ORIGINAL ARTICLE

Conceptualizing the Counseling Training Environment Using Bronfenbrenner's Ecological Theory

Jared Lau · Kok-Mun Ng

Abstract While learning environment research has been growing in popularity over the past few decades, little attention has been given towards the learning environment of graduate students, and virtually no attention has been given specifically towards graduate counseling and related programs such as professional counseling, clinical and counseling psychology, and marriage and family therapy. In this paper we propose using Bronfenbrenner's (1979, 1992) ecological theory as a model to conceptualize the training environment of such counselor preparation programs. Through the application of Bronfenbrenner's theory, counselor educators and counseling trainees can better understand the systemic nature of the training environment that they create and where they train. Implications and recommendations for future research are provided to further advance the knowledge and awareness of the counseling training environment.

Keywords Counseling training environment · Counseling training · Ecological model · Multicultural · Internationalization

Introduction

Learning environment research has experienced considerable growth over the past few decades. For instance, it occupies 1 of the 11 sections in the *Second International Handbook of Science Education* (Fraser, Tobin, and McRobbie 2012), 1 of 19 chapters in the *Handbook of Research on Science Teaching and Learning* (Fraser 1994), and a section in the *International Encyclopedia of Teaching and Teacher Education* (Anderson 1996). A Special Interest Group (SIG) of the American Educational Research Association (AERA) on the Study of

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Learning Environments was also established in 1984 (AERA 1999), further establishing learning environment research as a significant focus within educational research. While originally implemented as a way to assess students' perceptions of their classroom environment, learning environment research has been increasingly viewed as the precursor to studies on predicting and improving student-learning outcomes (Walker and Fraser 2005).

Today's counselor preparation programs in the United States (US) appear to place a significant emphasis on evaluating programs' learning environments and measuring student learning outcomes. For instance, the American Psychological Association (APA) and the Council for Accreditation of Counseling and Related Educational Programs (CACREP), the major accrediting bodies for doctoral-level psychology programs and masters- and doctoral-level counseling/counselor education programs respectively in the US, mandate that accredited programs collect data on program evaluation and measurement of student learning outcomes (APA 2009; CACREP 2009). Furthermore, Section I of the 2009 CACREP Standards, entitled "Learning Environment: Structure and Evaluation," is dedicated solely to the learning environment, thus highlighting its growing importance in counselor preparation programs.

For the purposes of discussion, we expand the scope of counselor preparation programs to include professional counseling, applied psychology, and marriage and family therapy, as it is our belief that, while the training philosophies and approaches of such programs may have unique dimensions, their overall training curricula consist of similar components. For instance, in all three disciplines, trainees can be expected to engage in both classroom academic learning and counseling/clinical skills field-based training.

Literature in counselor preparation also regularly reference the learning and training environment (e.g., Fujikura 2008; Ng and Smith 2009; Shurts et al. 2006). While counseling references in the literature are commonly directed towards the general training "program" (e.g., overall program experience and environment), references are also made to the counseling academic environment (e.g., classroom environment) and the counseling clinical environment (e.g., supervisory environment). However, these references are generally made in broad and generic terms, such as creating *safe* and *effective* environments for learning and supervision (e.g., Ladany, Friedlander, and Nelson 2005; Shurts et al. 2006), and rarely are detailed descriptions or specific examples of such environments offered in the literature. Furthermore, the literature is generally segregated and focuses on each of these *learning* environments within a training program independently from each other, not treating it as a total and unified *training* environment.

Though the field of learning and training environment research has been steadily growing over the past few decades, very little scholarly work has focused on conceptualizing and assessing it in regard to counselor preparation programs. The lack of such research on programs seems to reflect an overall lack of research focusing on the learning environments in adult, graduate, and post-secondary education as a whole. For instance, results of a recent literature search yielded significantly fewer studies that assessed the adult learning environment as compared to those that assessed primary and secondary student learning environments. Such findings reflect the paucity of research on adult and post-secondary learning environments, which has been previously noted by researchers such as Fraser (1998a), Fraser and Treagust (1986), and Langenbch and Aagaard (1990). Furthermore, because of the many differences between adult learning and primary and secondary learning (cf., Knowles 1980, 1984; Knowles et al. 2005), the validity of the existing few post-secondary learning environment measures appears to be limiting because they were adapted from primary and secondary education learning environment assessments (e.g., Darkenwald 1987; Darkenwald and Valentine 1986; Fraser and Treagust 1986).

In view of the aforementioned, there is, therefore, a need for researchers in counselor preparation programs to systematically explicate the meaning and scope of the counseling training environment. It is our belief that Bronfenbrenner's (1979, 1992) ecological theory presents a viable and comprehensive model for researchers and trainers to conceptualize the training environment of counselor preparation programs, because the theory's multisystemic framework seems well-suited for the integration of the various counselor training domains into a larger comprehensive training environment. Furthermore, given the recent popularity of the internationalization of the counseling profession (e.g., Heppner et al. 2008a, b; Ng and Noonan 2012), we believe that Bronfenbrenner's emphasis on the phenomenological experience of trainees allows counselor educators to assess programs through a transcultural framework that honors both the *emic* and *etic* aspects of mental health counseling training.

Our stance of using Bronfenbrenner's (1979, 1992) theory is not unique. For instance, some scholars (e.g., Heppner et al. 2008a, b; Neville and Mobley 2001) have previously advocated for the use of the theory to inform curricular design and teaching practices in the counseling and related training fields; however, they have not offered specific details. Similarly, Forrest, Elman, and Miller (2008) proposed a model using Bronfenbrenner's theory as a framework to help psychology programs assist trainees identified as experiencing problems of professional competence. However, Forrest et al.'s (2008) model is specifically aimed at the individual in a training program, not at the training program itself.

