more confident in your ability as a teacher” ($M = 2.60$). Beginning educator classes were perceived to have only been “slightly effective” at helping with the remaining seven outcomes. The least amount of impact was felt on “feeling less overwhelmed” ($M = 2.25$), “providing emotional support” ($M = 2.40$), and “improving classroom management” ($M = 2.41$).

**Comparison of induction method effectiveness.** The overall effectiveness mean ($1 = \text{not effective at all}, 5 = \text{extremely effective}$) for each source of support was calculated omitting respondents who had not reported experiencing all three categories of induction ($47.1\%, n=98$) (Table 4.3). Based on the mean score to 12 questions about each category’s effectiveness as a source of induction face-to-face mentors were shown to be the most effective ($M = 3.88, SD = 0.94$). FBDG was shown to be close behind formal mentors in effectiveness ($M = 3.46, SD = 0.74$), but beginning teacher classes, workshops, orientations, or seminars were well behind both other induction categories ($M = 2.50, SD = 1.10$).

Table 4.3

<table>
<thead>
<tr>
<th>Source</th>
<th>Mean ($SD$)</th>
<th>Cronbach Alpha</th>
</tr>
</thead>
<tbody>
<tr>
<td>FBDG</td>
<td>3.46 (0.74)</td>
<td>.93</td>
</tr>
<tr>
<td>Face-to-Face Mentor Program</td>
<td>3.88 (0.94)</td>
<td>.97</td>
</tr>
<tr>
<td>Classes, workshops, orientations, or seminars</td>
<td>2.50 (1.10)</td>
<td>.98</td>
</tr>
</tbody>
</table>

*Note.* Valid $N = 98$. $SD = \text{Standard Deviation}$. Mean for each support source was calculated omitting respondents who had not reported experiencing all three categories of induction. Effectiveness of each source was measured by 12 statement-rating responses in which 1 indicates not effective at all and 5, extremely effective.
Research Question 3: How do members engage with FBDG and what is their satisfaction toward the group’s activities?

This section provides results of data analyses related to the first part of the third research question. Member engagement with and satisfaction toward FBDG was characterized by their length of membership, frequency and type of use, and perceptions of the usage experience.

Length of membership. With the focus of this study on early-stage teacher members of FBDG, it was not surprising that the majority of respondents (61.5%, $n = 128$) had been members of the group for fewer than three full academic years. Since the group also permits preservice music teachers to join, it was unsurprising to see a sizable number of participants with more years of membership. In fact, 26.9% ($n = 56$) had a total of 3-4 academic years of membership, with one member (0.5%) reported having been a FBDG member for the full seven years since the group’s creation.

Frequency of use. The majority of survey respondents (57.0%, $n = 118$) reported spending at least the same amount of time on FBDG as they did on other Facebook activities (41.5%, $n = 86$), if not more (15.5%, $n = 32$). Two-thirds of the participants said they accessed FBDG at least once, if not multiple times a day (67.1%, $n = 139$), as compared to 30.9% ($n = 64$) who did so weekly and 1.9% ($n = 4$) who accessed it once or a few times monthly.

Type of use. About nine of every ten respondents reported their most frequent action (1 = never, 5 = very often) was to read other people’s posts with 89.8% ($n = 185$) doing so “often” or “very often.” The next most frequent action was to research and read old posts, which was undertaken “often” or “very often” by 49.8% ($n = 102$) of respondents. The majority of participants “rarely” or “never” uploaded their own posts (77.7%, $n = 160$), shared resources (66.0%, $n = 136$), or commented on other people’s posts (51.0%, $n = 105$). Respondents for the
most part “never” reported events (64.1%, n = 132) or reported on their own initiatives (54.9%, n = 113). In general, this analysis coincides with previous studies that suggest differences in members’ activities that produce group content and those that consume content were along lines of member characteristics (Ranieri et al., 2012).

**Perceptions of usage experience.** Experiences using the FBDG were considered as respondents’ perceptions of the moderator and their degree of agreement with statements about their use of the group. The majority of respondents perceived the moderator to be fair (56.5%, n = 118). Nearly a third also found them to be positive (31.7%, n = 66), while close to a fifth felt they were not present or particularly visible within the group (19.2%, n = 40). Very few respondents characterized them as the “soul of the group” (2.4%, n = 5), nor found them to be too permissive (4.8%, n = 10), or rigid (1.4%, n = 3).

Participants in the survey agreed (mostly and strongly) with the statements “FBDG is a great way to spend my free time” (66.2%, n = 135) and “FBDG allows me to build relationships with other users” (57.8%, n = 118). The majority also mostly disagreed or strongly disagreed with the statement “I started questioning my privacy after using FBDG” (74.0%, n = 151). However, the respondents were essentially neutral or divided regarding the statements “I feel a sense of ownership regarding the community of FBDG” and “I feel very comfortable sharing my feelings and opinions with my FBDG friends/contacts.”

In addition to questions related to satisfaction with FBDG, counterpart questions were also asked regarding satisfaction with Facebook in general (Q17.1-5). Results from paired samples t-tests indicate that participants felt significantly more satisfied with FBDG than Facebook in general when it came to: (1) feeling better about spending their free time on it, (2) their comfort sharing their feelings and opinions with their friends and contacts, and (3) the
protection of their privacy (Table 4.4). However, members where more satisfied with Facebook than FBDG when it came to its ability to allow them to build relationships with others. There was no significant difference in mean scores about their feelings of ownership over either venue.

Table 4.4

*Paired Sample T-tests Comparing Facets of FBDG and Facebook User Satisfaction*

<table>
<thead>
<tr>
<th></th>
<th>FBDG</th>
<th></th>
<th>Facebook</th>
<th></th>
<th>t</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>M</td>
<td>SD</td>
<td>M</td>
<td>SD</td>
<td></td>
</tr>
<tr>
<td>Sense of ownership</td>
<td>3.25</td>
<td>.91</td>
<td>3.15</td>
<td>.91</td>
<td>-1.17</td>
</tr>
<tr>
<td>Builds relationships</td>
<td>3.55</td>
<td>.85</td>
<td>3.84</td>
<td>.79</td>
<td>4.19**</td>
</tr>
<tr>
<td>Comfortable sharing</td>
<td>3.22</td>
<td>.99</td>
<td>2.97</td>
<td>1.04</td>
<td>-3.17*</td>
</tr>
<tr>
<td>Good use of free time</td>
<td>3.67</td>
<td>.82</td>
<td>2.92</td>
<td>.93</td>
<td>-9.91**</td>
</tr>
<tr>
<td>Do not question my privacy</td>
<td>3.99</td>
<td>.79</td>
<td>2.63</td>
<td>1.06</td>
<td>-18.43**</td>
</tr>
</tbody>
</table>

*Note. M = Mean. SD = Standard Deviation. User satisfaction was measured by level of agreement with statements in which 1 indicates least agreement and 5, most agreement. *p < .01. **p < .001.*

Research Question 4: To what extent does one’s category of participation in an online professional community of practice (Wenger-Trayner & Wenger-Trayner, 2011) result in differences in group engagement (consumption and production) and satisfaction among early-stage teachers?

This section provides results of data analyses related to the fourth research question. Descriptions of the categories of membership participation in online communities of practice derived by Wenger-Trayner and Wenger-Trayner (2011) were provided in the survey. These are, in order of decreasing involvement: core, active, occasional, and peripheral. After reading the descriptions of each presented as part of survey question 25, respondents were asked to
categorize themselves in this way. Presented in descending order of participant contribution, no one identified as a Core Participant, and just 13.1% \((n = 27)\) identified as Active Participants. The largest percentage \((43.7\%, n = 90)\) identified as Occasional Participants, and not far behind were those who identified as Peripheral Participants \((43.2\%, n = 89)\).

**Levels of Participation and Engagement.** In order to investigate whether early-stage teachers’ engagement reflected the category of their DCP participation, the seven items for different types of engagement (group member activities) were subjected to an exploratory factor analysis. Principal components factoring was used to see if there were any latent variables that would allow reduction of those seven items (Table 4.5). The Kaiser-Meyer-Olkin value was \(0.75\), above the recommended threshold of \(0.50\) (Young & Pearce, 2013), and the Bartlett’s Test of Sphericity reached statistical significance indicating the correlations were sufficiently large for exploratory factor analysis. Using Varimax rotation, two factors were extracted based on eigenvalues \((> 1.0)\), cumulative variance and inspection of the scree plot. The first encompassed the behaviors of commenting on other’s posts (Q29.2), uploading one’s own posts (Q29.3), sharing resources (Q29.4), reporting events (Q29.5), and reporting on one’s own initiatives (Q29.6). This factor was labeled, “Production Activity.” The other included reading other’s posts (Q29.1) and researching and reading old posts (Q29.7), and was labeled as “Consumption Activity.” Production and Consumption factor scores for each respondent were calculated for use in subsequent analysis.
### Table 4.5

*Exploratory Factor Analysis with Varimax Rotation for FBDG Member Engagement Measures*

<table>
<thead>
<tr>
<th>Item</th>
<th>Production Activity</th>
<th>Consumption Activity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Comment on other’s posts</td>
<td>.77</td>
<td></td>
</tr>
<tr>
<td>Upload own posts</td>
<td>.78</td>
<td></td>
</tr>
<tr>
<td>Share resources</td>
<td>.74</td>
<td></td>
</tr>
<tr>
<td>Report events</td>
<td>.58</td>
<td></td>
</tr>
<tr>
<td>Report on own initiatives</td>
<td>.74</td>
<td></td>
</tr>
<tr>
<td>Read other’s posts</td>
<td></td>
<td>.84</td>
</tr>
<tr>
<td>Research/read old posts</td>
<td></td>
<td>.85</td>
</tr>
<tr>
<td>Eigenvalues</td>
<td>2.75</td>
<td>1.35</td>
</tr>
<tr>
<td>5% of variance</td>
<td>39.37</td>
<td>19.34</td>
</tr>
</tbody>
</table>

*Note:* Factor loadings over .40 appear in bold.

