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Editorial Office
PROJECT INNOVATION INC.
P.O. Box 8508
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Fax: 205-995-1588
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Rights and Responsibilities of Teachers and Parents as School Citizens: A Qualitative Study Based on Organizational Citizenship

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Attending an undergraduate institution in the United States is one of the most exciting and unique experiences in college students’ lives. Although students have only spent several years in college, it has strong impacts that may last a lifetime. Strong institutional commitment, through its investment and allocation of various resources, is a necessary condition to enhance student learning and development. Student satisfaction is a good predictor of student success and retention at the college level. Collectively, institutional characteristics are a major factor that determines student success, retention, and graduation. This article reviews previously published literature regarding the institutional characters that affect the educational experiences of undergraduate college students.

Introduction

A number of colleges and universities in the United States today officially enroll tens of thousands of students (Kuh, 2006). Over the past four decades, a significant change in the delivery of post-secondary education involves the dramatic increase in the use of adjunct faculty (Jacoby, 2006; Lei, 2007). From an administrator’s perspective, many higher education institutions rely heavily on the first-hand knowledge and experience that adjunct instructors bring to the classroom; hiring these instructors are cost-saving and have staff flexibility (Lankdard, 1994; Lei, 2007), especially during economic downturns. As a result, students at large institutions can be essentially anonymous, relatively unknown by their instructors and their peers (Kuh, 2006). Meanwhile, higher education institutions typically have multiple missions in response to a variety of educational, social, and economic interests of the taxpayers who support them (Kuh, 2006). To increase access to public higher education by historically under-represented groups, many of these institutions officially admit students with diverse demographic backgrounds including minority, first-generation, as well as economically-, physically, and learning-challenged students (Lei, 2007). In part, this increased access is why public colleges and universities are disproportionately among four-year institutions with the lowest student retention and graduation rates (Carey, 2004).

Moreover, higher education institutions are typically expected to be a driving force of the current economy, attempting to balance among undergraduate education, graduate training, research, as well as service to the state, region, and nation (Kuh, 2006). Taken together, these factors and others make it difficult and challenging to create positive learning environments where students feel
supported and encouraged, and to put in place other features associated with student learning, such as small classes and frequent interactions with faculty members (Astin, 1993; Pascarella and Terenzini, 2005).

Institutional characteristics, collectively, have played a vital role in determining student success, retention, and graduation. Such characteristics may include campus climate (environment), campus size, library size, student population size, student-faculty ratio, type of institution, course format, campus facilities, student support services, campus-sponsored activities, as well as on-campus living and employment. This article evaluates previously published literature regarding the institutional characteristics that determine the educational experiences of undergraduate college students in the United States.

Institutional Characteristics

Campus Environment

Strong institutional commitment, with its devotion to invest and allocate various resources, is a required condition for enhancing student learning and development. Institutional characteristics have played a crucial role in determining the educational experiences of undergraduate students. In general, institutions should provide supportive campus environment that is conductive to student learning (Table 1). The campus environment should encourage various aspects of student learning, such as developing scholarly and intellectual qualities, practical and career relevance of college experiences, along with positive relations with students, faculty, and staff (Pace and Kuh, 2002).

Campus, Library and Student Population Sizes

Sizes of the campus, library, and student population are often positively related among the three variables. Sizes of the campus and student population, however, are often negatively related with student-faculty ratio (Table 1). Many college administrators believe that the lower the student-faculty ratio, the greater the learning and personal development will occur (Astin, 1999) due to a greater student-faculty interaction. Frequent interaction with faculty is more strongly related to satisfaction with college than any other type of involvement or any other student or institutional characteristics (Astin, 1999). Students who interact frequently with faculty are more likely than other students to express satisfaction with all aspects of their institutional experience, including student friendships, variety of courses, intellectual environment, and even the administration of the institution (Astin, 1999).

<table>
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In terms of campus facilities, the physical designs of classroom, including studios, laboratories (labs), computer labs, auditoriums, and other indoor environments, can have a profound impact on student learning and subsequent student evaluations of college instructors (Lei, 2010; Table 1). Many large-sized classrooms have been conventionally designed in the shape of a square or a rectangle, with permanently attached furniture (Lei, 2010). There is no perfect classroom physical design to accommodate all types of academic activities in college. Well-designed classrooms not only promote teamwork and interest in student learning, but also encourage active class participation (Niemeyer, 2003).

Some institutions may invest physical, human, and fiscal resources to expand the library size and book collection in order to facilitate student research (Lei, personal observations). Regardless of the library size and book collection, virtual library and online interlibrary loans are also made available to accommodate students’ research requests, so that students would promptly receive the desired research materials if not physically found in their own libraries.

Institutions have provided modern computer and information technology in computer laboratories (labs) throughout campus to facilitate and maximize student learning, and to improve the overall educational experience of students. Meanwhile, administrators must realize that the mere accumulation of campus resources (physical, human, and fiscal) is insufficient, with little attention given to the use or deployment of such resources (Astin, 1999). For instance, having established a multimillion-volume library or a multimillion computer and information technology, the administrators may neglect to find out whether students are making effective use of that library or modern electronic technology (Astin, 1999).