In response to earlier calls to examine systemically trainee and program evaluation, the present paper represents an attempt, possibly the first, to offer a comprehensive framework to conceptualize the counseling training environment based on Bronfenbrenner's (1979, 1992) theory. In subsequent sections we will consider how Bronfenbrenner's ecological theory can be used to conceptualize various domains in the training environment of counselor preparation programs, and we will also discuss its implications. We begin first by outlining Bronfenbrenner's theory.

Bronfenbrenner's Ecological Theory

Bronfenbrenner's (1979, 1992) ecological theory, though originally developed as a theory for understanding human development, can also be used as a systemic framework for understanding student learning and the training environment of adult and graduate trainees in counselor preparation programs. Based on Bronfenbrenner (1979) belief that learning is a function of social interaction, we believe that his theory is applicable to student learning because the more developed and experienced the student, the more likely they will have experienced complex social, learning, and training experiences in school and through life. As such, graduate trainees in counselor preparation programs are likely to have experienced much more complex social and learning experiences, as compared to primary and secondary school-aged children and undergraduate students.

Bronfenbrenner's theory utilizes a systemic framework by which the overall ecological environment is conceptualized as a set of embedded structures (i.e., sub-environments), each inside the next. As a result, all of the sub-environments where learning and training takes place are interdependent and contribute to each other in some way. Thus, Bornfenbrenner's theory suggests that the learning environment is made up of multiple systems and sub-systems interacting with each other and contributing to the overall learning environment of the student. Bronfenbrenner labels the environmental sub-systems as: (a) microsystem, (b) mesosystem, (c) exosystem, (d) macrosystem, and (e) chronosystem.

Microsystem

The microsystem is a "pattern of activities, roles, and interpersonal relations experienced by the developing person in a given setting with particular physical and material characteristics" (Bronfenbrenner 1979, p. 22). The microsystem consists of the immediate settings of the individual, or in our case, the counseling trainee, including the interpersonal relations and settings in which the individual lives (Heppner et al. 2008a, b). A "setting" in the microsystem is defined as "a place where people can readily engage in face-to-face interaction" (Bronfenbrenner 1979, p. 22).

An important aspect of the microsystem is its emphasis on the lived experience or phenomenological dimension of the individual. Bronfenbrenner (1979) believed that the most powerful aspects of an environment are those that give meaning to the person in the given situation or environment. Therefore, the experience of the individual is salient, as it emphasizes that relevant features of any environment include not only its objective properties (e.g., size), but also the way the person in that environment perceives such properties (Bronfenbrenner 1979).

Mesosystem

The mesosystem is a set of interrelations between two or more settings in which the developing person becomes an active participant (Bronfenbrenner 1979). It is important to understand that it is the interrelations, also referred to as links, between the various settings in the microsystem that are referred to as the mesosystem. In other words, it is the interrelations and connections between settings—not specific places or settings themselves—that define the mesosystem. The difference between the microsystem and mesosystem lies in the nature of the interconnections involved. That is, whereas at the microsystem level social connections occur within one setting (e.g., at the university), at the mesosystem level these processes take place across setting boundaries (e.g., between the university and the internship site).

Exosystem

The exosystem in Bronfenbrenner's theory is defined as "one or more settings that do not involve the developing person as an active participant but in which events occur that affect, or are affected by what happens in that setting" (1979, p. 237). The exosystem is present when events that do not directly involve an individual still have an impact on the said individual. The exosystem is bi-directional, whereby events that happen within the exosystem and impact the microsystem can also occur in the opposite direction. For instance, while an event in the exosystem can indirectly impact an individual in the microsystem, that same individual may create an event within the microsystem that can cause an impact on the exosystem. A counseling-specific example of the bi-directional nature of the exosystem is included in the next section of this paper.

Macrosystem

The macrosystem is defined as the "consistency observed within a given culture or subculture in the form and content of its constituent microsystem, mesosystem, and exosystems, as well

as any belief systems or ideology underlying such inconsistencies" (Bronfenbrenner 1979, p. 258). This suggests that while consistency within the larger macrosystem is important, it is equally important to be aware of the unique differences that are also present within the system. For instance, while a counselor preparation program may intentionally base their curriculum on the principles of multicultural counseling to ensure that every class implements multicultural components into its lessons (e.g., consistency), variability could exist in terms of what aspect of multicultural counseling is covered in each class and to what extent it is covered (e.g., inconsistency). From Bronfenbrenner's perspective, both the consistency and the inconsistency within the macrosystem are equally important.