A one-way ANOVA was conducted to examine the difference between Active, Occasional, and Peripheral participant categories and the Production Activity factor. Results showed that mean factor scores for Production were significantly different among the three categories of DCP participation, F (2, 203) = 57.32, p < .001. Confirming what had previously been suggested by content analyses (Brewer & Rickels, 2014; Palmquist & Barnes, 2015), post-hoc Tukey HSD analysis with Bonferroni correction indicated that Active participants reported higher production activity ($M = 1.06$, $SD = .72$) than Occasional Participants ($M = .28$, $SD = .83$), who in turn reported significantly higher production activity than Peripheral Participants ($M = -$).
.64, SD = .80). This distinction by category of DCP participation did not, however, carry over for Consumption, F (2, 203) = 2.87, p = .059

Levels of participation and satisfaction. In order to investigate whether early-stage teachers’ satisfaction toward FBDG reflected the category of their DCP participation, the five items for different types of satisfaction (Q31.1-5) were subjected to an exploratory factor analysis. Principal components factoring was used to see if there were any latent variables that would allow reduction of those five satisfaction items. Initial analysis suggested that concerns about one’s privacy while using FBDG (Q31.5) did not highly correlate with the other four variables. The exploratory satisfaction measure was found to be more reliable with only four items (α = .673) rather than all five (α = .506), so the scores for the personal privacy question were removed from the factor analysis. In the revised analysis, the Kaiser-Meyer-Olkin was .75, above the recommended threshold of .50 (Young & Pearce, 2013), and the Bartlett’s Test of Sphericity reached statistical significance indicating the correlations were sufficiently large for exploratory factor analysis. As shown in Table 4.6, one factor was extracted explaining 60% of the variance. Since just one component was extracted (eigenvalue >1.0), factors were not rotated. This single factor was labeled, “FBDG General Satisfaction.”
Table 4.6

Summary of Exploratory Factor Analysis Results for FBDG General User Satisfaction Measure

<table>
<thead>
<tr>
<th>Item</th>
<th>FBDG General Satisfaction</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sense of ownership regarding the community</td>
<td>.79</td>
</tr>
<tr>
<td>Allows me to build relationships with users</td>
<td>.80</td>
</tr>
<tr>
<td>Comfortable sharing feelings and opinions with members</td>
<td>.75</td>
</tr>
<tr>
<td>Great way to spend free time</td>
<td>.76</td>
</tr>
<tr>
<td>Eigenvalues</td>
<td>2.40</td>
</tr>
<tr>
<td>% of variance</td>
<td>59.99</td>
</tr>
</tbody>
</table>

Note: Factor loadings over .40 appear in bold.

A One-way ANOVA was conducted to examine the difference between Active, Occasional, and Peripheral participant categories and respondents’ mean FBDG General Satisfaction. Results showed that the mean scores for FBDG General Satisfaction were significantly different among the three categories of DCP participation, F (2, 201) = 17.06, p < .001. Post-hoc Tukey HSD analysis with Bonferroni correction indicated that Peripheral Participants reported significantly lower general satisfaction (M = 3.13, SD = .65) than both Occasional Participants (M = 3.58, SD = .65) and Active Participants (M = 3.81, SD = .59). There was not a significant difference in FBDG General Satisfaction between Active and Occasional Participants.
Research Question 5a: Do demographic and contextual characteristics of early-stage teachers represent differences in the circumstances leading to participation?

This section provides results of data analyses related to the first part of the fourth research question. Chi-square tests of independence were performed to compare how members found out about FBDG against their gender, education level, multiplicity of school settings, multiplicity of specialties, and school urbanicity. Due to small cell sizes for some response options, the categories for Education Level were collapsed for analysis. The single high school diploma response was excluded and the single doctoral degree was combined with the master’s degree responses to create two Education Level options, undergraduate degree and graduate degree.

To condense the options for how they found out about the group, respondents who indicated they found out via invitation, word of mouth, or through a friend or mentor were more broadly considered as having found out through a person-to-person connection. Those who found out through personal research, a favorite website, or Facebook algorithm recommendation were broadly classified as having found FBDG independently. As detailed in Table 4.7, the proportion of respondents who found out about FBDG through a personal connection or independently did not significantly differ by any of the demographic or contextual factors.
Table 4.7

Crosstabulations of How Members Found FBDG and Professional Demographics and Contextual Variables

<table>
<thead>
<tr>
<th>Category</th>
<th>df</th>
<th>N</th>
<th>( \chi^2 )</th>
<th>( p )</th>
</tr>
</thead>
<tbody>
<tr>
<td>Education level</td>
<td>1</td>
<td>215</td>
<td>2.26</td>
<td>.13</td>
</tr>
<tr>
<td>Employment status</td>
<td>1</td>
<td>216</td>
<td>1.51</td>
<td>.22</td>
</tr>
<tr>
<td>Certification status</td>
<td>1</td>
<td>216</td>
<td>4.86</td>
<td>.03**</td>
</tr>
<tr>
<td>Years of experience</td>
<td>3</td>
<td>216</td>
<td>1.45</td>
<td>.70</td>
</tr>
<tr>
<td>Main school setting</td>
<td>4</td>
<td>216</td>
<td>3.06</td>
<td>.55</td>
</tr>
<tr>
<td>Multiplicity of school settings</td>
<td>1</td>
<td>216</td>
<td>3.25</td>
<td>.07</td>
</tr>
<tr>
<td>Main specialty</td>
<td>6</td>
<td>216</td>
<td>6.24</td>
<td>.40</td>
</tr>
<tr>
<td>Multiplicity of specialties</td>
<td>1</td>
<td>216</td>
<td>.90</td>
<td>.35</td>
</tr>
<tr>
<td>School urbanicity</td>
<td>3</td>
<td>205</td>
<td>1.00</td>
<td>.80</td>
</tr>
<tr>
<td>School sector</td>
<td>2</td>
<td>216</td>
<td>6.00</td>
<td>.05*</td>
</tr>
</tbody>
</table>

Note. *More than 20% of cells have counts less than 5, violating the assumptions of the test. **More than 20% of cells have counts less than 5 and the result of Fischer's Exact Test was not significant.

Chi-square tests of independence were also performed to examine the distribution among the top-ranked reasons why members joined FBDG and their gender, education level, multiplicity of school settings, multiplicity of specialties, and school urbanicity. The distributions with which members selected the top-ranked reasons for joining FBDG did not significantly differ by any of the contrasting demographics or contexts, as shown in Table 4.8.
Table 4.8

*Crosstabulations of Members Top-Ranked Reasons for Joining FBDG and Professional Demographics and Contextual Variables*

<table>
<thead>
<tr>
<th>How Members Found FBDG</th>
<th>df</th>
<th>N</th>
<th>$\chi^2$</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Education level</td>
<td>5</td>
<td>214</td>
<td>3.03</td>
<td>.70</td>
</tr>
<tr>
<td>Employment status</td>
<td>5</td>
<td>215</td>
<td>8.21</td>
<td>.15</td>
</tr>
<tr>
<td>Certification status</td>
<td>1.83</td>
<td>215</td>
<td>1.83</td>
<td>.87</td>
</tr>
<tr>
<td>Years of experience</td>
<td>15</td>
<td>215</td>
<td>28.43</td>
<td>.02*</td>
</tr>
<tr>
<td>Main school setting</td>
<td>20</td>
<td>215</td>
<td>30.58</td>
<td>.06</td>
</tr>
<tr>
<td>Multiplicity of school settings</td>
<td>5</td>
<td>215</td>
<td>3.79</td>
<td>.58</td>
</tr>
<tr>
<td>Main specialty</td>
<td>30</td>
<td>215</td>
<td>31.67</td>
<td>.38</td>
</tr>
<tr>
<td>Multiplicity of specialties</td>
<td>5</td>
<td>215</td>
<td>5.02</td>
<td>.41</td>
</tr>
<tr>
<td>School urbanicity</td>
<td>15</td>
<td>205</td>
<td>15.91</td>
<td>.39</td>
</tr>
<tr>
<td>School sector</td>
<td>15</td>
<td>215</td>
<td>8.43</td>
<td>.91</td>
</tr>
</tbody>
</table>

*Note.* *More than 20% of cells have counts less than 5, violating the assumptions of the chi-square test.*

**Research Question 5b: Do demographic and contextual characteristics of early-stage teachers represent differences in the perception as a form of professional induction?**

This section provides results of data analyses related to the second part of the fourth research question. Five one-way ANOVAs were conducted to examine the difference between respondents’ education level, years of experience, multiplicity of school settings, multiplicity of specialties, and school urbanicity and their perceptions of FBDG’s value as professional
development for them personally (Q37.1). Results showed that the mean scores for personal FBDG professional development value were not significantly different.

To further investigate whether early-stage teachers’ perception of FBDG as a form of professional induction differed by their demographics or contexts, the 12 survey items rating the group’s effectiveness in helping users in a variety of ways (Q36.1-12) were subjected to an exploratory factor analysis. Principal components factoring was used to see if there were any latent variables that would allow reduction of those 12 items. The Kaiser-Meyer-Olkin value was .93, well above the recommended threshold of .50 (Young & Pearce, 2013), and the Bartlett’s Test of Sphericity reached statistical significance indicating the correlations were sufficiently large for exploratory factor analysis. As shown in Table 4.9, two factors were extracted explaining 65.49% of the variance based on eigenvalues, cumulative variance and inspection of the scree plot. Factors were orthogonally-rotated using Varimax rotation. Results showed two distinct factors: the first encompassed issues of problem solving, classroom management, and developing broader perspectives on teaching, and was labeled as “Practical Support.” The second, that encompassed feelings of isolation, feelings of confidence, and provision of emotional support, was labeled as “Emotional Support.” Beyond the internal logic of the components within each factor, these factor labels align with the language used by DeWert et al. (2003) and Merseth (1991) in previous examinations of DCP used to support induction. Practical and Emotional factor scores for each respondent were calculated for use in subsequent analysis.
Table 4.9

Summary of Exploratory Factor Analysis with Varimax Rotation for FBDG Professional Induction Value Measures

<table>
<thead>
<tr>
<th>Item</th>
<th>Practical Support</th>
<th>Emotional Support</th>
</tr>
</thead>
<tbody>
<tr>
<td>View problems from multiple perspectives</td>
<td>.74</td>
<td></td>
</tr>
<tr>
<td>Critically analyze problems encountered</td>
<td>.68</td>
<td></td>
</tr>
<tr>
<td>Ability to solve similar problems in the future</td>
<td>.74</td>
<td></td>
</tr>
<tr>
<td>Develop broader perspectives on teaching and learning</td>
<td>.78</td>
<td></td>
</tr>
<tr>
<td>Create alternate solutions to problems</td>
<td>.78</td>
<td></td>
</tr>
<tr>
<td>Ability to solve current problems</td>
<td>.76</td>
<td></td>
</tr>
<tr>
<td>Share teaching techniques</td>
<td>.80</td>
<td></td>
</tr>
<tr>
<td>Improve classroom management</td>
<td>.59</td>
<td>.49</td>
</tr>
<tr>
<td>Feel more confident in teaching ability</td>
<td>.43</td>
<td>.56</td>
</tr>
<tr>
<td>Feel less isolated</td>
<td></td>
<td>.83</td>
</tr>
<tr>
<td>Provide needed emotional support</td>
<td></td>
<td>.80</td>
</tr>
<tr>
<td>Feel less overwhelmed</td>
<td></td>
<td>.76</td>
</tr>
<tr>
<td>Eigenvalues</td>
<td>6.84</td>
<td>1.02</td>
</tr>
<tr>
<td>% of variance</td>
<td>56.99</td>
<td>8.51</td>
</tr>
</tbody>
</table>

*Note: Factor loadings over .40 appear in bold.*
Five one-way ANOVAs were conducted to examine the difference between respondents’ education level, years of experience, multiplicity of school settings, multiplicity of specialties, and school urbanicity and their perceptions of FBDG’s Practical and Emotional Support. Results showed that the mean scores for the effectiveness of FBDG’s Practical and Emotional Support were not significantly different.