Study rooms located at the libraries and student union buildings have provided a convenient location for students, especially those who commute or live off-campus, to catch up on their homework, to conduct group study or group meetings, and to socialize with students (Lau, 2003). Moreover, some institutions have indoor gymnasiums, athletic facilities, and even a fitness center that are open to currently enrolled students. Physical exercises are an important component of students’ health and well-being. Regular exercises on campus may make students feel physically fit and relief some stress. Such exercises may also give students a sense of attachment to the college (Lei, personal observations).

Institutional Type and Course Format

There are two basic types of institution at the undergraduate level—Teaching and research institutions (Table 1). Research orientation is defined primarily in terms of the faculty’s publication rate, time spent conducting research, and personal commitment to research and scholarly activities (Astin, 1993). The research orientation of the faculty has a strong negative effect on student satisfaction with faculty (Astin, 1999). It also has negative effects on satisfaction with the overall quality of instruction, on student leadership development, on student growth, in social/interpersonal skills, on college GPA, and on completion of a bachelor’s degree (Astin, 1993).

On the other hand, the student orientation of the faculty is a perpetual factor reflecting faculty belief about their colleague’s interest in and focus on student learning and development (Astin, 1993). The student orientation of the faculty has positive effects on bachelor’s degree attainment, intellectual self-esteem, and overall academic development and leadership (Astin, 1993). In summary, having a strongly student-centered faculty pays rich dividends in terms of the affective and
cognitive development of the undergraduate college students (Astin, 1993).

It should be emphasized that this strong negative association between research orientation and student orientation reflects institutional characteristics (Astin, 1993). The problem seems to reside institutional missions and policies; most institutions that hire large numbers of research-focused faculty apparently give little priority to effective undergraduate teaching and student learning (Astin, 1993).

Regardless of which institutional type, many colleges and universities today have offered three major course formats (Table 1) in order to accommodate students with different backgrounds and learning styles. Traditional, face-to-face and distance (online) learning have satisfied a large number of undergraduate students in terms of effectively learning new course materials and retaining these materials long after college graduation. Hybrid courses, meanwhile, seek to end the sharp divide between traditional and online instruction (Carmel and Gold, 2007). Multiple hybrid course formats (e.g. 50/50, 80/20, 20/80, etc…) have been proposed and developed to accommodate additional groups of students who can benefit from the best of both traditional and online learning (ward, 2004), thus enriching the overall educational experience of college students.

Student Support Services and Campus Activities

If institutions commit themselves to achieve maximum student success and retention, advisors, counselors, other staff, and student personnel workers, collectively, in the student support services have played an important role in institutional operations (Astin, 1999; Table 1). Student support services may include academic advising, tutorial centers, writing centers, learning resource centers, foreign language labs, psychological counseling, career services, and international student affairs (Lei, personal observations). Staff and student personnel workers in these support services often operate on a one-to-one basis with students. These on-campus employees are in a unique position because they can closely monitor students’ academic progress, and steer them in the right academic and career path.

Virtually all higher education institutions in the United States have offered a wide variety of campus-sponsored events and activities that encourage social, cultural, intellectual, and recreational interactions by providing learning experiences outside of the class (Yin and Lei, 2007; Table 1). Such campus-sponsored events and activities may include intramural and intercollegiate athletic teams, academic, social, and cultural clubs and organizations, as well as student government (Yin and Lei, 2007). Extracurricular activities and peer group interactions can help students integrate smoothly into their new learning and living environments (Lau, 2003). In general, students who become actively involved in sports, clubs, organizations, and student government interact frequently with their peers (Astin, 1999). Such peer interaction appears to increase student satisfaction and show a greater sense of attachment to the college compared to students who are not actively involved in campus-sponsored events and activities (Lei, personal observations).

On-Campus Living and Employment

A major institutional factor that increases student satisfaction and retention is to allow students living on campus (Table 1). First-year undergraduate students are required to live on campus according to many institutional policies (Lei, personal observations). Living on campus provides an invaluable complement to students’ academic career. A combination of living and learning is the cornerstone of the residential experience, home to thousands of undergraduate students during the academic year and summer
In some institutions, multicultural dormitories (dorms) are established to help students from differing cultural backgrounds cope with social diversity issues (Lau, 2003). For instance, some institutions have established an international hall and/or athletic hall, reserved specially for foreign students and student athletes to live, respectively. In other institutions, freshman dorms are reserved for those who choose to live with their peers (Lau, 2003).

Living in a dorm is positively associated with campus involvement, such as interactions with peers and faculty, involvement in student government, and participation in social fraternities or sororities (Astin, 1999). Living on campus substantially increase the likelihood that students will come into contact with other students, professors, and college staff (Astin, 1999). From a psychological perspective, relying heavily on the college as a major source of income can result in a greater sense of attachment to the college (Astin, 1999).

Retention suffers, however, if students work full-time off-campus (Astin, 1999). Because students are spending a considerable amount of time and energy on non-academic activities that are unrelated to student campus life, full-time work off-campus is likely to decrease time and energy that students can devote to academic studies and other campus-sponsored activities (Astin, 1999).