In understanding the macrosystem, it is important to understand the contexts of the microsystem, mesosystem, and exosystems as well. Because the macrosystem assumes a larger and broader canvas, it is often associated with looking at the overall cultural climate of a given environment. From the macrosystem perspective, while cultures and subcultures can be expected to be different from each other (e.g., male counselor trainees vs. female counselor trainees), they are also relatively homogenous from an internal structure viewpoint. In other words, while the macrosystem is unique to each individual, similarities also exist among all individuals as manifested through the ecological systemic framework. Furthermore, from the macrosystem perspective, members of given cultures or subcultures find support for their behavior and values from each other; therefore, their behaviors and values are manifested by each other and thus work in a cylindrical pattern.
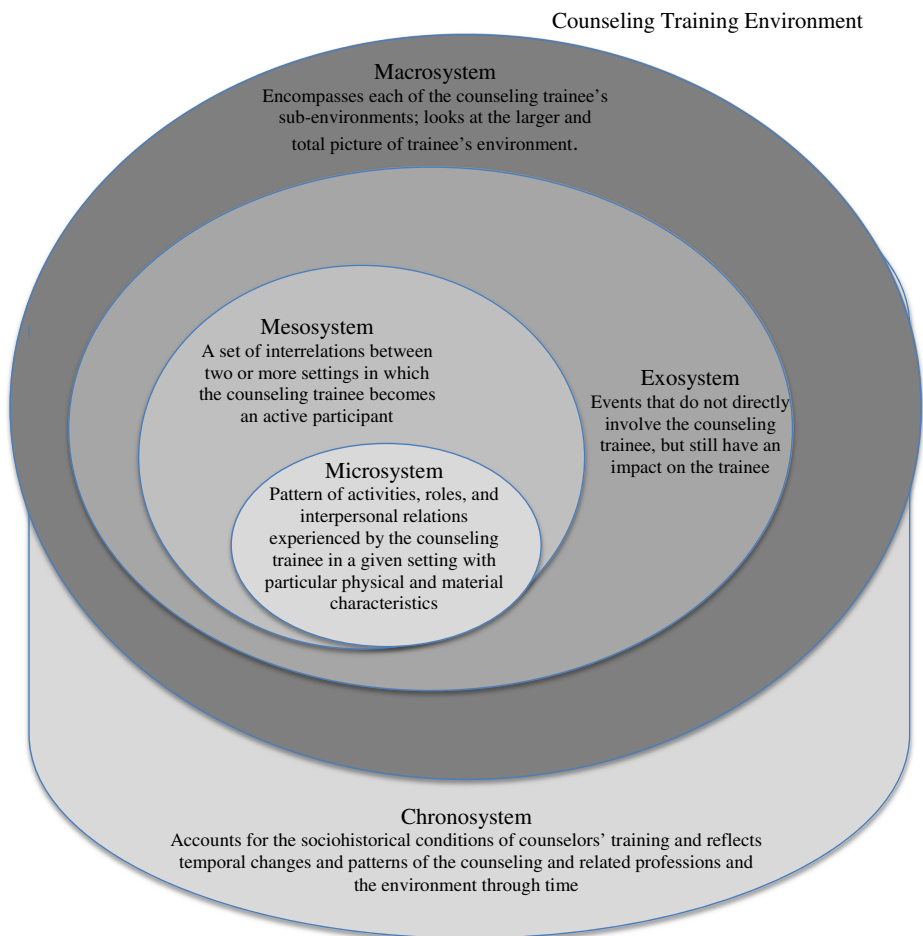
Chronosystem

Bronfenbrenner identified the chronosystem as an addendum to his original theory, to acknowledge that environments can change over time (Bronfenbrenner 1992). Therefore, the chronosystem reflects changes in patterns of environmental events and sociohistorical conditions (e.g., transitions over the life course of the individual). The chronosystem further exemplifies Bronfenbrenner's belief that individuals' learning and their environments change through time as they further develop. Similar to the various systems, in attempting to understand the chronosystem, it is also important to understand the contexts of the other sub-systems (i.e., mesosystem, and exosystem).

Bronfenbrenner and the Counseling Training Environment

The term "learning environment" has been variedly defined in the general learning environment literature (e.g., Fraser 1998b; Maudsley 2001; Mulrooney 2005; Papp et al. 2003). Similarly, professional education in counselor preparation programs is diverse and consists of various elements, including both classroom/academic learning and clinical/field experience training (Papp et al. 2003). Thus, instead of using the expression 'the *learning environment* of counselor preparation and related programs', we use the broader and more inclusive expression 'the *training environment* of counselor preparation programs'. Furthermore, rather than referring to an individual in a counselor preparation program as a *counseling student*, we refer to them as a *counseling trainee*. We make this distinction to acknowledge that in addition to being a classroom student learner, the individual also engages in various other training activities towards becoming a professional counselor, psychologist, or marriage and family therapist.

For the counseling trainee, the classroom/academic training includes lectures and seminars, scholarly assignments, class-related research, and other responsibilities as assigned by program faculty. The interactions between and among students and professors are also a characteristic of the classroom/academic training setting. Complementary clinical training includes both on-campus and off-campus clinical experiences, such as introductory counseling techniques and clinical practicums and internships. The training settings include on-campus training labs and on-site clinical training locations (e.g., schools, community agencies, hospitals, etc.). In clinical training, the counseling trainee receives training and supervision from both on-campus faculty supervisors and on-site supervisors. Group clinical supervision is often also a feature of on-campus clinical training, and is frequently available on-site as well. Thus, in addition to individual supervision and training from the counseling trainee's on-campus and on-site supervisors, the counseling trainee typically receives clinical training from fellow students and from other practitioners on-site. See Fig. 1 for a visual model of Bronfenbrenner's (1979, 1992) theory applied to the counseling training environment and Table 1 for the more specific elements.

Counseling Training Environment

Macrosystem
Encompasses each of the counseling trainee's
sub-environments; looks at the larger and
total picture of trainee's environment.

Mesosystem
A set of interrelations between
two or more settings in which
the counseling trainee becomes
an active participant

Exosystem
Events that do not directly
involve the counseling
trainee, but still have an
impact on the trainee

Microsystem
Pattern of activities, roles, and
interpersonal relations
experienced by the counseling
trainee in a given setting with
particular physical and material
characteristics

Chronosystem
Accounts for the sociohistorical conditions of counselors' training and reflects
temporal changes and patterns of the counseling and related professions and
the environment through time

Fig. 1 Bronfenbrenner's (1979, 1992) ecological model applied to the counseling training environment

Table 1 Counseling training environment: sub-systems and content categories considered through Bronfenbrenner's ecological theory

Domain	Content Category Examples
Microsystem	Classroom/advising
	Clinical experience
	Academic unit
	University/college
	Community
Mesosystem	Multi-setting participation
	Inter-setting communication
	Inter-setting knowledge
Exosystem	Student-client-client's other
	Student-faculty-faculty's other
	Student-supervisor-supervisor's other
	Student-classmates/co-workers-classmates/co-workers' other
Macrosystem	Political culture
	Laws and ethics
	Economics
	Multiculturalism
Chronosystem	Social-historical
	Current, up-to-date, adaptive

Note. "Other" in the exosystem represents the events that do not directly involve the counseling trainee yet indirectly impact the trainee

Microsystem in the Counseling Training Environment

As the microsystem consists of the immediate settings where the counseling trainee performs activities and roles, and experiences interpersonal relationships, this system in the counseling training environment is the foundation of the trainee's environment. In the microsystem, the counseling trainee participates in a number of settings, including campus classrooms, campus clinics and training labs, off-campus internship sites, the local neighborhood of the internship site, workplaces, and the surrounding university and college community.