**Research Question 5c: Do demographic and contextual characteristics of early-stage teachers represent differences in the type of participant interaction?**

Five one-way ANOVAs were conducted to examine the difference among respondents’ gender, education level, multiplicity of school settings, multiplicity of specialties, and school urbanicity and respondents’ productive FBDG engagement. Results showed that the mean scores for Production Activity were not significantly different.

Five one-way ANOVAs were also conducted to examine the differences among participants’ professional demographics and contextual characteristics and respondents’ FBDG Consumption Activity. Results showed that the mean scores for Consumption Activity were not significantly different by gender, multiplicity of school settings, or school urbanicity. However, the results did show that mean Consumption Activity scores were significantly different by education level \( (F(1,205) = 4.198, p = .042) \) and multiplicity of specialties \( (F(1,206) = 6.72, p = .010) \). Analysis indicated that participants who held undergraduate degrees reported significantly higher levels of Consumption Activity \( (M = .08, SD = .94) \) than those with graduate degrees \( (M = -.34, SD = 1.16) \). Participants responsible for teaching music specialties in addition to band reported significantly higher levels of Consumption Activity \( (M = .15, SD = .90) \) than those who were responsible for teaching solely band \( (M = -.22, SD = 1.08) \).
CHAPTER 5
SUMMARY AND DISCUSSION

This chapter first presents the discussion of the results according to the research questions. Implications for early-stage teachers and formal professional induction programs are then discussed. The chapter ends with recommendations for future research and concluding remarks.

Care must be taken in generalizing these results to all early-stage teachers of FBDG due to the sampling procedure. However, the results provide insight into how early-stage teachers choose to engage with FBDG and their perceptions of FBDG as a form of teacher induction, which is the purpose of this study.

Research Question 1: What are the personal and professional demographics of early-stage teacher participants in FBDG?

The composite portrait of an early-stage teacher member of FBDG was a 26-year-old White woman with an undergraduate degree and teaching certificate, who had less than one academic year of teaching experience. This typical member taught multiple music specialties including band, full-time, across multiple grade level settings in a suburban territory within the United States, and had received formal teacher induction in the form a face-to-face mentor and beginning teacher seminars. She also had been a Facebook member for 11 years, checked her account multiple times a day, and belonged to two to three professional Facebook groups.

Most early-stage teacher members were certified to teach and held bachelor’s degrees. This is unsurprising as possession of a bachelor’s degree and certification in one’s area of teaching is a fundamental requirement for an instructional position in public schools (Teacher Certification Degree, 2017), which is where all but 13 of the 216 respondents taught. It also
confirms that the survey respondents very much fit this study’s target population and the
definition of early-stage band teachers described in Chapter One.

Six out of every 10 band directors in K-12 schools across the United States are male (MTD Research, 2015), yet most early-stage teachers who joined FBDG are female (52.9%). This gender breakdown is slightly different from that of the total FBDG membership in which males were found to be the majority of members (57.4%) in a study by Rickels and Brewer (2017) that used a sampling technique very similar to that used in the current study. This minor trend toward more even gender representation within FBDG, particularly among early-stage participants, may be, at least in part, due to the Facebook usage demographics of U.S. adults. Women join Facebook at a somewhat higher rate than do men, with 83% of female Internet users adopting the social media platform compared to 75% of male Internet users (Greenwood, Perrin, & Duggan, 2016).

Early-stage FBDG members are notably varied with regard to demographics of interest beyond gender as well. There was not a predominant sociodemographic characteristic present with regard to years of teaching experience, school urbanicity, nor school setting in which most teaching duties were performed. Their teaching responsibilities were also not limited solely to band because two out of every three respondents were also responsible for teaching additional music specialties. Rickels and Brewer (2017) found very similar demographics for FBDG as a whole and concluded that such diversity, when paired with FBDG’s large membership size, “creates quantity and variety in responses that help users gain a range of perspectives on each topic” (p. 86) Early-stage teachers were predominantly White (88.9%). This too was in line with Rickels and Brewer’s (2017) findings about FBDG membership.
Research Question 2: How do early-stage teacher participants perceive FBDG as a form of professional induction?

It is clear that early-stage teacher participants found FBDG to be a valuable form of professional development, particularly as an avenue for practical support, such as sharing teaching techniques or improving one’s ability to solve similar problems in the future. In fact, as an overall method of induction, FBDG was found to be nearly as effective as having a face-to-face mentor, and much more effective than beginning teacher classes, workshops, orientations, or seminars. Professional induction was considered in terms of the value or importance of the group in meeting early-stage teachers’ needs and desires for support and guidance as they transitioned into their first jobs as derived from the work of Brewer and Rickels (2014), Conway (2015), Donna (2009), and Smith (1994). Related survey questions probed the group’s content, the trustworthiness of that content, the effectiveness of content in helping members professionally, whether these impressions matched the early-stage teacher members’ reasons for joining, and comparisons of FBDG to other sources of professional induction for early-stage teachers.

Early-stage teacher members reported the most prevalent FBDG content posts they encountered related to humor, story sharing, or group moderation; slightly less frequent were posts about relationships with adult program stakeholders, equipment and facilities, and curricular instruction. In large part, this reflected previous analyses of FBDG content (Brewer & Rickels, 2014) in which topics fell into three overarching categories, in descending order of frequency: curricular (including planning, instruction, learning environment, and assessment); co-curricular (including equipment & facilities, scheduling, finances, and relationships with adult stakeholders); and community (humor, story sharing, and moderation of the forum). In the
current study, community posts were seen by early-stage teachers most frequently, followed by co-curricular posts, and finally curricular posts.

Variations between Brewer and Rickels’ content analysis and the early-stage teacher members’ perceptions identified in the current study could be due to reasons related to methodology and to two characteristics of online social media platforms. First, FBDG content may be encountered directly through the group page or because Facebook’s algorithms insert FBDG participant posts within a member’s personal newsfeed outside of FBDG. Next, the distributed, asynchronous, and member-driven nature of FBDG also means that activity within the group occurs every day and around the clock, whether a member is online or not. Therefore, the actual content contained within FBDG and the content a member personally encounters are not comparable. In addition, Brewer and Rickels’s methodology captured only produced content contributed to FBDG within a set timeframe, whereas the current study targeted early-stage teachers’ perceptions of FBDG as professional induction.

Information shared within FBDG was believed to be trustworthy by the majority of early-stage teacher members. This feeling of trust was based mostly on their positive perceptions of the relevance of the posts and comments from the other members. Research regarding DCP for educators points to real-time personal interaction as driving the success and level of trust within the online environment (Klecka, 2004; Langley, 2008). Among FBDG members, off-line, in person interaction may occur, but this is not likely to happen for any more than a small percentage of the group’s membership. Despite not meeting face-to-face, the fact that FBDG members feel positive about their shared competence, and are interacting and learning together within the group, defines it a community of practice as articulated by Wenger (1998).
In large part, respondents deemed FBDG to be valuable as a source of professional development. As a form of professional development, early-stage teacher members (80.2%) thought FBDG to be valuable for them personally and for music educators from any specialty area (72.7%). This high level of perceived value is in line with previous investigations of online educator support programs (DeWert et al., 2003; Donna, 2009; Hough et al., 2004; Langley, 2008).

Early-stage teachers found FBDG to be very effective in helping them in a variety of ways including viewing problems from multiple perspectives, critically analyzing problems they encounter, feeling less isolated, improving their ability to solve similar problems in the future, developing broader perspectives on teaching and learning, constructing alternative solutions to problems they encounter, feeling more confident in their abilities as teachers, improving their ability to solve problems they currently face, and sharing teaching techniques. Respondents felt that FBDG was moderately effective at providing emotional support, helping them feel less overwhelmed, and improving classroom management. Of the seven initial reasons for joining offered as response options, joining “to feel less isolated” was the lowest-ranked reason members were drawn to FBDG, whereas joining “to keep oneself informed” was ranked as the most important reason by almost half of the respondents. That only seven participants ranked their feelings of isolation as the primary attraction to the group is surprising due to how often the issue of teacher isolation and its deep, negative impact, particularly among early-stage music teachers, is noted in the literature (Conway & Christensen, 2006; Conway & Zerman, 2004; Krueger, 2011; Rickels & Brewer, 2017). It is noteworthy then that, despite having not joined in order to feel less isolated, the majority of the respondents felt they received extremely or very effective help from FBDG in that area.
When data about effectiveness was examined for underlying themes, two types of support emerged: Emotional and Practical. Emotional Support consisted of improving classroom management, feeling less overwhelmed, providing emotional support, feeling more confident in teaching ability, and feeling less isolated. These same five effectiveness items also ranked as the areas in which respondents felt they had received the least effective support from FBDG. It appears that although early-stage members felt they received mostly effective support overall, FBDG may be an induction context better suited for supporting its members with their practical needs than their emotional needs.

In addition to FBDG as source of professional induction, members were asked the effectiveness of school sponsored seminars and face-to-face mentor programs. Reflecting the pervasiveness of teacher induction programs across the United States (Goldrick, 2016; Ingersoll, 2012), the majority of respondents reported receiving formal, in-person support both of an individual nature, with face-to-face mentors (73.1%), and of a more general nature, with school sponsored beginning teacher seminars (66.7%).

When the effectiveness ratings for each support method were viewed together, some broad trends emerged about how FBDG functions as induction related to face-to-face mentors and beginning teacher seminars. None of the three methods rose to the level of being rated extremely effective, and seminars for beginning teachers were quite clearly the least effective of the sources. Both mentoring and use of FBDG were typically rated very closely and consistently as moderately to very effective, but mentoring did retain a slight edge in effectiveness for the most part. That a DCP and in-person mentor-mentee relationships would bear such similarities points to an opportunity for further research comparing the two.
Research Question 3: How do members engage with FBDG and what is their satisfaction toward the group’s activities?