Educational Implications

Strong institutional commitment is a necessary condition for positive student learning and development, which may determine student success and retention at the undergraduate college level in the United States. Institutional commitment is more than just impressive words and mission statements issued in college catalogues and brochures; it is the willingness to invest the resources and provide incentives and rewards needed to enhance student success and retention (Tinto, 2005). Without such strong commitment, academic programs for student success and retention may begin, but rarely prosper over the long-run (Tinto, 2005). In short, students are more likely to succeed when they find themselves in educational settings that are committed to student success, hold high expectations for student success, provide needed academic, social, and financial support, and sponsor various campus activities for student involvement (Tinto, 2005).

Additionally, any institutional policy to enhance student success and retention must address issues of curriculum, pedagogy, and the skills faculty brings to the task of education students, especially in the classrooms (Tinto, 2005). Students in teaching institutions are generally more satisfied with the institution,
the curriculum, faculty, and other aspects of educational experiences, and are more likely to develop academically compared to students in research institutions (Astin, 1993). Meanwhile, faculty in research institutions should have a strong teaching commitment, and need to strike a delicate balance between teaching and research. Simultaneously, institutional policy must provide regular incentives and rewards for individual faculty members who demonstrate excellence in teaching. For instance, many institutions have used Faculty Teaching Award and Dean’s List or Honor Roll at the end of each quarter or semester that rewards selected faculty and students, respectively. Both faculty and students may receive a perfect attendance award in the form of certificate, plaque, or trophy if they attended all of their classes during an academic semester or a quarter. In some institutions, photos of the instructors and students of the quarter or semester are displayed on a hallway, so that people may know which instructors have a strong commitment to teaching and which students have a strong dedication to learning, respectively. Length of faculty teaching service at an institution in five-year increments should also be taken seriously. Such length of service award may be given to faculty who demonstrate a long-term dedication and commitment to a particular institution.

Undergraduate institutions have strong impacts in terms of student college experiences. It is imperative that institutional administrators focus on developing and implementing academics, as well as social programs that will promote each student’s educational growth (Lau, 2003). A strong institutional commitment is essential for student success, retention and eventual graduation. Institution, along with their schools/colleges, departments, faculty, and staff must be held accountable for enhancing student success (Tinto, 2005), and for enriching the educational experiences of undergraduate college students.

Literature Cited
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STANDING OUTSIDE THE FIRE:
REMAINING OBJECTIVE AND FAMILY-BASED IN 
EARLY INTERVENTION

DR. MELISSA M. CASSES
Indiana University of Pennsylvania

DR. KELLI R. PAQUETTE
Indiana University of Pennsylvania

Part C of the Individuals with Disabilities Education Act (IDEA) early intervention services utilizes a family-based model of support for families of infants and toddlers with disabilities. Family-based services stem from the research of parent-child interactions as the primary means for developmental growth. This article will advocate strategies for early interventionists so that they are able to assist families who are experiencing stressors in a way in which they can maintain a connected, family-based approach to providing early intervention services. Included within this article is the presentation of two-family scenarios which highlight neutrality from the early interventionist’s perspective. Family-based methods will be reviewed in order to share practical strategies utilized for infants and toddlers by an early interventionist in the system whose goal was to remain objective, yet compassionate, to family’s diverse needs.

**Key Words:** Early Intervention, Developmental Delays, Infants and Toddlers, Family-Based Services

_Standing Outside the Fire_ are words to a tune made popular by Garth Brooks to describe tackling life with open arms and a willing heart. This song advocates the need to run toward the fire embracing life with all of its complexities while experiencing all of the emotions that can invade the soul. Certainly, throwing ourselves into the excitement of life is a stimulating way to operate. However, early intervention providers must maneuver more mindfully while serving the complex needs of families.

Research has been collected on the stressors of raising infants and toddlers with developmental delays. In a qualitative study of 16 families conducted by Brotherson, Summers, Naig, Kyzar, Friend, Epley, Gottto, and Turnbull (2010), each of the families reported, “stress from multiple or complex challenges.” This research identified that these stressors are also experienced beyond the family, citing, in particular, the effect they can have on early interventionists. These providers often report feeling overwhelmed in their family-based roles. As the professional in the intervention, he or she must continue to remain as unaffected as possible by remaining objective, yet compassionate, while coaching families through developmental strategies that enhance the child’s well-being. Apart from all issues the interventionist may be experiencing him/herself, they will also encounter multiple
challenges to be circumvented within the environment of the child with regard to issues such as cultural difference, socio-economic status, housing issues, and parental stress.

In consideration of the issues interventionists face in planning an intervention, this article will advocate strategies for standing outside the fire of family stressors while maintaining a connected, family-based approach to early intervention services. Included within this article is the presentation of two-family scenarios which highlight neutrality from the early interventionist’s perspective. Family-based methods will be reviewed in order to share practical strategies utilized for infants and toddlers by an early interventionist in the system whose goal was to remain objective, yet compassionate, to family’s diverse needs.