The relationships established within the various settings could be among classmates, clinical staff at internships, clients, clinical supervisors, faculty members, faculty advisors, university administrators and support staff, and co-workers. Therefore, the microsystem is not only the most basic of the sub-systems, it is also extremely diverse. Because counseling trainees in any given counseling course will have various experiences of their unique settings, a counselor educator must be cognizant of each individual trainee's unique circumstance while attending to the whole class.

Mesosystem in the Counseling Training Environment

Counseling trainees participate in multiple settings (e.g., classroom, supervision, internship sites, community outreach, etc.). Therefore, the mesosystem comprises the interactions

between and among the various settings allowing numerous interconnections between and among microsystems to be possible. Bronfenbrenner's (1979, 1992) theory identifies four types of interactions and links that occur between microsystems and within the mesosystem: (a) multi-setting participation, (b) indirect linkage, (c) inter-setting communications, and (d) inter-setting knowledge.

Multi-Setting Participation

The multi-setting participation link occurs when the same person engages in activities in more than one setting (Bronfenbrenner 1979). For example, a counseling trainee who spends time both at the university and at his or her off-campus internship site is engaged in multi-setting participation.

When counseling trainees participate in more than one setting of a mesosystem, they are considered to be the primary link. Other persons who participate in the same two settings are referred to as supplementary links (Bronfenbrenner 1979). For instance, the counseling trainee's professor who pays a visit to the trainee's off-campus internship site would be referred to as a supplementary link. Similarly, the off-campus site supervisor may also pay a visit to the trainee's internship class on campus and fulfill a similar role. Thus, direct interactions between both the primary and supplementary links can operate in the direction of either setting (Bronfenbrenner 1979).

Indirect Linkage

In indirect linkage, the same person does not actively participate in two specific settings; but a connection between the two may still be established through a third party who serves as an intermediate link between persons in the two settings (Bronfenbrenner 1979). An example of an indirect link would be the counseling trainee's client who discusses issues related to his or her work and family during counseling sessions. Though the counseling trainee is not a participant in the client's work and family setting, the counseling trainee is indirectly linked to these settings through the client.

Inter-Setting Communications

Inter-setting communication refers to the messages transmitted from one setting to the other with the expressed intent of providing "specific information to persons in the other setting" (Bronfenbrenner 1979, p. 210). The messages and communications may be either one-sided and/or occur in both directions. Inter-setting communications can occur in a variety of ways, including telephone conversations, face-to-face interactions, correspondence, written messages (e.g., email, letters, brochures), and notices or announcements (Bronfenbrenner 1979). An example of inter-setting communications within the counseling training environment would be the counseling trainee's site-supervisor making a phone call to the trainee's university instructor informing the instructor of the trainee's progress at the internship site.

Inter-Setting Knowledge

This linkage refers to the information or experience that exists in one setting about the other setting (Bronfenbrenner 1979). Inter-setting knowledge is similar to inter-setting communication, yet it is the specific linkage of *knowledge* that is of importance. For example, the counseling trainee's site supervisor may receive a packet in the mail from the trainee's

internship instructor informing the supervisor of the revised internship policies and standards that the trainee must follow. While inter-setting communication has taken place, the actual packet received in the mail represents the knowledge and the "link." Therefore, inter-setting communication and knowledge often go hand-in-hand with each other.

Exosystem in the Counseling Training Environment

Recall that the exosystem is where events occur in one or more settings that do not involve the counseling trainee, yet these events nevertheless have an effect on the counseling trainee. An example of the exosystem would be a part-time counseling trainee who learns that his or her work unit is in jeopardy of being closed down, resulting in the work environment becoming very tense and the counseling trainee experiencing high levels of stress at work. Though the classmates of this counseling trainee are not active participants in the workplace, the events at the workplace indirectly impact the classmates when the trainee brings the stress he or she experiences at work to the classroom, thus impacting the classroom environment for all those present. As counseling classes typically employ seminar and discussion-style formats, it is not unusual for trainees to often share personal stories and process their lived experiences with each other. Thus, the impact of the exosystem can be significant.

Also, recall that the exosystem is bidirectional in nature, where events that happen in the counseling trainee's exosystem can impact the trainee's microsystem, and events in the trainee's microsystem can equally impact the trainee's exosystem. An example of the bidirectional nature of the exosystem would be a counseling trainee who is working with a homosexual client who reports being discriminated against and bullied at the workplace and who might work with the client on social justice and advocacy issues. Through their work together in the microsystem, the client may become empowered by the counseling trainee and may choose to confront his or her boss and inform the boss of the discrimination and bullying occurring at work (i.e., the counseling trainee's exosystem). As a result, the boss might choose to implement a zero tolerance policy towards bullying and discrimination in the work place.

Macrosystem in the Counseling Training Environment

As the macrosystem encompasses each of the counseling trainee's sub-environments, the macrosystem looks at the larger and total picture of a trainee's environment. The macrosystem of the training environment is often what is referred to as the culture and the overall profile of the particular counselor preparation program (Forrest, Elman, and Miller 2008). For instance, a counselor preparation program that is housed in an institution that promotes celebrating cultural differences and diversity will likely also embrace diversity as a core philosophy and value in its overall training curriculum.

It is important to note that by not taking into consideration the various sub-environments of the counselor preparation program, assessment of the macrosystem is incomplete. For example, a counselor preparation program that wants to measure its success by comparing the number of trainees-turned graduates from their program to the number from a competing university's program will be conducting an incomplete assessment. Instead, in order to understand and assess the entire culture and macrosystem of the counselor preparation program and its trainees, one must also understand and assess the contexts of the trainees' microsystems, mesosystems, and exosystems, not just simply look at the overall numbers and graduation profile.