With respect to how members engage with FBDG, early-stage teachers frequently spend time in the group, primarily carrying out consumption behaviors, such as reading and researching, as opposed to producing original content. Early-stage members were largely satisfied with the activities and level of privacy within FBDG, particularly in comparison to Facebook more generally. FBDG member engagement was characterized by membership length, frequency of group use, and type of use. Satisfaction related to FBDG was typified by perceptions of the group moderator and a series of agreement statements related to user satisfaction.

The majority of early-stage teachers had belonged to FBDG for fewer than three academic years, which was expected considering the population upon which this study is focused. The finding that two-fifths of the teachers had additional years of membership suggests that many perhaps began engaging while they were still completing their professional education programs. That those who joined before their first employment in a teaching job continued to engage after entering the teaching force may also indicate some positive degree of satisfaction. Most of the survey respondents spent at least the same amount of time on FBDG as they did on Facebook more generally, accessing the group at least once each day.

Members’ engagement was also investigated as to what activities individuals undertook within FBDG. Consumption of FBDG content as reading and researching was compared to members’ production of content for the group. Nine out of ten early-stage teachers spent their time reading content posted by others. Nearly half of the teachers frequently researched and read older content posts. But when it came to contributing their own posts and comments of any kind,
such activities were rarely or never undertaken. This consumption/production distinction was confirmed via a factor analysis that extracted two discrete components, clearly divided along these same lines. Both types of activity are necessary for a social media platform like Facebook and a healthy DCP to successfully operate.

In this context, production is also predicated to some degree on consumption because a member has no choice but to look at and read material when they log onto the site. This may be one reason behind the comparatively higher levels of consumption activities. Another may be that because senior members within Facebook groups typically engage more frequently in production activities (Ranieri et al., 2012) than junior members who were the focus in the current study. No matter the length of one’s membership, the idea of posting questions or other material to be potentially consumed by or commented on by more than 19,000 of one’s professional peers may be an intimidating prospect that may inhibit members even when they do have something to contribute. Despite FBDG’s professional focus and the moderator’s articulation of guidelines promoting “respectful, civil, and professional” postings and comments (Wis, 2013), all FBDG members may not adhere to these expectations. Maintaining professional interactions within FBDG can be further complicated by participants’ inability to read and respond to non-verbal cues in what is a text-intensive environment.

One dimension of satisfaction with FBDG was the characterization of the group moderator. The FBDG group moderator was perceived by the majority of early-stage teachers as being fair. Few teachers found the moderator to be very visible within the group or to be too rigid or too permissive. It may be that the FBDG moderator did well early on in creating and enforcing policies that focus conversations in a community of responsibility, safety, and trust.
Statements by several teachers supported this possibility and suggest that some of the membership may be aware of the moderator’s deft touch:

“I am not sure who the moderator is.”

“A good moderator is invisible.”

“I honestly don’t see the moderators interacting often. They seem to let the group function on its [sic] own and it works great!”

“I think he (and other moderators that are less visible) do a great job!”

Early-stage teacher members were satisfied with the time they spent engaging with the group and their ability to build relations with other users as a member of the group. When compared with Facebook more generally, teachers felt more positive about spending their free time in FBDG. On the other hand, it was general Facebook use they felt was better for building relationships. The professional development focus of the group, as opposed to the largely social focus of the overall Facebook platform, may be responsible for both these differences.

Early-stage teachers were divided or neutral in their feelings of group ownership and personal comfort posting thoughts and feelings to the FBDG membership. These same sentiments were expressed about Facebook’s platform in general.

Previous research has shown that privacy for members of online groups is a source of worry (Klecka, 2004; Maxwell et al., 2010). This was true for respondents in this study. However, inside this group, three out of four early-stage members were not concerned with their level of privacy. This relatively lower concern for privacy within the group may be why members were also far more comfortable sharing their thoughts and feelings within the FBDG than they were on Facebook in general. Participants may also feel a relative sense of anonymity among the tens of thousands of FBDG teachers, only a fraction of whom one is likely associated with offline. A member’s acceptance of the trustworthiness of the others may create a sense of
relative safety regarding personal privacy, which in turn may promote usage of the group and increased user satisfaction. One is left wondering if members are aware of the possibility that any member can make a digital image of any content and post it outside the wall of the group.

**Research Question 4: To what extent does one’s category of participation in an online professional community of practice (Wenger-Trayner & Wenger-Trayner, 2011) result in differences in group engagement (consumption and production) and satisfaction among early-stage teachers?**

Wenger-Trayner (2011) identified four categories of participation and membership in professional communities of practice. They are labeled, in descending order of frequency and type of engagement: Core, Active, Occasional, and Peripheral. Previous content analyses have suggested the existence of these participation categories in online teacher professional development groups (Brewer & Rickels, 2014; Palmquist & Barnes, 2015; Rutherford, 2010). Due to the nature of content analysis, Peripheral participation was difficult to measure and these categories had not been verified by direct survey of online teacher professional development group members.

The current study investigated (1) whether the expected distribution of members among these groups holds for a community of practice that exists within an online context when focused on early-career teachers, and (2) whether consumption and production activity differs by self-placement in a category of participation. In terms of distribution, Core members are the smallest group followed by the slightly more numerous Active members. Occasional members are much larger in number and Peripheral members are the largest group. Regarding the predictability of the distribution of members among the four categories, the fact that this study focused on early career teachers in one sense structured expectations in a way that makes intuitive sense. No
early-stage teachers identified as a Core Participant. This is not surprising given that members targeted by this study were early-stage teachers and therefore unlikely candidates to provide the nurturing of community that characterizes this type of participation as described by Wenger (2002). Only 13.1% of respondents self-identified as Active Participants. Relative to Core members, the expected smaller proportion of members who self-identify as Active Participants was in line with the proportion of FBDG members represented in the current study. Occasional Participants made up the largest portion of early-stage teachers in FBDG, but were very close to the 43.2% of Peripheral Participants. These early-stage FBDG members were distributed among the categories of community of practice membership as expected.

The nature of one’s production varied with regard to participation type in the ways expected. Active Participants’ Production Activity was significantly higher than that of Occasional Participants, who in turn had higher Production Activity than Peripheral Participants. However, no significant differences with regard to Consumption were observed. As was discussed previously, this may reflect the pervasive nature of consumption with social media use. When interpreting this finding, one must keep in mind that Wenger et al. (2002) assigned neither positive nor negative connotations to Production or Consumption Activity.

Prior to the current study, no research tested whether Wenger-Trayner and Wenger-Trayner’s (2011) participation categories extended to satisfaction with the community of practice in which one is engaged. Results suggest the members who self-identified as least engaged (Peripheral Participants) were significantly less satisfied with their FBDG experience than the other group members. This may point to a potential shortcoming of a DCP serving as a form of induction. While a formal induction program might hold all of its early-stage teachers to a similar standard of engagement in an effort to maximize the benefit to all participants, such
expectations run counter to the fundamental structure of an online DCP. It should be noted, however, that in a DCP one’s participant category is not permanently fixed. People will move in and out of these categories over time as their needs and priorities change, which is considered a sign of community health and that “good community architecture invites many different levels of participation” (Wenger et al., 2002, p. 55).

**Research Question 5a: Do demographic and contextual characteristics of early-stage teachers represent differences in the circumstances leading to participation?**

Most teachers found their way to FBDG through a person-to-person connection and joined to keep themselves informed. How and why they did so was independent of their gender, education level, multiplicity of school settings, multiplicity of specialties, or school urbanicity. While effective district-level induction for music educators is sometimes portrayed as a problem for rural or large urban school districts (Klecka, 2004; Smith, 1994), these analyses seem to indicate that becoming a member of FBDG is perhaps more about a broadly shared identity as active band directors interested in helping one another regardless of professional demographics or contextual distinctions.

**Research Question 5b: Do demographic and contextual characteristics of early-stage teachers represent differences in the perception as a form of professional induction?**

There was no difference in how early-stage teacher members perceived FBDG’s value as professional development based on education level, years of experience, multiplicity of school settings, multiplicity of specialties, or school urbanicity. The group was found to be valuable professional development by early-stage teachers from all demographics and school contexts.

There was also no difference in the members’ perceptions of the effectiveness of FBDG’s practical and emotional support of its members based on any of the professional demographics or
contexts. Members from all professional settings and backgrounds found FBDG to be largely effective at assisting with their teaching practice.

These findings appear to further underscore that the interest and benefit in joining FBDG are not limited to any particular set of teachers or characteristics of the schools in which they work. Via FBDG, early-stage teachers are engaging with a community of music education practice whether they are in a rural or suburban school, have a bachelor’s or a master’s degree, or are in their first or third year of teaching. The fact that first, second, and third year teachers all found FBDG valuable as induction gives added support to the idea of considering teacher career cycles in multi-year stages such as “early-stage” rather than slightly more arbitrary labels like “first-year” teachers (Eros, 2011).

Research Question 5c: Do demographic and contextual characteristics of early-stage teachers represent differences in the type of participant interaction?

There was no difference in early-stage teacher members’ level of production within FBDG based on gender, education level, multiplicity of school settings, multiplicity of specialties, or school urbanicity. On one hand, one is perhaps left to wonder what would predict or even encourage a member to engage in more group Production Activity. On the other hand, one might also wonder if having high Production Activity really mattered as long as a member was still getting something of value out of engaging with FBDG.

There were two differences regarding which early-stage teacher members’ level of Consumption Activity: education level of the teachers and multiplicity of specialties taught. Those early-stage teachers with only undergraduate degrees had higher consumption activity than those who also possessed graduate degrees. It may be that bachelor’s degree recipients feel they still have a lot to learn about themselves and the job and are trying to take in as much of the
content of FBDG as they can. It could also be that the early-stage teachers equipped with graduate school education feel surer of themselves personally and professionally and thus feel less need to rely on support from FBDG.

Early-stage teachers who were charged with teaching multiple music specialties had higher consumption activity than those teachers who taught only a single specialty area. Being responsible for curriculum planning and instruction across several music content areas could pose challenges to a teacher’s time and skills. It may be that these multi-specialty teachers spend more time reading and researching in pursuit of expedient and effective help solving unfamiliar problems or gathering new instructional ideas to better serve content areas in which they may not be as knowledgeable.

Implications

The findings of the present study provide illumination on a number of relevant issues for early-stage band directors, facilitators of school-sponsored teacher induction programs, and teacher preparation programs. As early-stage band directors often struggle to find help that is content-specialized and grade-level specific within school-sponsored professional induction programs, the findings about the high level of perceived professional induction value, trustworthiness, and effectiveness of the group recommend FBDG as an informal resource for such assistance. The early-stage teacher respondents in this study were in agreement about FBDG’s larger value as professional induction irrespective of their education level, years of experience, multiplicity of grade-level settings, multiplicity of music specialties being taught, and school urbanicity. Regardless of who an early-career band director is or at what job they are employed, many of their peers in FBDG share the same passion for band education and desire to
improve teaching practice. This positions FBDG as an authentic and valued community of practice.