**Early Intervention: Family-Based Approach**

In order to explain the role of an early interventionist in this context, it is necessary to have some understanding of the concept of family–based early intervention. Early intervention is based upon the understanding that infants and toddlers develop through trusting and caring relationships with adults (Trivette, Dunst, & Hamby, 2010). Campbell, Sawyer, and Muhlenhaupt (2009) expressed, “Families want early interventionists to be good listeners and communicators, interact positively with their children, understand family routines, and fit interventions into family life.” Positive, holistic views of the family are required to fulfill these expressed desires. Ylvén and Granlund (2009) advocate for a strengths-based to early intervention in order to support family functioning while also encouraging growth in the child’s development. This ability to observe strength requires the early interventionist to fully understand the child and family from an individualized perspective. This capacity to understand a child and family’s interests and strengths also allows the early interventionist the opportunity to tailor outcomes while fostering the strategies toward the developmental growth of the infant or toddler. Development unfolds in the context of utilizing everyday routines to encourage developmental activities and to scaffold challenges to the existing routines in order to avoid further challenging the parent.

**Parental Stressors**

Parenting can be an emotionally, physically, and mentally exhausting job. Families of infants and toddlers with developmental delays experience multiple stressors in addition to the “typical” stressors of parenting. Added stressors, such as the fear and acceptance of disability and influx of services coming into the home, further compound the task of parenthood. A mother, as reported in a Huffington Post article (Lin, 2012), described parenting a child with special needs as “both a blessing and a challenge.” Her description of personal feelings included the sentiments of “I am tired, lonely, scared, and jealous.” Consequently, the challenges of parenting a child with special needs requires an early intervention provider to utilize a family-based approach with the ability to remain compassionately objective.

The following scenarios are presented in order to capture the multiple challenges that providers may face when coaching families utilizing a family-based model of intervention. Several strategies are presented that serve to further promote the early intervention provider’s objectivity in these situations along with reflections of practice.

**Scenario 1  Sophie (child with autism)**

Sophie is a 2 year-old little girl who was diagnosed with autism at 18 months. Her mother, Carla, is home with Sophie all day while her husband works away on the oil rigs for two months at a time. When he returns...
home, his stay is only for one week. As a solo parent for much of the time, Carla experiences stress most of the day. Sophie is centered on routines and reacts to changes in these routines by behaving aggressively towards herself and others. For example, she will attempt to bite Carla when her chicken nuggets are not from McDonalds and subsequently proceeds to throw an hour long extreme tantrum until Mom chooses to drive to McDonald’s and purchase those special nuggets. When upset, Sophie bangs her head on the floor, yet, her Mom has no idea of the reason for this destructive behavior. Sophie’s tantrums are reported to occur at least 15 times per day.

Carla’s family visits once a month and often comments that she “caves” to Sophie’s demands too often. When her husband returns, he also reflects this opinion and challenges Sophie with a parenting style that is less permissive than her mother. These challenges compound the stress within the home and a fearful relationship with her father is perpetuated. The marriage suffers as a result and Carla reports that she feels overwhelmed and helpless in her parenting and life in general.

Scenario 2 Paul (child with developmental delay)

Paul is an 18 month old little boy experiencing a significant developmental delay in the areas of language/communication, cognition, and social-emotional relationships. Paul’s mother, Jeanine, is a single mother also with a mild cognitive disability. She is receiving a supplemental disability income as a sole means of caring for herself and Paul. They live in a rural area and experience a great deal of need in multiple domains.

During the initial evaluation for early intervention services, Jeanine was upset with Paul and called him an “idiot” and appeared to ignore him for most of the visit. She was reserved with the team of professionals during the meeting, holding her face low and muttering answers when asked questions directly. Jeanine indicated that she feeds him and changes his diapers but that (they) she and Paul, “Don’t really play together all that much.” Jeanine expressed that she doesn’t really know what to do with him during the day and cannot wait until he is old enough to go to school. Her reported favorite time with him is “when he’s sleeping.”

These stories portray only two high stress situations that can challenge an early intervention provider. It is the responsibility of a provider to use best practice while supporting the developmental needs of the child while remaining objective in the face of these challenges. The following vignettes offer a perspective of utilizing strengths within the family-based model as an avenue to remain objective and compassionate with the child and family.

Sophie

Sophie loves to play with her stuffed animals. Mom reports that this is an area where she feels as though she gets to view the “real” Sophie. She has one favorite stuffed animal whom she calls ‘Doodee’, a dog with blue ears. Mom reports that she loves to watch Sophie interact with Doodee. She hears new sounds when she’s playing with him and she will often engage Carla to pet him and bark like a dog. Sophie also enjoys the ability to cuddle with mom.
who reports that some of her favorite time with Sophie consists of “just sitting together” because “there is no pressure” and Sophie tends to feel comfortable and relaxed.

The early interventionist planned Sophie’s program by capitalizing upon observations that there is a strength in Sophie to connect with her Mom during this play and encourages that the interventions and strategies be tailored to reflect these strengths of a strong bond, pretend play, imagination, and coordination. An outcome is specifically to match these strengths while fostering a developmental progression in Sophie’s behaviors. The early interventionist encouraged Carla to define what she would like to see in the six-month period of intervention. Mom described the need to see “less tantrums during the day- or at least tantrums that weren’t as long.”