Chronosystem in the Counseling Training Environment

When applied to the counseling training environment, the chronosystem of Bronfenbrenner's (1992) theory accounts for the sociohistorical conditions of counselors' training and reflects temporal changes and patterns of the counseling and related professions and the environment through time. As such, it is particularly salient to counselor preparation programs that their curricula and related professional competencies are constantly evolving, reflecting historical as well as current socio-political and cultural influences and trends. For example, with the proliferation of online learning and advancements in technology, many counselor preparation programs currently offer courses in hybrid (i.e., face-to-face and online) or pure online formats, in addition to traditional face-to-face classes, which is in contrast to counselor preparation programs of the 1990s (Sax 2002).

The growth of internationalization of the counseling profession (e.g., Heppner et al. 2008a, b; Ng and Noonan 2012) and the increasing popularity of constructivist-based counseling theories and training approaches (e.g., McAuliffe and Eriksen 2000; Schermer and Hinkle 2010) are also more prominently reflected in todays' training curricula, as compared to the past. Furthermore, as accreditation agencies such as APA and CACREP place an emphasis on understanding the historical development of the psychology and counseling professions respectively (APA 2009; CACREP 2009), the chronosystem in a counselor preparation program is concerned with how relevant and responsive the program is to current advances in the profession, while still being mindful of the professional and historical roots of the profession and the growth and development of its trainees through time.

Implications for Counseling Training Programs

When used as a conceptual model for understanding the training environment of counseling trainees, Bronfenbrenner's (1979, 1992) ecological theory is comprehensive and complex. However, as counseling trainees have progressed through various stages in their lives, their learning and development is also expected to have become increasingly comprehensive and complex with the introduction of new roles, settings, activities, and patterns of interrelationships. Because at the graduate-level counseling trainees are developmentally more mature than school children and undergraduate students, applying Bronfenbrenner's theory to the counseling training environment appears to be appropriate, as learning and training is also a dynamic, ongoing, and developing process (Sontag 2006).

A strength of Bronfenbrenner's (1979, 1992) theory is its emphasis on the bidirectional nature of the impact and influence between an individual (the counseling trainee) and his or her environmental sub-systems through the mesosystem and exosystem. Whereas other popular conceptual models (e.g., Fraser and Treagust 1986; Moos 1974) used to assess child and adult environments place a lesser prominence on the individual's influence on the environment, Bronfenbrenner addresses this with his theory. The macrosystem and chronosystem of Bronfenbrenner's theory further highlight the importance of sociological and ideological influences on the counseling training environment and, hence, the development of the trainee. Regardless of the extent to which sociological and ideological elements are attended to in the training curriculum, socio-political and cultural forces that drive the changes and progress in human civilization will significantly influence counseling trainees' development.

Furthermore, as norms and values shift over time, the chronosystem's emphasis on temporal patterns of such phenomena is important in understanding the environment of a given time period. For instance, in response to the multiculturalism movement in the 1960s,

70s, and 80s, multicultural counseling competence has become accepted as a critical aspect of counselor training, especially since the early 1990s (cf., Pedersen 1991; Sue, Arredondo, and McDavis 1992), resulting in training curricular changes in content, teaching, training environment, and learning outcomes. Thus, the current counseling training environment has become very different from that which predated the formalization of multicultural competence training.

Finally, Bronfenbrenner's (1979, 1992) emphasis of the phenomenological and perceived lived experience of the individual (the counseling trainee) in his or her environment helps address the understanding—and not just the descriptions—of the various strategies and coping skills that the individual utilizes to adapt to new environments. This is an area that is lacking in other models, such as the College and University Classroom Environment Inventory (CUCEI; Fraser and Treagust 1986) and the College Classroom Environment Scale (CCES; Winston et al. 1994). For instance, in the previously mentioned models, the individual's unique experience and how he or she understands the environment is not taken into consideration when evaluating the learning environment. Rather, these models simply ask the individual to rate the learning environment based on descriptions and observations of the environment (e.g., whether the instructor considers students' feelings). The phenomenological aspect of Bronfenbrenner's model also emphasizes that human behavior is an act-in-context; that is, human behavior is highly contextual. The contextual emphasis of the model has strong relevance to the counseling profession, especially in regards to multiculturalism and increasing multicultural competence (Heppner et al. 2008a, b).

Focusing attention on the training environment of graduate counselor preparation programs is an important yet often overlooked aspect of graduate education experience. For instance, when studying graduate students and their success in graduate school, Astin (1993) found that universities and graduate schools traditionally used an input-environmental-outcome (I-E-O) model, where faculty and administrators attempted to identify and isolate particular variables (e.g., student characteristics; input) that they believed to be accurate predictors of academic success at the graduate level (e.g., graduation, completion of program; output), given the particular environment (e.g., academic program, policies, faculty, peers, etc.) of the university in which the student was a participant.

A common example of the I-E-O model is using Graduate Record Exam (GRE) scores, undergraduate grade-point average, and letters of recommendation (i.e., input) of potential graduate counseling trainees to predict how successful they will be in navigating the graduate counseling program (i.e., environment) to eventually graduate and receive their degree (i.e., outcome). However, when studying graduate students, researchers (e.g., Allodi 2010; Astin 1990, 1993; Fraser 1991) pointed out that many faculty and administrators primarily focused on the input and the outcome, and not as much on the environment.

Thus, through the application of Bronfenbrenner's (1979, 1992) theory, we believe that not only can counselor educators and administrators begin to focus more attention on the training environment in general, they will also naturally focus on the sub-environments of the trainee and, therefore, achieve a more holistic and comprehensive view of the total counseling training environments that they create. For trainees, having a better understanding of their training environment can also provide them with a better understanding and appreciation of their training experience, leading to an increase in satisfaction towards their program (Hubschman 1999) and also aid in their adjustment to graduate school (Cain, Marrara, Pitre, and Armour 2003).