FBDG is available online to its members at any time of any day, whether one wants to read or research relevant posts by others or share one’s own questions, ideas, or comments. This can allow potential time for reflection, conveniently enable early-stage teachers to seek help, and provide just-in-time, content-specific support. Yet, the distributed, asynchronous, and member-driven characteristics of the group also mean that the content posted can represent only the expertise and viewpoints of the group’s members.

While there is moderation to foster professional civility within this online space, there is no adjudication of the content for quality. This creates limits to the induction value of the group. For example, the lack of racial/ethnic diversity among the early-stage members (88.9% of early-stage members are White) limits the space’s ability to include cross-cultural knowledge and understandings, thereby adding to the documented mismatch between the lived experiences of school band teachers and their students, though not necessarily of school band students (Elpus, 2015; Sleeter, 2001). In this respect, FBDG represents an induction experience that is narrower than may be found in formal, school-sponsored induction programs based on a broader base of professional interests and expertise.

Most of the early-stage teachers in the current study were found not to post or produce content, yet most still found the experience with FBDG to be valuable and satisfying. Those producing the least amount of content (Peripheral Participants) were the least satisfied members. It remains unclear whether Peripheral Participants were dissatisfied because of their lower engagement level, or if some portion of them had opted for Peripheral Participation because they were dissatisfied with their FBDG experience. But, as a DCP, the group allows members
flexibility to adjust their participation level over time as they themselves develop and their needs change.

FBDG could serve as a relevant resource for school-sponsored teacher induction programs. Because band directors are a specialized minority in relation to the rest of the local school educator population, school districts may struggle to provide relevant help. This can lead to feelings of professional isolation on the part of early-stage teachers, potentially resulting in lower teacher performance, lower student achievement, and even teacher attrition, all of which cost schools in different ways (Ingersoll, 2012; Krueger, 2000). Although few early-stage teachers joined FBDG in order to feel less isolated, once they became one of nearly 19,000 members they reported that the FBDG was very effective at helping them feel less isolated. This is, however, not to suggest that the group is a panacea as there are aspects of teaching practice that FBDG addresses less effectively. Though the majority of members expressed receiving effective Emotional Support, the five specific topics within this component were provided the least effective support among all 12 topics. Using FBDG in concert with other forms of induction, perhaps in a context that would permit face-to-face interaction, may best serve the needs of early-stage band directors.

Because membership in FBDG is free, an analysis of the cost and benefit to schools and their early-career band directors would suggest that formal induction programs either incorporate the group or at the very least bring it to the attention of teachers. FBDG topics and posts could serve as conversation starters for mentors and mentees or as the basis for more relevant beginning teacher seminar material. Also, because participation in FBDG does not have to be organized across participants or calibrated to the school year, early-career teachers can access information or mentors in a more timely and efficient manner. Participation in FBDG can begin
before a school district has arranged for face-to-face meetings between mentees and mentors. This may be of particular importance to band directors who begin their work with marching bands before the start of the school year.

Preservice teacher education programs and their students could also benefit from FBDG in ways similar to early-stage band directors and induction programs. Although preservice music educators are permitted to join FBDG, they are asked to refrain from posting or commenting until such time as they hold their first professional teaching position. While this forces music education students into a “Peripheral” status (Brewer & Rickels, 2014), they can still consume all that the group produces. In this way, preservice teachers can access the variety of FBDG members’ teaching experiences. Furthermore, while they may not necessarily feel isolated within their program of study, they can broaden their perspective on teaching and learning in band. Like induction program facilitators, teacher educators might suggest FBDG membership to students, if not incorporate it into coursework.

The specialized nature of wind and percussion methods classes could be supported by class participation in FBDG because the group has shown to be of value to early career teachers and satisfies their interests. If so, FBDG as a community of practice is content specific and is portable to the years and spaces in which a program’s graduates will live and work. Orienting preservice teachers to the nature of DCP, including teaching them how to make careful judgments about the trustworthiness and how to glean information of value from within the enormous content found in such groups is a skill necessary for 21st century music educators.

One caveat regarding formally incorporating FBDG membership into induction or preservice education programs is the fact that FBDG is a “closed group.” This feature was clearly valuable to the early-stage membership based upon their feelings about privacy.
Requiring membership of pre-service or early-career band directors who may not have joined of their own volition may disrupt and redefine what has currently been established as an authentic community of practice (Brewer & Rickels, 2014), potentially making FBDG interaction less rewarding or meaningful. On the other hand, more members could increase the diversity of perspectives within the group. Those forced into joining who are not necessarily as interested in being FBDG members may be far less engaged and perhaps for only a short time before ignoring the group completely (Donna, 2009).

**Recommendations for Future Research**

The current study found FBDG to be perceived as largely effective in assisting early-stage teachers within the set of established outcomes for DCP, in particular, regarding assistance with their practice. Further investigation is needed to understand if and how an on-line DCP bears similarities to in-person, one-on-one mentor program.

The current study found that early-stage teacher members of FBDG consumed content more frequently than they produced it. Other research on professional Facebook groups has shown that more senior members within groups produce more than other members. Besides the longevity of their membership, what other factors initiate and sustain members’ production of content remains unexamined.

Due to the population and research questions of interest to this study a quantitative approach was utilized. In order to form a deeper understanding of FBDG’s value and what the members get from the group, a qualitative approach could be conducted. This would also inform our understanding of if and how knowledge gained from FBDG relates to the nature and quality of members’ professional practice.
It is possible that DCP of other music education specializations contribute to teacher professional induction, whether part of a formal program or not. Within just the Facebook platform there are groups for teachers who specialize in general music, string/orchestra, choral, jazz, hip-hop and music technology. In addition, teachers who work in private studios may have a distinctive set of expectations and interests that might be addressed by an on-line DCP. Without additional study, it is not possible to conclude whether these other groups of music educators are part of a successful distributed community of practice of early-stage teachers similar to FBDG, or if FBDG is a distinct source of valued professional induction.

**Conclusion**

The target population for this study was early-stage band director members of FBDG. Due to the nature of this online group, caution should be exercised in generalization of results to all early-stage band directors within FBDG, and no assumptions are made regarding the representativeness of the population of early-stage band director beyond this group, nor other early-stage music educators. However, this exploration provides understanding of the nature of experiences of these particular early-stage teachers with this community of practice on one of the most ubiquitous social media platforms, Facebook.

Formal, school-sponsored induction programs for early-stage music educators continue to be inconsistent in their effectiveness and lack content area specific support for teachers of music. Like many of the respondents in this study, music teachers are often tasked with teaching multiple areas of music specialty across multiple grade-level settings, which can be isolating and overwhelming. The results of this study show that FBDG is perceived as serving as teacher-driven, effective, content-area and grade-level specific induction support for early-stage band directors.
As in previous research involving DCP, FBDG provides perceived effective emotional and practical support to early-stage teachers, helping reduce feelings of isolation and being overwhelmed, potentially improving teacher success in the classroom. Being housed within the social media platform of Facebook provides convenient access from anywhere, at any time of day, and as frequently as a user prefers. With more than 19,000 members interacting and providing informal professional development for band directors at all career stages, and users whose levels of participation vary widely, this study underscores FBDG’s potential value and effectiveness as a community of practice.
REFERENCES


teachers (pp. 133–137). Reston, VA: MENC-The National Association for Music Education.


APPENDIX A

SURVEY: EARLY-CAREER MUSIC TEACHERS’ PERCEPTIONS OF THE FACEBOOK BAND DIRECTORS GROUP AS PROFESSIONAL INDUCTION

Screening Questions

1. Are you currently teaching music in K-12 classrooms?
   a. Yes
   b. No
2. Do you currently teach or have you ever taught band as your job or as a part of your job?
   a. Yes
   b. No
3. Are you currently in your first, second, or third year of teaching (full or part time)?
   a. Yes
   b. No

At first “No,” send to Thank you page.
<table>
<thead>
<tr>
<th>Question</th>
<th>Response or Response Scale</th>
<th>Source</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>1. Demographic Questions</strong></td>
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<td></td>
</tr>
<tr>
<td>1. How do you describe your gender?</td>
<td>Female&lt;br&gt;Male&lt;br&gt;Other</td>
<td>Ranieri et al. (2012)</td>
</tr>
<tr>
<td>2. What is your age? (enter whole number)</td>
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<td>Ranieri et al. (2012)</td>
</tr>
<tr>
<td>3. What is the highest degree or level of education you have <em>completed</em>?</td>
<td>High School diploma or equivalent (e.g. GED)&lt;br&gt;Associate degree&lt;br&gt;Bachelors degree&lt;br&gt;Masters degree&lt;br&gt;Professional degree (PsychD, MD, JD)&lt;br&gt;Doctoral degree (EdD, DMA, PhD)</td>
<td>Ranieri et al. (2012)</td>
</tr>
<tr>
<td>4. How would you describe your race/ethnicity?</td>
<td>American Indian or Alaskan&lt;br&gt;Native&lt;br&gt;Asian&lt;br&gt;Black or African-American&lt;br&gt;From multiple races&lt;br&gt;Hispanic/Latino</td>
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<tr>
<td>Question</td>
<td>Response</td>
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<tr>
<td>5. In what country do you do most of your teaching?</td>
<td>Qualtrics’ pull down menu</td>
<td></td>
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</table>
| 6. Please write the ZIP or Postal Code of the school district where you do most of your teaching. | (Enter 5-digit ZIP code or Postal code)  
Ranieri et al. (2012)                                                   |
| 7. In what type of school do you work?                                  | Public, non Charter  
Public, Charter  
Private, non-religious  
Private, religious  
Other Private  
Ranieri et al. (2012)                                                   |
| 8. Which of the following categories best describes your current employment status in teaching? | Employed, working full-time  
(≥40 hours/week)  
Employed, working part-time  
(<40 hours/week)  
Not employed, looking for work  
Not employed, NOT looking for work  |
| 9. Are you licensed or certified to teach music by a state or governmental agency? | Yes  
No |
| 10. How many years have you been teaching as a licensed/unlicensed educator? | Less than 1 academic year  
1 academic year  
Ranieri et al. (2012) |
<table>
<thead>
<tr>
<th>2 academic years</th>
<th>3 academic years</th>
<th>More than 3 academic years</th>
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</table>

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<tr>
<th>11. In what setting/s do you teach? (Check all that apply)</th>
<th>Pre-school</th>
<th>Elementary/Primary School</th>
<th>Middle/Junior High School</th>
<th>High School</th>
<th>University</th>
<th>Professional/Technical School</th>
<th>Other (please specify)</th>
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</thead>
</table>