With the creation of the outcome for Sophie to “adapt to changes,” as evidenced by a reduction in duration and frequency of tantrums, the provider begins their work. The intent of the intervention is to create a place of familiarity (such as her play with Doodee) and comfort for Sophie, which allows for her to become accustomed to small changes in routine without the overwhelming fear, manifested as tantrums. Mom and the early interventionist use the stuffed animals. They play a peek-a-boo game that allows mom to take away the object in a fun and playful way. She also creates changes in the routine, while encouraging Sophie through fun animal sounds, to accept these changes without the reaction of fear. Mom introduces counting to five to start the teaching of the concept of waiting. She does so in a fun and playful way which in turn can be implemented in multiple routines throughout the day. Mom recognizes that she can ask Sophie to “wait” for her chicken nuggets by counting to five in a playful way which will provide a small but noticeable difference in the routine. Snuggle time also become a routine that can be modified by mildly shifting the routine to include Sophie sitting in mom’s lap, face to face versus Sophie’s back to her mom. This small change also opens the potential of facial gazing and finger play, which is a fun and playful routines-based strategy, one in which Sophie can accept and adapt.

Reflection on Sophie’s Case

Sophie’s early interventionist recognized the power of using already established routines to introduce small but noticeable differences in Sophie’s world. This was done in the context of current routines to avoid further overwhelming Sophie or Carla. As a result, Carla had the opportunity to acquire a sense of empowerment in her ability to transfer this skill of “waiting” to multiple routines throughout the day. By identifying Sophie’s strengths and seamlessly integrating strategies into the family’s current routines, the provider maintained an objective view of the situation versus becoming consumed in what wasn’t happening. This process led to the family-based model’s success which encourages parents to seamlessly integrate intervention into existing routines for the child’s developmental growth (Dunst, Trivette, Humphries, Raab, & Roper, 2001).

Dunst et al. (2006) provide examples of seamless integration of goals into family routines including “Engaging a child in a range of motion exercises during the child’s bath time is an example of implementing early
intervention in an activity setting, whereas a child watering flowers or vegetables with a garden hose is an example of using an activity setting as an everyday learning opportunity.” As the early interventionist embodies the family-based philosophy, this hands-on coaching model opens the potential for empowerment which, in turn, stimulates parental thinking to utilize opportunities throughout the day. In turn, parents have the opportunity to feel less reliant on the early interventionist. In addition to this strategy, ECOMAPS has been found to be very effective.

**ECOMAPS for Objectivity**

The ECOMAP is an ecological tool utilized in the social work profession (Germain & Gitterman, 1986; Meyer 1976, 1983). Considering the use of the ECOMAP in early intervention can allow the early interventionist or team to remain more objective while encouraging the family to identify and objectively view their current situations in reference to their child’s development. ECOMAPS can be especially helpful in situations with reluctant and/or overwhelmed families. Certainly, early interventionists can encounter situations where there is a great need in multiple areas. This opening icebreaker can create comfort for families to discuss multiple areas indicating where early intervention services can be of support. An ECOMAP provides a transparent view of the current supports and relationships in order to identify strengths when they may not be completely apparent. In addition, it allows the early interventionist to stand outside the fire of the family’s stressors by taking a more objective stance with reference to the child’s development. In this sense, the early interventionist becomes the fire fighter for the family. By standing back where there is no smoke (remaining objective), the early interventionist can observe the big picture for the family. The visual representation can assist the family in viewing their situation objectively.

To begin an ECOMAP, the early interventionist draws a large circle on a blank sheet of

---

**Figure 1 An ECOMAP of Paul and Jeanine**

![ECOMAP Diagram]

Jeanine’s Father

Jeanine’s Mother

Social Security Disability

Grocery Store

Jeanine

Paul

Standing Outside The Fire / 127
paper with the parent. In that circle, they list the individuals living in the home, surrounding males with a square and females with a circle. A relationship line is drawn between the relationships among the individuals in the home. A straight line indicates no issues in the relationship and hashes in the line indicate difficulties in the relationship. Once the relationships of the home are identified, the early interventionist draws circles outside of the large circle to place the exterior supports and resources. These supports and resources are given the same relationship lines. Once the ECOMAP is completed, the family can begin to describe some of the issues from the context of viewing a visual model of their current situation. Given the delicate nature of Paul and Jeanine’s situation, an ECOMAP for their family is created.

By utilizing this strategy as a means to begin difficult discussions, early intervention specialists have opportunities to identify areas in which supports can assist young children and their families in these trying situations.

Paul and the Use of the ECOMAP Strategy

This particular intervention, as explained in the introduction, was deemed to be useful in the case of Paul. The scenario explains how the ECOMAP was used by the interventionist, and how she/he found it useful in remaining objective:

Jeanine, Paul’s mother, was reserved in her initial interactions with the team of early interventionists. During this initial team meeting, Jeanine was asked to identify the types of support she requires from the early intervention team. Jeanine shrugs her shoulders and verbalizes that she doesn’t know. The team begins the ECOMAP process asking specific questions about the relationship between Jeanine and Paul. The team probes about activities that they share and activities that they enjoy together. Jeanine reports that they watch television together.

Jeanine identifies that she has the support of her mother and the Department of Social Security Disability. Jeanine also states that her father does not have contact with her and that when he tried to contact her through Facebook, she became very sad. This feeling of comfort in sharing this information seemed to open Jeanine to more conversation. The team probes further and discovers that Jeanine and Paul walk to the grocery store each Tuesday. The team begins asking questions related specifically to the relationships and discovers that Jeanine’s mother is a positive influence in her life. Jeanine’s mother occasionally takes Paul for walks and plays with him. Jeanine enjoys spending time with her mother.