The implications presented in this article could benefit from additional research. For instance, we recommend the development of an assessment instrument based on Bronfenbrenner's (1979, 1992) theory that is designed to assess the counseling training environment. This instrument could have multiple versions: (a) trainees' perception of their

actual training environment, (b) trainees' perceptions of their preferred training environment, (c) faculty perceptions of their actual training environment, and (d) faculty perceptions of their preferred training environment. The results of these versions could be compared to each other to identify actual-preferred discrepancies from the trainees' perspectives, the faculty's perspective, and between the two (i.e., trainees' perspectives compared to faculty's perspective).

Furthermore, as counselor preparation programs are growing in various countries of the world, cross-national comparisons between trainees and faculty could also be done. In response to the growing number of online and hybrid counselor preparation programs, a specific instrument might also be developed to assess the training environment of these programs and results could be compared to traditional face-to-face programs.

Example Model and Best Practices

In this section we provide an example of how our evaluation model can be implemented by a counselor preparation program through the recommendations of best practice considerations. Forrest et al. (2008) note that when implementing an ecologically based model, planning and preparation on the program's part is a critical piece and that it must be considered *before* it is implemented. Thus, we divide our example model into the following three stages and we offer best practice recommendations within each stage: (a) initial planning, (b) implementation, and (c) evaluation and planning for the future. We note in parentheses the specific sub-system of Bronfenbrenner's (1979, 1992) ecological theory that is being utilized for each consideration (e.g., microsystem).

Stage One: Initial Planning

Establish Goals of the Training Environment (Macrosystem)

As the macrosystem is considered to be the cultural and the overall profile of the particular counselor preparation program (Forrest et al. 2008), we recommend that prior to the start of the academic year, program faculty first meet as a group and establish clear expectations of the type of environment that they desire to establish and they believe to be the most effective for their program. For instance, a program faculty may decide to develop a training environment and culture that revolves around multicultural and international competences. The process of establishing environmental goals is critical because it allows the faculty to get "on the same page" in terms of their expectations of the program as well as setting the roadmap for the desired direction of the program. Because faculty must look at the program from an "overall" perspective, they must also determine where their program fits into the larger cultural environment of where they operate (e.g., within the university, within the community, within the state) and their goals within each environment (e.g., be a leader of research or recruiting diverse students, establish community partnerships, serve on state licensing boards, etc.).

Identify Participants in the Training Environment (Microsystem)

Once the training environment goals have been established, program faculty should next identify the various participants in the training environment. Participants in the training environment can include, but are not limited to, the program faculty, the counseling trainees, the off-campus supervisors, and program staff and support. The process of identifying the

participants in the training environment also lends itself to the next step of identifying the various settings where training takes place and, therefore, the various types of communication and knowledge that can and should be shared between settings (mesosystem).

Establish the Links (Mesosystem)

Now that the participants have been identified, we recommend that program faculty invite members of the specific "groups" of participants (e.g., counselor trainees, supervisors, community leaders, etc.) and facilitate a working group meeting with the objective of establishing shared expectations and goals of the program. These expectations should come from the specific perspectives of each group of participants (e.g., from the trainees' perspectives, supervisors' perspectives, etc.). This process helps establish the foundation of the inter-setting intercommunication and knowledge "links" that are established through multi-setting participation (microsystem). Also, because the working group meetings should encourage open dialogue between attendees, the communication and knowledge being shared is bi-directional in that all participants involved are able to communicate and share their unique perspectives with each other.

Keep a Record

We recommend that program faculty keep a documented log of the activities and decisions made throughout the planning process in Stage One. The documentation can serve as the roadmap for program faculty in helping delineate the direction and goals of the program. This documentation can also be a useful resource for program faculty to refer to throughout the academic year in an effort to conduct periodic reviews of progress of their program (chronosystem).

Stage Two: Implementation

Implement the Plan

We encourage program faculty to implement the training environment goals or "plan" that was established in Stage One through ensuring that all of the ecological aspects identified are intentionally implemented and infused throughout the training program. It is equally important for the program faculty to also be mindful of the current dynamics happening within the training environment and to be open and adaptive to change. For instance, while program faculty make intentional efforts to infuse relevant and current (macrosystem and chronosystem) materials into their classroom lectures and activities, they may learn from their counseling trainees and the supervisors (mesosystem and exosystem) of a new and particular training issue (e.g., the increased presence of social media being used by clients) that is causing particular challenges in the training environment. Learning of these concerns, program faculty should then research and implement new materials into their training curriculum to address the trainees and supervisors' latest concerns.

Informal Self-Evaluation

Throughout the academic term, program faculty should make regular and continuous efforts to check in and assess their progress on the implementation of their training environment plan. The process of self-evaluation does not need to be too complex or formal. Simply being aware of the dynamics of the training environment and doing "check-ins" with the participants can be

of great value (mesosystem). For instance, program faculty may want to consider periodically using class time to solicit feedback from their trainees on topics such as the relevancy of materials being covered, current issues and concerns that are being presented at their clinical sites, and activities and lessons that they, the counseling trainees, hope to encounter during the remainder of the term. It is also important to remember that the process of checking in with participants is bi-directional in nature (mesosystem and exosystem). For instance, while program faculty may solicit feedback from trainees and clinical supervisors, program faculty should also be diligent in providing feedback to trainees and supervisors.

Stage Three: Formal Evaluation and Planning for the Future

End of Year Program Evaluation

At or near the conclusion of the academic year we recommend that programs conduct a systematic program evaluation that re-visits their training environment goals and plan that they established at the beginning of the year (chronosystem). This re-evaluation falls in line with accreditation standards such as Section I.AA of the 2009 CACREP standards that states programs should engage in continuous systematic evaluation that assesses how their mission, objectives, and learning outcomes are being met. For instance, program faculty should consider asking themselves what progress has been made in terms of maintaining the originally defined training environment goals and plan. Program faculty are also encouraged to measure the progress of their program by way of including all of the participants in the training environment. Progress can be measured both quantitatively and qualitatively through methods such as surveys and working group meetings, respectively.