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<tr>
<th>12. In what setting do you perform most of your teaching duties? (Check all that apply)</th>
<th>Pre-school</th>
<th>Elementary/Primary School</th>
<th>Middle/Junior High School</th>
<th>High School</th>
<th>University</th>
<th>Professional/Technical School</th>
<th>Other (please specify)</th>
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<tr>
<th>13. What music specialties do you teach? Select all that apply.</th>
<th>Winds/Bands</th>
<th>Choral/Voice</th>
<th>General Classroom Music</th>
<th>Guitar</th>
<th>Jazz</th>
<th>Marching Band</th>
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</thead>
</table>

Ranieri et al. (2012); National Association for Music Education
II. Header: GENERAL FACEBOOK USE

INTRO: The next six questions are about your Facebook use in general and not limited to Facebook Band Directors Group (FBDG)
<table>
<thead>
<tr>
<th></th>
<th>Question</th>
<th>Options</th>
<th>Reference</th>
</tr>
</thead>
<tbody>
<tr>
<td>15</td>
<td>For how long have you had your Facebook account?</td>
<td>Less than 6 months</td>
<td>Ranieri et al. (2012)</td>
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<td></td>
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<td>6-11 months</td>
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<td>12 years</td>
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<td></td>
<td>13 years</td>
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<tr>
<td>16</td>
<td>How often do you check your Facebook account?</td>
<td>Multiple times/day</td>
<td>Ranieri et al. (2012)</td>
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<td>Once a day</td>
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<td>A few times a week</td>
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<td>Only once a week</td>
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<td></td>
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<td>Once a month</td>
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<td></td>
<td></td>
<td>Other (please specify)</td>
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</tr>
<tr>
<td>17</td>
<td>Indicate your degree of agreement or disagreement with the following</td>
<td>Strongly agree</td>
<td>Ranieri et al. (2012)</td>
</tr>
<tr>
<td></td>
<td>statements regarding general Facebook use: *</td>
<td>Agree</td>
<td></td>
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<tr>
<td>Neither agree nor disagree</td>
<td>Disagree</td>
<td>Strongly disagree</td>
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<tr>
<td>a. I feel a sense of ownership regarding the community of Facebook</td>
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<tr>
<td>b. Facebook allows me to build relationships with other users</td>
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<tr>
<td>c. I feel very comfortable sharing my feelings and opinions with my Facebook friends/contacts</td>
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<tr>
<td>d. Facebook is a great way to spend my free time</td>
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<tr>
<td>e. I started questioning my privacy after using Facebook</td>
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</table>

18. Including the Facebook Band Directors Group, of how many *professional* Facebook groups are you a member? (enter a whole number larger than 1)  

| ≥1 | Ranieri et al. (2012) |

---

**Header: FACEBOOK BAND DIRECTORS GROUP**

**Intro:** The next 14 questions are limited to your use and thoughts about the Facebook Band Directors Group.

<table>
<thead>
<tr>
<th>19. For how long have you been a member of Facebook Band Directors Group (FBDG)?</th>
<th>&lt; 1 academic year</th>
<th>1 academic year</th>
<th>2 academic years</th>
<th>3 academic years</th>
<th>4 academic years</th>
<th>5 academic years</th>
<th>6 academic years</th>
<th>Ranieri et al. (2012)</th>
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</thead>
<tbody>
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</tbody>
</table>
7 academic years. In other words, since the year that FBDG was created.

20. How did you find out about FBDG? (select one)*
   - Personal research
   - I was added/invited
   - Word of mouth
   - I found out through a friend
   - I saw it mentioned on a favorite website
   - Facebook anticipated my interest based on algorithm
   - Don’t remember
   - Other (please specify)

21. Rank in order from most important to least the following reason for joining the FBDG.*
   1= most important
   7=least important
   - To share information
   - To share ideas/projects
   - To keep myself informed
   - To gain visibility for my initiatives
   - To feel less isolated
   - Out of curiosity
   - Other (please specify)

22. How often do you access the FBDG?
   - Multiple times a day

Ranieri et al. (2012)
### 23. Relative to the average you spend on FB, how much time do you spend on FBDG?*

- I spend more time on BDG than on other FB activities.
- I spend about the same amount of time on BDG as I do on other FB activities.
- I spend more time on other FB activities than I do on BDG.

### 24. How often do you do the following when you are on FBDG?

<table>
<thead>
<tr>
<th>Activity</th>
<th>Never</th>
<th>Rarely</th>
<th>Sometimes</th>
<th>Often</th>
<th>Very often</th>
<th>Ranieri et al. (2012)</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. Read other people’s posts*</td>
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<td>b. Comment on other people’s posts</td>
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<tr>
<td>c. Upload my own posts</td>
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<tr>
<td>d. Share resources</td>
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</tbody>
</table>
e. Report event

f. Report on my own initiatives

g. Research and read old posts

<table>
<thead>
<tr>
<th>25. Online communities, like the Facebook Band Directors Group, allow for different ways to participate. Typical categories of membership and participation include:</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. <strong>Core participants</strong>: a relatively small group whose passion and engagement energizes and nurtures the community</td>
</tr>
<tr>
<td>b. <strong>Active participants</strong>: members who participate on a regular basis but without the regularity or intensity of the core group</td>
</tr>
<tr>
<td>c. <strong>Occasional participants</strong>: members who only participate when the topic is of special interest, when they have some specific to contribute, or when they are involved in a project related to the domain of the community</td>
</tr>
<tr>
<td>d. <strong>Peripheral participants</strong>: members who have a sustained connection to the community, but rarely participate visibly</td>
</tr>
</tbody>
</table>

How would you categorize your membership category and level of participation in FBDG?

| Core participant | Ranieri et al. (2012) |
| Active participant | Wenger et al. (2002) |
| Occasional participant |  |
| Peripheral participant |  |

The next set of questions is about your view of the FBBG. Please select the
best answer based on your experience with FBDG.

<table>
<thead>
<tr>
<th>26.</th>
<th>Indicate your degree of agreement or disagreement with the following statements regarding FBDG use: *</th>
<th>Strongly agree</th>
<th>Agree</th>
<th>Neither agree nor disagree</th>
<th>Disagree</th>
<th>Strongly disagree</th>
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</thead>
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<tr>
<td>f.</td>
<td>I feel a sense of ownership regarding the community of FBDG</td>
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<td>Ranieri et al.  (2012)</td>
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<td>g.</td>
<td>FBDG allows me to build relationships with other users</td>
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<tr>
<td>h.</td>
<td>I feel very comfortable sharing my feelings and opinions with my FBDG friends/contacts</td>
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<tr>
<td>i.</td>
<td>FBDG is a great way to spend my free time</td>
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<td>j.</td>
<td>I started questioning my privacy after using FBDG</td>
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</table>

<table>
<thead>
<tr>
<th>27.</th>
<th>How often do you think each of the following topics appear as shared posts?*</th>
<th>Never</th>
<th>Rarely</th>
<th>Sometimes</th>
<th>Often</th>
<th>Very often</th>
</tr>
</thead>
<tbody>
<tr>
<td>a.</td>
<td>Curricular planning &amp; preparation</td>
<td></td>
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<td></td>
<td></td>
<td>Ranieri et al.  (2012); Brewer and Rickels, 2014</td>
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<tr>
<td>b.</td>
<td>Curricular instruction</td>
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<td>c.</td>
<td>Curricular learning environment</td>
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<tr>
<td>d.</td>
<td>Curricular assessment</td>
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</tr>
<tr>
<td>e.</td>
<td>Equipment &amp; facilities</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>f.</td>
<td>Scheduling</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>g.</td>
<td>Program finances</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>h.</td>
<td>Relationships with adult program stakeholders, e.g. administrators, parents, community members,</td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>alumni</td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>i.</td>
<td>Humor, story sharing, or group moderation</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>j.</td>
<td>Other (please specify)</td>
<td></td>
<td></td>
<td></td>
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</tr>
</tbody>
</table>

| 28.   | To what extent do you believe the other members of the group are                                  | very trustworthy |        |                           |          | Ranieri et al.  (2012); Brewer and Rickels, 2014 |

145
| Question 27? | Knowledgeable about the topics?
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>trustworthy</td>
<td>neither trustworthy nor untrustworthy</td>
</tr>
<tr>
<td>not trustworthy</td>
<td>very untrustworthy</td>
</tr>
</tbody>
</table>

29. Upon what criteria do you base your belief in other members’ knowledge or expertise about the topics in Question 27? (Please check 3 answers)*

| Membership screening by the moderator |
| Membership screening by the moderator |
| Personal knowledge of the members |
| Expressed approval of members by people you know |
| Members’ notoriety in the profession |
| Accuracy of the information on members’ profiles |
| Relevance of members’ posts & comments |
| Quantity of members’ posts & comments |
| Approval from other members (eg. number of “likes”) |
| It is not an issue I am concerned about |

Ranieri et al. (2012)
### 30. How would you categorize the behavior of the FBDG moderator? (Check all that apply)

<table>
<thead>
<tr>
<th>Behavior</th>
<th>MODERATOR IS OFTEN NOT PRESENT</th>
<th>MODERATOR IS A LITTLE RIGID</th>
<th>MODERATOR IS FAIR</th>
<th>MODERATOR IS TOO PERMISSIVE</th>
<th>MODERATOR IS POSITIVE</th>
<th>MODERATOR IS THE SOUL OF THE GROUP</th>
<th>Other (please specify)</th>
</tr>
</thead>
</table>

- Ranieri et al. (2012)