Jeanine also expresses that she has difficulty taking Paul to the grocery store and that she often feels judged by others when he throws tantrums. Paul likes to take items from the shelves and throw them into the cart. Paul becomes upset when Jeanine puts them back. The team discusses this issue with Jeanine and develops a community-based goal in which the team can support the family while grocery shopping together. They are also able to identify a desire from Jeanine to know how to play with Paul. The team discusses this goal as it relates to the cognitive, social-emotional, and communication growth that can be experienced through play.
Reflection of Jeanine and Paul’s ECOMAP

The process of using ECOMAPS can assist a team in joining with a family through discussions of their current life situations. Outcomes that are relevant and specific to the family can be created through structuring questions related directly to the relationship and functioning of the child in the family’s life experiences. As in the case with Paul, understanding the positive relationship between Jeanine and her mother may open doors for support in Paul’s development. By viewing the family from a visual representation, the family also has the opportunity to see themselves as they are without the flood of emotions that are so often present in parenting children with special needs compounded with difficult situations. Throughout all their family interactions, the importance of maintaining a positive outlook by all persons involved is imperative.

Holding a Positive Outlook

When presented with high-stress situations in early intervention, providers’ subconscious minds can take a journey into judgments and preconceived notions about the nature of how parents, and a family should function. As in the case with Paul, this difficult situation can leave an early interventionist feeling pessimistic due to the interaction observed between parent and child. Recall in the introduction the interactions of Paul and Jeanine, most notably the name calling and lack of connection from Jeanine. This initial encounter can be shocking and lay heavy on the heart of an early interventionist; however, as an early interventionist, the challenge is to recognize the potential of the family versus judging. Through examining these judgments and preconceived thoughts on the part of the early interventionist, the early interventionist has the capacity to set the stage for positive interactions with families based on mutual respect.

The Technical Assistance Center for Social Emotional Intervention (TACSEI, http://challengingbehavior.fmhi.usf.edu) and Center for Social Emotional Foundation for Early Learning (CSEFEL, http://csefel.vanderbilt.edu/index.html) are special projects within the Federal Office of Special Education Programs (OSEP). The projects’ missions are to enhance the coaching model for the development of social-emotional skills in infants and toddlers. As described in the above situation, difficult circumstances arise in which the early interventionist is called upon to be the positive support that will guide the family to recognize and implement the important aspects of the child’s social-emotional development. TACSEI and CSEFEL recommend strategies for early interventionists that foster a perspective of unconditional positive regard for the families that present challenging situations. These strategies have been targeted through the research of Seibel and colleagues (2006) centered on the self-reflection of the early interventionist.

Early interventionists are encouraged to wonder versus judge (Seibel et al., 2006). This thought-process encourages early interventionists to shift the context of their thinking to becoming more inquisitive in difficult situations as opposed to allowing themselves to making snap judgments about the families. In essence, early interventionists must suspend their own values, beliefs, and assumptions about parenting while serving families in order to join with them in the intervention process. In order to begin to effectively join with families, early interventionists must exude a caring empathetic approach and encourage the family through reinforcing the positives. This particular approach is highlighted in both Sophie’s and Paul’s stories.
Sophie

Upon the early interventionist’s arrival, Carla takes a phone call. She remains on the phone for 15 minutes of the hour-long visit. The early interventionist has an initial irritation to the situation and quick thoughts begin flowing through her mind of “how rude,” “why doesn’t she respect my time,” and “she must not care about her child.” Once the initial awareness of her thoughts becomes clear, she resets her thinking to wonder versus judge the situation. She reflects on her thinking and modifies it to embrace the wonderment of, “I wonder if she’s had an incredibly difficult weekend; these are long days with this little girl. She probably just needs to catch up with a friend; it won’t be long. I wonder how I would react to not having any time for myself?” While the early interventionist plays with Sophie, she begins to reset her thinking to become more centered in her approach. Carla gets off of the phone and joins them in the session. The early interventionist asks Carla about her week. She reinforces that situations can be difficult, as well as the importance of their time together. The early interventionist continues to enthusiastically share that she is very excited to see both of them to gauge the progress made during the past week.

Reflection of Sophie’s Case

In this scenario, the early interventionist practices wondering versus judging and moves to empathetic inquisition towards the mother. This empathetic questioning, in turn, affords the opportunity to speak to Carla about the importance of the visit in a non-threatening and non-confrontational manner. The practice in this scenario takes the early interventionist out of the “fire” of the family stress and the early interventionist’s own judgment and offers an empathetic view of the situation.

Paul

During the initial evaluation, Jeanine was upset with Paul, called him an “idiot,” and appeared to ignore him for most of the visit. She was reserved with the team and expressed that she feeds him and changes his diapers but that they, “Don’t really play together all that much.” Jeanine expressed that she doesn’t really know what to do with him during the day and can’t wait until he is old enough to go to school. Her reported favorite time with him is “when he’s sleeping.”