   While many universities utilize course evaluations by trainees as a method to measure instructor effectiveness, we recommend that programs also develop similar instruments that can be administered to all participants (e.g., program faculty, supervisors, administrators, and community members) and allow each group of participants to provide their unique perspective on the progress and status of the training environment. Programs are also encouraged to invite representatives from the various participant groups to a "closing" working group meeting with the objective of gathering qualitative feedback on the various efforts that were implemented and attempted in achieving the desired training environment. Whereas the emphasis of the first working group meeting in Stage One is on gathering ideas and establishing a unified "goal" of the desired training environment, the focus of the closing meeting in this stage should be on understanding what has worked for the program and what areas could use improvements for the program.

Plan and Prepare for the Future

Upon the completion of the closing meeting, we recommend that program faculty meet once more and compile a final written report that summarizes the original goals that were identified in Stage One, the progress made in achieving the goals, and the areas of the training program environment that needs improvement. The purpose of this final written report is at least twofold. First, having a final culminating report can serve as useful resource to faculty, trainees, supervisors, administrators, and community members who may inquire on the status of the training and the progress made in achieving the identified goals at the beginning of the year. For instance, the report may highlight the specific actions and steps that the program implemented in their pursuit of achieving a particular goal, while also highlighting the areas of the training program that needs additional attention and support. The report also serves as a

mechanism to ensure accountability within the counseling program (Astramovich and Coker 2007) as various stakeholders and participants will be able to better understand their roles and how their contributions impacted the counseling program.

Second, as the systemic nature of our model suggests, the process of evaluating the training environment through an ecological lens requires that programs go through a cylindrical cycle in the evaluation process. Thus, the establishment of a final report can serve as the foundation to the development and conceptualization of future goals for the counseling program's desired training environment. Just as the planning steps in Stage One focused on establishing the initial training environment goals, this final report allows programs to have a "running start" in modifying and establishing a new "training environment plan" for the future and upcoming academic year. Therefore, upon the completion of this final stage, counseling programs will now have an established "system" in place that they can implement and regularly modify.

Conclusion

The application of Bronfenbrenner's (1979, 1992) theory to the counseling training environment is just one attempt to provide an evaluation model designed to assist in the conceptualization and assessment of counseling training environments. Certainly, other theories can be applied and other models developed. In fact, other researchers (e.g., Darkenwald 1987; Fraser and Treagust 1986; Moos 1974) have used other theories such as Moos's (1974) theory on social climate to conceptualize the learning environments of adults. However, in this article we attempt to be potentially the first to offer a comprehensive conceptualization model that is specific to the training environment of counselor preparation programs. Thus, we believe our efforts in this paper serve as a solid first-step in beginning the discussion of focusing more attention on the training environments of counselor preparation programs. It is our hope that more scholarly work focusing on the theory and practice of counseling training will ensue, to further benefit professional counseling and related disciplines as they continue to expand and thrive in the current climate of multiculturalism in professional counseling training.

References

Allodi, M. W. (2010). The meaning of social climate of learning environments: some reasons why we do not care enough about it. *Learning Environment Research, 13*, 89–104. doi:10.1007/s10984-010-9072-9.

American Educational Research Association, American Psychological Association, & National Council on Measurement in Education. (1999). *Standards for educational and psychological testing*. Washington, DC: American Educational Research Association.

American Psychological Association (APA). (2009). *Guiding principles for accreditation of programs in professional psychology*. Retrieved from: http://www.apa.org/ed/accreditation/about/policies/guiding-principles.pdf.

Anderson, L. W. (Ed.). (1996). *Encyclopedia of teaching and teacher education* (2nd ed.). Oxford: Pergamon.

Astin, A. W. (1990). *Assessment for excellence: The philosophy and practice of assessment and evaluation in higher education*. New York: Macmillan.

Astin, A. W. (1993). *What matters in college? Four critical years revisited*. San Francisco: Jossey-Bass, Inc.

Astramovich, R. L., & Coker, J. K. (2007). Program evaluation: the accountability bridge model for counselors. *Journal of Counseling and Development, 85*(2), 162–172. doi:10.1002/j.1556-6678.2007.tb00459.x.

Bronfenbrenner, U. (1979). *The ecology of human development: Experiments by nature and design*. Cambridge: Harvard University Press.

Bronfenbrenner, U. (1992). Ecological systems theory. In R. Vasta (Ed.), *Annals of child development. Six theories of child development: revised formulations and current issues* (pp. 187–249). London: Jessica Kingsley.

Cain, D. L., Marrara, C., Pitre, P. E., & Armour, S. (2003). Support services that matter: an exploration of the experiences and needs of graduate students in a distance learning environment. *Journal of Distance Education, 18*(1), 42–56.

Council for Accreditation of Counseling and Related Educational Programs (CACREP). (2009). *2009 CACREP Standards.* Retrieved from: http://cacrep.org/doc/2009%20Standards%20with%20cover.pdf.

Darkenwald, G. G. (1987). Assessing the social environment of adult classes. *Studies in the Education of Adults, 18*, 127–136.

Darkenwald, G. G., & Valentine, T. (1986). *Measuring the social environment of adult education classrooms.* Syracuse: Paper presented at the Adult Education Research Conference.

Forrest, L., Elman, N. S., & Miller, D. S. (2008). Psychology trainees with competence problems: from individual to ecological conceptualizations. *Training and Education in Professional Psychology, 2*(4), 183–192. doi:10.1037/1931-3918.2.4.183.

Fraser, B. J. (1991). Two decades of classroom environment research. In B. J. Fraser & H. J. Walberg (Eds.), *Educational environments: Evaluation, antecedents and consequences* (pp. 3–27). Oxford: Pergamon Press.

Fraser, B. J. (1994). Research on classroom and school climate. In D. Gabel (Ed.), *Handbook of research on science teaching and learning* (pp. 493–541). New York: Macmillan.

Fraser, B. J. (1998a). The birth of a new journal: editor's introduction. *Learning Environments Research, 1*(1), 1–6. doi:10.1023/A:1009994030661.