### 31. Rate the effectiveness of the FBDG in helping you in the following ways*

<p>| Effectiveness | a. Viewing problems from multiple perspectives | b. Thinking about and critically analyzing the problems or dilemmas you encounter | c. Feel less isolated | d. Improving your ability to solve similar problems in the future | e. Providing emotional support you need | f. Developing broader perspectives on teaching and learning | g. Constructing alternative solutions to the problems you encounter | h. Feeling more confident in your ability as a teacher | i. Feeling less overwhelmed | j. Improving your ability to solve the problems you encounter | k. Sharing teaching techniques | l. Improving classroom |
|--------------|-----------------------------------------------|-----------------------------|-------------------|---------------------------|----------------------|-----------------------------------|-----------------------|-------------------|---------------------------|-------------------|-------------------|
| Extremely effective | very effective | moderately effective | slightly effective | not at all effective | DeWert et al. (2003) (based upon Merseth, 1991) |</p>
<table>
<thead>
<tr>
<th>management</th>
<th>Strongly agree</th>
<th>Agree</th>
<th>Neither agree nor disagree</th>
<th>Disagree</th>
<th>Strongly disagree</th>
<th>Kumar (2012)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Indicate your degree of agreement with the following statements:</td>
<td></td>
<td></td>
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</tr>
<tr>
<td><strong>32. “The time I spend in FBDG is a valuable form of professional development for me.”</strong></td>
<td>Strongly agree</td>
<td>Agree</td>
<td>Neither agree nor disagree</td>
<td>Disagree</td>
<td>Strongly disagree</td>
<td></td>
</tr>
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<td></td>
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</tr>
<tr>
<td><strong>33. “The time I spend in FBDG is a valuable form of professional development for any music educator.”</strong></td>
<td>Strongly agree</td>
<td>Agree</td>
<td>Neither agree nor disagree</td>
<td>Disagree</td>
<td>Strongly disagree</td>
<td></td>
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<tr>
<td></td>
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</tr>
<tr>
<td><strong>INTRO: The next 6 questions are limited to your experiences with elements of professional development for early career teachers other than the FBDG.</strong></td>
<td></td>
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</tr>
<tr>
<td><strong>34. Have you had or do you currently have a formal mentor with whom you meet face-to-face?</strong></td>
<td>Yes</td>
<td>If No &lt;--skip to 37</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>35. Rate the effectiveness of your formal, face-to-face mentor in helping you:</strong></td>
<td>extremely effective</td>
<td>very effective</td>
<td>moderately effective</td>
<td>slightly effective</td>
<td>not at all effective</td>
<td>DeWert et al. (2003) (based upon Merseth, 1991)</td>
</tr>
<tr>
<td>a. View problems from multiple perspectives</td>
<td></td>
<td></td>
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<td></td>
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</tr>
<tr>
<td>b. Think about and critically analyze the problems or dilemmas you encounter</td>
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<tr>
<td>c. Feel less isolated</td>
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<tr>
<td>d. Improve you ability to solve similar problems in the future</td>
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<tr>
<td>e. Get the emotional support you need</td>
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<td></td>
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<tr>
<td>f. Develop broader</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Perspectives on teaching and learning</td>
<td></td>
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<tr>
<td>--------------------------------------</td>
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</tr>
<tr>
<td>g. Construct alternative solutions to the problems you encounter</td>
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</tr>
<tr>
<td>h. Feel more confident in your ability as a teacher</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>i. Feel less overwhelmed</td>
<td></td>
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</tr>
<tr>
<td>j. Improve your ability to solve the problems you encounter</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>k. Share teaching techniques</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>l. Improve classroom management</td>
<td></td>
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<td></td>
<td></td>
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<td></td>
</tr>
</tbody>
</table>

36. Describe your experiences with your formal, face-to-face mentor.  
   open-ended response

37. Have you had or do you currently have classes, workshops, orientations, or seminars for beginning educators at your school or district?  
   Yes  
   If No, skip to final Thank you page.

38. Rate the effectiveness of your school or district’s beginning educator classes, workshops, orientations, or seminars in helping you:*  
   a. View problems from multiple perspectives  
   b. Think about and critically analyze the problems or dilemmas you encounter  
   c. Feel less isolated  
   d. Improve you ability to solve similar problems in the future  
   e. Get the emotional support you need  
   f. Develop broader perspectives on teaching and learning  
   g. Construct alternative solutions to the problems you encounter  
   h. Feel more confident in your ability as a teacher  
   i. Feel less overwhelmed  
   extremely effective  
   very effective  
   moderately effective  
   slightly effective  
   not at all effective  
   DeWert et al. (2003) (based upon Merseth, 1991)
<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>j.</td>
<td>Improve your ability to solve the problems you encounter</td>
</tr>
<tr>
<td>k.</td>
<td>Share teaching techniques</td>
</tr>
<tr>
<td>l.</td>
<td>Improve classroom management</td>
</tr>
<tr>
<td>39.</td>
<td>Describe your experiences with your school or district’s beginning educator classes, workshops, orientations, or seminars</td>
</tr>
</tbody>
</table>
Similar to the purpose of this dissertation study, Ranieri et al. (2012) investigated why teachers in general education engaged in Facebook groups and what the implications of such membership had for professional development. Their questionnaire was designed to gather socio-demographic data and habits and use related to participation in Facebook groups. When their study was uncovered in the course of reviewing related literature, the three authors were contacted via email to inquire about the possibility of reviewing their full survey instrument. The authors were happy to provide the instrument, though it was completely in Italian.

After the initial translation of the instrument into English, due to the survey’s focus on teacher professional development and social network systems, there were several issues with technical words and phrases that did not directly translate. More than a year later, Ranieri, Manca, and Fini, contacted me to inquire about the English translation of the tool as other international researchers had also expressed interested in it. The English version was provided along with an explanation about the terminology issues. Their team of researchers reviewed and revised the English version, and provided a copy of the revision in return. It is this last revision that was adapted to the purposes of the proposed study.

Though these two studies share critical interests, they do not seek to answer the same set of research questions, and thus the survey instrument of Ranieri, et al. (2012) was not replicated in full. Once a quality translation had been created, each question and the closed responses were edited to better accommodate the specific content area of the teacher participants and the specific Facebook group that are the objects of this investigation. The edited questions were examined
individually to determine what research construct each item addressed. Those questions found not to be relevant were removed.

**Survey on Facebook professional uses**

Attention: This survey is only for the following Facebook groups: Insegnanti, Pinocchio 2.0, Tutti a bordo dislessia, SOS Sostegno, and Docenti virtuali (groups are original Italian groups name which I cannot translate).

Dear participant,

We are doing a study on social networks for professional use, and on the benefits for individuals that become members of these groups.

The following survey contains some general personal questions (date of birth, occupation, etc.), one section is dedicated to media practices, one section is about Facebook use, and two section are about professional Facebook group members.

In order to conduct this study, we need your collaboration. We need you to answer to the following questions by January 15, 2102. This will take you about 15 minutes.

We will only use your answers for this study and we will be pleased to share our results with you.

Thank you very much.

Regards,

Maria Ranieri, University of Florence
Stefania Manca, ITD-CNR Genova
Antonio Fini University of Florence

PS: questions with an asterisk are mandatory. It’s necessary to answer to those questions before going on with the following ones.
Which of the following professional Facebook groups you are a member of? If you are a member of more than one, please choose the one you use more often. *

- Insegnanti
- Pinocchio 2.0
- Tutti a bordo dislessia
- SOS sostegno
- Docenti virtuali

Section 1 – Personal questions

1. Sex
   F
   M

2. Age
   Less than 29
   30-39
   40-49
   50-59
   60 and above

3. Studies
   Middle school
   High School
   Degree in humanities/economics/social studies
   Degree in science/technical studies

4. Where do you live?
   North
   Center
   South
   Islands

5. Profession
   Teacher
   School director
   Educator
   Self-employed consultant
   University professor
   Parent
   Other (please specify)

6. If you are a teacher, how many years have you been teaching?
Less than 3
3 to 10
11 to 20
21 to 30
More than 30

7. If you are a teacher, what type of school or educational agency do you work for?
   Kindergartner
   Primary school
   Middle school
   High school
   University
   Professional/technical school
   Other (please specify)

8. If you are a teacher, what is your subject matter?
   Humanities/History/Literature
   Mathematics/Science
   Foreign languages
   Art
   Professional, technical
   Gymnastic
   Religion
   Music
   Special education
   Other (please specify)

Section 2 – Media practices

9. How long have you been using the Internet?
   Less than 1 year
   1 to 5 years
   6 to 10 years
   More than 10 years

10. How often do you use the Internet for the following activities? (Note: explanation in Italian what e-government is).

<table>
<thead>
<tr>
<th></th>
<th>Never</th>
<th>Rarely</th>
<th>Sometimes</th>
<th>Often</th>
<th>Very often</th>
</tr>
</thead>
<tbody>
<tr>
<td>Occupation</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Studies</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Entertainment</td>
<td></td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Shopping</td>
<td></td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>E-government</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Social</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
11. How long have you been using your cell phone?
   Don’t use
   Less than 5 years
   6 to 10 years
   11 to 15 years
   More than 15 years

12. What kind of cell phone do you own?
   Basic phone (phone calls, text)
   Medium phone (phone calls, text, photo, video)
   Advanced phone (phone calls, text, photo, video, Internet)
   Smartphone with Internet connection and apps

13. If you own a cell phone with an Internet connection but you don’t use it to connect to the web, what are the reasons?

<table>
<thead>
<tr>
<th>Reason</th>
<th>Not at all</th>
<th>A little</th>
<th>Enough</th>
<th>Much</th>
<th>Very much</th>
</tr>
</thead>
<tbody>
<tr>
<td>Connection costs</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Insufficient technical skills</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Uselessness</td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Privacy issues</td>
<td></td>
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<tr>
<td>Impact on health</td>
<td></td>
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<tr>
<td>Other (please specify)</td>
<td></td>
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</tr>
</tbody>
</table>

14. How often do you use your cell phone for the following activities?

<table>
<thead>
<tr>
<th>Activity</th>
<th>Never</th>
<th>Rarely</th>
<th>Sometimes</th>
<th>Often</th>
<th>Very often</th>
</tr>
</thead>
<tbody>
<tr>
<td>Make phone calls</td>
<td></td>
<td></td>
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<td></td>
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<tr>
<td>Send text messages</td>
<td></td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Make video calls</td>
<td></td>
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</tr>
<tr>
<td>Take pics/video</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Listen to music</td>
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</tr>
<tr>
<td>Search for information on the internet</td>
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<td></td>
</tr>
<tr>
<td>Online shopping</td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>E-government</td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Online courses</td>
<td></td>
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<td></td>
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<tr>
<td>Social networking</td>
<td></td>
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<tr>
<td>GPS</td>
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<td></td>
<td></td>
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<tr>
<td>Other (please specify)</td>
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</tr>
</tbody>
</table>

15. If you own other electronic devices connected to the Internet, which one do you own?
   - Tablet
   - E-book reader
   - Videogames
   - TV
   - Other (please specify)

**Section 3 – Facebook and you**

16. How long have you been on Facebook?
   - Less than a year
   - 1 to 3 year
   - More than 3 year

17. Other than Facebook, which of the following social network sites you are a member of?
   - MySpace
   - Badoo
   - Google+
   - Windows Live
   - Netlog
   - LinkedIn
   - Plaxo
   - Twitter
   - Flickr
   - YouTube
   - Last.fm
   - Second Life
   - Ning
Hi5
Anobii
Other (please specify)

18. How often do you log on Facebook?
   Many times during the day
   At least once a day
   A few times per week
   Once a week
   A few times per month
   Once a month
   Less than once a month
   Other (please specify)

19. If you use your cell phone to connect to Facebook, how often do you do?
   Very often
   Often
   Sometimes
   Rarely