The early interventionist initially reacts to this situation with infuriated thinking. She begins to review her own values, beliefs, and assumptions in her mind reinforcing her own childhood and her knowingness of the importance of a caring nurturing environment in the growth and development of the child. She thinks, “No wonder the child is delayed; she’s horrible.” As the early interventionist catches this thinking pattern, she quickly shifts her thinking to reflect the wondering versus judgment model of thinking. She begins to ponder, “I wonder what types of models this mother had while she was young?” and “I wonder how her cognitive delay is affecting her ability to think through what she is saying.”

The early interventionist begins to empathize with this young mother and expresses, “Wow, I just saw how he looked at you. I can see that he is just crazy about you. Let’s take these
Reflection of Paul’s Case

While the early interventionist is aware of child protective laws and will act appropriately when there is imminent danger for the child, she views this use of language with a child as an opportunity to work with this parent to create connections. The connection between Paul and his mother opens the process of assisting Paul’s developmental opportunities through the day. This connection serves as an environment from which the child has the opportunity to be stimulated in his growth. With an early interventionist dedicated to wondering versus judging and a commitment to positive regard for this parent, the opportunity to generate a connection between the parent and child is much easier.

Conclusion

This article describes the parental stressors that can be present in families raising infants and toddlers with developmental delays. By understanding that these stressors may be present, the early interventionist, in order to create true and lasting changes with the family, needs to utilize strategies in order to remain in positive regard with families. The strategies of creating ECOMAPS, wondering versus judging, and empathizing with families are several tools that early interventionists can use to accomplish this goal by allowing the provider to be mindful in their ability to remain neutral and objective in the face of family stress. As the profession of early intervention continues to discover new interventions that assist with the development of children, it is the relationships that continue to be the cornerstone of treatment.

This relationship stems further than simply between the parent and the child. In order to make lasting changes with families, early interventionists must join families and create coaching relationships that utilize accommodations within the families’ current daily routines. This suspension of judgment from the early interventionists’ perspectives allow for mutual respect. In coaching relationships, the ability to maintain open communication becomes paramount in the delivery of services. When early interventionists observe a resistance or shyness from parents with regards to discussing family life, they may ask more specific questions utilizing the ECOMAP. This strategy coupled with positive regard for the family creates an opportunity to break down the walls of communication that can be present.

As the early interventionist maintains the ultimate goal of progressing the development of a child, the ability to be aware of the multiple and intense stressors faced by families supports a relational cohesion that joins the early interventionist with the family. Standing outside the fire of emotion requires an objectivity to the stressors, while maintaining a caring and compassionate response to the emotions that the family expresses. Mastering this art of compassionate objectivity provides the opportunity to enhance the relationship between the early interventionist and the parent while stimulating the environment of the developing child.
References


THE CLASS ACTION SURVEY: AN ASSESSMENT INSTRUMENT DESIGNED TO EVALUATE STUDENTS’ SUBJECTIVE ATTITUDES REGARDING A COURSE IN COLLEGE STUDENT RETENTION AND PERSISTENCE TO GRADUATION

ARTHUR D. KEMP
University of Central Missouri

This investigation explored the extent to which a newly constructed instrument, the CLASS Action Survey (CLAS), was able to accurately measure the qualities of a specialized course, the Crystallized Learning and Academic Study System (CLASS) and its stated goals: (1) to increase college students’ academic mindedness, (2) to challenge self-responsibility, (3) to increase academic skills and (4) to provide students with an academic system for studying and learning they can uniquely apply to enhance their scholastic performance. Forty-three college students enrolled in the CLASS course were assessed across a two-week pre/post administration of the CLAS. Results of a dependent samples t-test indicated that the CLAS reliability differentiated between the pretest and posttest means which were determined to be statistically significant. Post hoc analysis of pre-post survey item responses using the McMemar Test indicated additional significant differences on selected items. Methodological limitations, future research and implications for colleges and universities are discussed.

Keywords: CLASS Action Survey, College Student Retention, College Student Persistence, Assessment

Recent data from ACT revealed an increase in the number of college graduates from 1,924,436 in 2015 to 2,090,342 in 2016 – an increase of 8.6% (ACT, 2016). Nevertheless, college student attrition, retention, and persistence to graduation remain among the most challenging issues for colleges and universities. Act (2015) reported a 32% overall attrition rate across the nation for 2143 colleges and universities with a persistence to degree rate of 45.3%. Additionally, some institutions continue to operate without an apparent desire to combat this institutional dilemma. Only 32% to 68% of colleges (two year and four year private and public) responding to the ACT (2010) survey reported having an established goal to improve retention, while only 23% to 53% reported a goal to improve degree completion. Additionally, 30% to 40% reported having no one on staff responsible for addressing or coordinating attrition and retention on their campus (ACT, 2010).

Undoubtedly, many students matriculate colleges and universities without having been adequately prepared for such challenges
during high school (Hudley, Moschetti, Gonzalez, Cho, Barry & Kelly, 2009). Once on campus, college students generally spend about 27 hours a week studying, about the same amount of time full-time kindergarten students spend in class (Babcock & Marks, 2010). Despite this fact, students tend to enter college with a desire to persist until graduation (Levitz, 2016). Additionally, those with optimistic college expectations tend to adjust better in college than those with pessimistic expectations (Smith & Wertlieb, 2005). But desire and optimism are not enough. College students who are better prepared to adapt to the college environment tend to fare better than those who are simply optimistic (Smith & Wertlieb, 2005). Thus, a major problem for too many college students is that they lack a well developed system for studying, learning, and performing with excellence in college courses. ACT (2004) reported that inadequate preparation for college level work was ranked as the primary student characteristic leading to attrition from colleges and universities.