Fraser, B. J. (1998b). Classroom environment instruments: development, validity, and applications. *Learning Environments Research, 1*(1), 7–33. doi:10.1023/A:1009932514731.

Fraser, B. J., & Treagust, D. F. (1986). Validity and use of an instrument for assessing classroom psychosocial environment in higher education. *Higher Education, 15*, 37–57. doi:10.1007/BF00138091.

Fraser, B. J., Tobin, K. G., & McRobbie, C. J. (2012). *Second international handbook of science education.* Dordrecht: Springer.

Fujikura, Y. (2008). *Exploration of gendered patterns in counseling students' perception of training experiences* (Doctoral dissertation). Available from ProQuest Dissertations and Theses database (UMI No. 3318936).

Heppner, P. P., Leong, F. T. L., & Chiao, H. (2008a). A growing internationalization of counseling psychology. In S. D. Brown & R. W. Lent (Eds.), *Handbook of counseling psychology* (4th ed., pp. 68–85). Hoboken: Wiley.

Heppner, P. P., Leong, F. T. L., & Gerstein, L. H. (2008b). Counseling within a changing world: meeting psychological needs of societies and the world. In W. B. Walsh (Ed.), *Biennial review of counseling psychology* (pp. 231–258). New York: Routledge.

Hubschman, B. G. (1999). *How do different types of adult learners adapt to distance education?* Paper presented at the annual meeting of the American Educational Research Association, Montreal, Canada. Retrieved from ERIC database. (ED441156).

Knowles, M. S. (1980). *The modern practice of adult education: From pedagogy to andragogy. revised and updated.* New York: Cambridge.

Knowles, M. S. (1984). *The adult learner: A neglected species* (3rd ed.). Houston: Gulf Publishing.

Knowles, M. S., Holton, E. F., III, & Swanson, R. A. (2005). *The adult learner: The definitive classic in adult education and human resource development* (6th ed.). Burlington: Elsevier.

Ladany, N., Friedlander, M. L., & Nelson, M. L. (2005). Managing sexual attraction: Talking about sex in supervision. In N. Ladany, M. L. Friedlander, & M. L. Nelson (Eds.), *Critical events in psychotherapy supervision: An interpersonal approach* (pp. 127–153). Washington, DC: American Psychological Association.

Langenbch, M., & Aagaard, L. (1990). A factor analytic study of the adult classroom environment scale. *Adult Education Quarterly, 40*(2), 95–102. doi:10.1177/0001848190040002003.

Maudsley, R. F. (2001). Role models and the learning environment: essential elements in effective medical education. *Academic Medicine, 76*, 432–434. doi:10.1097/00001888-200105000-00011.

McAuliffe, G., & Eriksen, K. (2000). *Preparing counselors: Creating constructivist and developmental programs.* Alexandria: Association for Counselor Education and Supervision.

Moos, R. H. (1974). *The social climate scales: An overview.* Palo Alto: Consulting Psychologists Press.

Mulrooney, A. (2005). Development of an instrument to measure the practice vocational training environment in Ireland. *Medical Teacher, 27*(4), 338–342. doi:10.1080/01421590500150809.

Neville, H. A., & Mobley, M. (2001). Social identities in context: an ecological model of multicultural counseling psychology processes. *The Counseling Psychologist, 29*, 471–486. doi:10.1177/0011000001294001.

Ng, K.-M., & Noonan, B. M. (2012). Internationalization of the counseling profession: meaning, scope and concerns. *International Journal for the Advancement of Counselling, 34*(1), 5–18. doi:10.1007/s10447-011-9144-2.

Ng, K.-M., & Smith, S. D. (2009). Perceptions and experiences of international trainees in counseling and related programs. *International Journal for the Advancement of Counselling, 31*(1), 57–70. doi:10.1007/s10447-008-9068-7.

Papp, I., Markkanen, M., & von Bonsdorff, M. (2003). Clinical environment as a learning environment: Student nurses' perception concerning clinical learning experiences. *Nurse Education Today, 23*, 262–268. doi:10.1016/S0260-6917(02)00185-5.

Pedersen, P. B. (1991). Counseling international students. *Counseling Psychologist, 19*(1), 10–58. doi:10.1177/0011000091191002.

Sax, C. L. (2002). Assistive technology on-line instruction: Expanding the dimensions of learning communities. In M. J. Scherer (Ed.), *Assistive technology: Matching device and consumer for successful rehabilitation* (pp. 215–229). Washington, DC: American Psychological Association. doi:10.1037/10420-013.

Schermer, T. W., & Hinkle, M. S. (2010). Constructivist interview: a teaching technique for counselor educators. *ACES Spectrum, 70*(2), 6–11.

Shurts, W. M., Cashwell, C. S., Spurgeon, S. L., Degges-White, S., Barrio, C. A., & Kardatzke, K. N. (2006). Preparing counselors-in-training to work with couples: Using role-plays and reflecting teams. *The Family Journal: Counseling and Therapy for Couples and Families, 14*(2), 151–157. doi:10.1177/1066480705285731.

Sontag, J. C. (2006). Toward a comprehensive theoretical framework for disability research: Bronfenbrenner revisited. *The Journal of Special Education, 30*(3), 319–344. doi:10.1177/02246699603000306.

Sue, D. W., Arredondo, P., & McDavis, R. J. (1992). Multicultural competencies and standards: a call to the profession. *Journal of Counseling & Development, 70*, 477–486.

Walker, S. L., & Fraser, B. J. (2005). Development and validation of an instrument for assessing distance education learning environments in high education: the distance education learning environments survey (DELES). *Learning Environments Research, 8*, 289–308. doi:10.1007/s10984-005-1568-3.

Winston, R. B., Vahala, M. E., Nichols, E. C., Gillis, M. E., Wintrow, M., & Rome, K. D. (1994). A measure of college classroom climate: the college classroom environment scales. *Journal of College Student Development, 35*, 11–18.