20. How much do you rate the following reasons to connect to Facebook?

<table>
<thead>
<tr>
<th>Reason</th>
<th>Not at all</th>
<th>A little</th>
<th>Enough</th>
<th>Much</th>
<th>Very much</th>
</tr>
</thead>
<tbody>
<tr>
<td>Keep in touch with friends and acquaintances</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Keep in touch with colleagues</td>
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</tr>
<tr>
<td>Expand my professional network of contacts</td>
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<tr>
<td>Expand my personal network of contacts</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Share professional interests</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Share personal interests</td>
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<tr>
<td>Expand knowledge in</td>
<td></td>
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</tbody>
</table>
21. What are the criteria by which you accept or send a new friendship request from people that you do not know directly (max 3 answers)
   People that might expand my professional network of contacts that share my same interests
   People that intrigue me
   To give visibility to my profile
   They are “friends of friends”
   I am intrigued by their profile
   I like to have many friends
   I accept friendship requests from anyone
   I do not accept friendship requests from people that I do not know
   Other (please specify)

22. How many people you do not know in person are among your friends?
   Nobody
   Less than half
   About half
   More than half
   Almost everyone

23. How often do you carry out the following actions?

<table>
<thead>
<tr>
<th></th>
<th>Never</th>
<th>Rarely</th>
<th>Sometimes</th>
<th>Often</th>
<th>Very often</th>
</tr>
</thead>
<tbody>
<tr>
<td>Update my status</td>
<td></td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>Check my home page</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Write and read private messages</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Answer to friends’ comments on my profile</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Upload pics/videos</td>
<td></td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Share links/videos</td>
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</tr>
</tbody>
</table>
to external information
Use of applications (e.g., games)
Chat
Visit friends’ profiles
Write or publish links on friends’ wall
Write comments on friends’ status, posts or pictures

<table>
<thead>
<tr>
<th>24. How much do you agree/disagree with the following statements?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Facebook allows me to express my opinion with few clicks</td>
</tr>
<tr>
<td>Facebook allows me to find people that share my interests</td>
</tr>
<tr>
<td>Facebook deprives me of valuable time that I could dedicate to my study, my job or my family</td>
</tr>
<tr>
<td>I feel at ease when I share my feelings, opinions and ideas with my</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Facebook allows me to express my opinion with few clicks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Facebook allows me to find people that share my interests</td>
</tr>
<tr>
<td>Facebook deprives me of valuable time that I could dedicate to my study, my job or my family</td>
</tr>
<tr>
<td>I feel at ease when I share my feelings, opinions and ideas with my</td>
</tr>
</tbody>
</table>
Section 4 – Professional Facebook groups and you

25. How many professional groups are you a member of?
   Only one
   2 to 5
   6 to 10
   More than 10

26. How often do you use your cell phone or a tablet connected to the Internet to access your groups?
   Very often
   Often
   Sometimes
   Rarely
   Never

27. In what circumstances do you use your cell phone or tablet to access your groups? (max 2 answers)
   When I do not have a computer connected to the internet (either indoor or outdoor)
   When it is easier and faster than using a computer
   When I want to share pics/videos in real time
   When I want to share my geolocation
   Other (please specify)

28. If you use a cell phone or a tablet to access your groups, what do you do? (max 2 answers)
   Rapid requests of information/help
   Sharing of contents from external sites (e.g., YouTube)
   Write comments and quick answers
   Use of “Like” button
   Other (please specify)

Section 5 – Your participation to the group
Please, remember to provide answers to the following questions according to the group you selected at the beginning of the survey

29. How long have you been a member?
   - Less than a year
   - 1 to 2 years
   - 2 to 3 years
   - More than 3 years

30. How did you find out about the group?
   - Personal research
   - I have been added/invited by founder/administrator or other members
   - I have found out through friends’ wall
   - I have seen a link on a favorite website
   - Don’t remember
   - Other (please specify)

31. What are the motivations you have joined the group? (max 3 answers)
   - Keep me updated on group topics
   - Exchange information
   - Sharing ideas and projects
   - Giving visibility to my initiatives
   - To feel less isolated
   - Curiosity
   - Other (please specify)

32. How often do you access the group?
   - Only when I receive notifications of new posts
   - Several times per day
   - At least once a day
   - A few times per week
   - Once a week
   - A few times per month
   - Once a month
   - Other (please specify)

33. How often do you carry out the following actions?

<table>
<thead>
<tr>
<th></th>
<th>Never</th>
<th>Rarely</th>
<th>Sometimes</th>
<th>Often</th>
<th>Very often</th>
</tr>
</thead>
<tbody>
<tr>
<td>Read other people’s posts</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Comment on other people’s posts</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Write my posts</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Share resources</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Report events</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Report my initiatives</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Search and read old posts</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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</tbody>
</table>

34. How do you rate your participation?
   Assiduous
   Constant
   Desultory
   Sporadic

35. How often do members share the following topics?

<table>
<thead>
<tr>
<th></th>
<th>Never</th>
<th>Rarely</th>
<th>Sometimes</th>
<th>Often</th>
<th>Very often</th>
</tr>
</thead>
<tbody>
<tr>
<td>Professional content</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>News and current affairs</td>
<td></td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Personal experiences</td>
<td></td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Moods and personal opinions</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Advertising initiatives and events</td>
<td></td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other (please specify)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

36. How many members participate assiduously, by commenting or posting? (approximately)
   Everyone
   Almost everyone
   Half
   One third
   A small part

37. How do you assess the behavior of the moderator?
Moderator is not very present
Moderator is a little rigid
Moderator is too much permissive
Moderator is balanced
Moderator is very propositive
Moderator is the group’s soul
Other (please specify)

38. On what criteria do you trust the other members of the group? (max 3 answers)
   Personal acquaintance of the members
   Comments about members by well-known persons
   Reputation in the field
   Accuracy of the profile information
   Relevance of posts and comments
   Number of posts and comments
   Rating received by other members (eg, number of “likes”)
   I do not care about this issue
   Other (please specify)

39. On what criteria do you rate the reliability of shared resources in the group? (max 3 answers)
   Trust the resource author
   Resource accuracy
   Trust the member who shared the resource
   Rating received by other members (eg, number of “likes”)
   Comments by other members
   Trust the authors of comments
   Comparison with other sources
   Other (please specify)

40. What kind of impact have online activities had on your off-line professional life?
   No impact at all
   New projects
   New collaboration
   Organization and participation at events
   Creation of new associations or networks
   Creation of new territorial webs
   Discover of new professional interests
   Other (please specify)

41. Comments

________________________________________________________________________________________
IRB EXEMPT APPROVAL

RPI Name: Louis Bergonzi
Project Title: Perceptions of Facebook's Band Directors Group as a Setting for Distributed Teacher Induction
IRB #: 17369
Approval Date: January 18, 2017

Dear Dr. Bergonzi and Mr. Rhodes:

Thank you for submitting the completed IRB application form and related materials. Your application was reviewed by the UIUC Office for the Protection of Research Subjects (OPRS). OPRS has determined that the research activities described in this application meet the criteria for exemption at 45CFR46.101(b)(2).

This message serves to supply OPRS approval for your IRB application. Please contact OPRS if you plan to modify your project (change procedures, populations, consent letters, etc.). Otherwise you may conduct the human subjects research as approved for a period of five years. Exempt protocols will be closed and archived at the time of expiration. Researchers will be required to contact our office if the study will continue beyond five years.

Copies of the attached, date-stamped consent form(s) are to be used when obtaining informed consent.

We appreciate your conscientious adherence to the requirements of human subjects research. If you have any questions about the IRB process, or if you need assistance at any time, please feel free to contact me at OPRS, or visit our website at http://oprs.research.illinois.edu

Sincerely,

Ronald Banks, MS, CIP
Human Subjects Research Coordinator, Office for the Protection of Research Subjects

Attachment(s): Approved consent document
Dear Band Directors Group Member:

Thank you for responding to the invitation! We are from the Music Education Division at the University of Illinois at Urbana-Champaign. We would like to invite you to take part in a research study that will collect information about early-stage stage music teachers' views regarding specific aspects of Facebook and Band Directors Group in particular. This study is specifically interested in early-stage teachers' reasons for joining the group, their level of involvement in it, and the group's contribution to their professional induction.

We hope that the information from the survey will help music teachers and schools improve by making teacher induction programs more comprehensive and effective. We are asking for your help on because this study is addressing an issue that we hope you'll agree is important.

Although new teacher orientation programs have grown in number and have been implemented in a wide variety of way, perhaps they could work better for music teachers. Sometimes these programs are weak on fundamental features such as a teacher's grade level or pairing new teachers with experienced teachers in different content areas! Music educators, are often the only content specialists in a school or sometimes in an entire district.

So, we're wondering if online and social media communities like the Band Directors provide opportunities for creating meaningful web-based professional music educator forums. Among these groups, the Band Directors Group on Facebook stands apart because it has achieved a critical mass of participants so that it is self-sustaining.

This is why we are asking for the help of its members who are in their first three years of teaching—like you!

What this survey is about, The survey contains questions about you, your use of and experience with Facebook and Band Directors Group, and your experiences with other elements of professional development.

Your participation in this study is completely voluntary. It will take about 15 minutes to complete the survey. You may stop taking the survey at any time. We expect that there will be no risks to participating in this study beyond those that exist in daily life. If you choose not to participate, you do not need to explain why you do not want to fill out the survey. A decision to participate or not, will not affect your grades, status, or future relations with the University of Illinois, or enrollment in Band Directors Group or Facebook.

The survey is confidential – We do not ask for your name. All information obtained during this research will remain strictly confidential. We will store data as password protected files. Any possible identifiers will not be reported at any time during the course
of this research project. Results of the study will be reported as part of a doctoral dissertation. Findings may also be part of conference presentations to teachers and other researchers or written up in an article in an academic journal. When this research is discussed or published, no one will know that you were in the study. However, laws and university rules might require us to disclose information about your responses. For example, if required by laws or University Policy, study information you supply may be seen or copied by the following people or groups: a) The university committee and office that reviews and approves research studies, the Institutional Review Board (IRB) and Office for Protection of Research Subjects; and b) University and state auditors, and Departments of the university responsible for oversight of research.

This project has received approval from the Institutional Review Board (IRB) at the University of Illinois. The IRB is the campus office that works to protect the rights of subjects in research conducted through the University of Illinois. If you feel you have not been treated according to the descriptions in this form, or if you have any questions about your rights as a research subject, including questions, concerns, complaints, or to offer input, you may call the Office for the Protection of Research Subjects (OPRS) at 217-333-2670 or e-mail OPRS at irb@illinois.edu.

If you have any questions about the survey, you may contact me at:

Andrew Rhodes  Louis Bergonzi
rhodes4@illinois.edu or 740-591-8004 (cell) bergonzi@illinois.edu