Higher education institutions concerned with student retention and persistence to graduation, tend to address such issues with multiple approaches to programming (Peltier, Laden, & Matranga, 2000) or the implementation of various tactics, strategies and adjustments to internal operations (Levitz, 2015). As evidence of their viability, these institutions usually generate attrition, retention, persistence and graduation data and reports that attest to the benefits of their programming efforts. Therefore, such systematic efforts are vitally important for both college students and the higher education institutions they attend.

Definitions

According to Noel-Leviz (2008), the terms retention and persistence are often used interchangeably. In fact, according to this author, attempts that have been made to differentiate the terms have been unsuccessful. However, while both are essential constructs of measure towards higher educational success, retention and persistence to graduation are two different variables (Kemp, 1990). ACT (2015) defines retention rate as “Percent of first-time/full time students who first enrolled in fall 2013 and were enrolled in fall 2014 at the same institution” (p. 2). Persistence to degree rate on the other hand is defined as the “percent of students completing a degree within a designated time frame at the same institution” (p. 2). Noel-Leviz (2008) provides perhaps the most comprehensive definitions of the terms retention, persistence, progression and completion/graduation than found anywhere else in the higher education retention literature; and thus, supports the notion that these are indeed separate but yet essential constructs for higher educational institutions to acknowledge.

Assessment of Retention and Persistence Programming

With regards to the assessment in retention and progression programming, two types of surveys are often used. Some investigations utilize questionnaires designed to assess a diverse array of variables known to be associated with retention (i.e., College Persistence Questionnaire [CPQ], Davidson, Beck & Milligan, 2009). Others have designed surveys to assess the components of a particular program relative to student retention (Dodge, Mitchell, & Mensch, 2009). The present investigation involved the creation of an assessment instrument to specifically evaluate students’ perceptions of their academic abilities before and after completing a course designed to enhance their potential for academic persistence and success (Kemp, 2014).

The purpose of this study was to examine this instrument – the CLASS Action Survey. This instrument was developed to assess college students’ changes in responses to the completion of a unique course – The
Crystallized Learning and Academic Study System (CLASS) (Kemp, 2014), which was created and designed to support institutional efforts at college student retention as well as persistence. The Crystallized Learning and Academic Study System (CLASS) course at the University of Central Missouri was developed to introduce and instruct students in a coherent system of academic strategies and provide them with insight into both psychological principles and behavioral approaches to enhancing studying and learning skills. The objectives of the course were that students would apply the acquired knowledge from the CLASS and as a result improve focused learning in the classroom, enhance their reading and studying skills, retain more information over the course of each semester, demonstrate elevated quiz and examination performances, achieve higher grades and grade point averages and ultimately graduate from college – with academic honors if possible.

Goals for the course were consistent with the two most prominent factors most associated with college retention and persistence (ACT, 2004; ACT, 2007; Jensen, 2011): (1) academic self-confidence; (a) to increase college student’s academic mindedness, and (b) to challenge self-responsibility and (2) academic related skills; (c) to increase academic studying and learning skills and (d) to teach students to adopt a system for learning and studying they can uniquely apply to their college experience. Operating from a psychological perspective, according to Kemp (2014), CLASS provides academically motivated students with a concrete systematic strategic approach that can be quickly learned, individually tailored and efficiently mastered with continued practice to enable enhanced academic performance and demonstration of scholastic potential. In addition to being exposed to well known and proven strategies that enhance learning and memory, personal anecdotal experiences are shared to inspire commitment to responsible action, diminished procrastination, and sustained attention and practice of academic activities. The CLASS Action Survey was specifically created to assess the goals of the CLASS. Kemp (2014) discussed the use of this instrument in teaching the Crystallized Learning and Academic Study System which he describes as a cognitive-behavioral approach to studying and learning which significantly impacts college students from the time a student enters college to the time they graduate.

Method

Participants

Participants consisted of 44 students enrolled in the CLASS course during fall 2006, spring 2007 and fall 2007. One record was eliminated due to incomplete data. The remaining 43 participants included 19 males and 24 females. Their mean age was 22.40 years \((SD = 6.88)\) and their average years of education was 14.28 \((SD = 1.14)\).

Instrument

A 21 – item 5 - point Likert type scale (1 = Strongly Disagree to 5 = Strongly Agree) instrument – the CLASS Action Survey (CLAS) was developed to measure the extent to which the goals of the course were accomplished. The CLAS is thought to assess subjective feelings of increased knowledge and awareness of the need for a coherent system for studying in response to taking the course. Psychometric evaluation of the instrument revealed very high internal consistency based on the present sample of participants (Cronbach’s Alpha = .91). Students were administered the CLAS at the beginning and again at the conclusion of the course.
Table 1. Pre/Posttest Values for CLAS Items With Significant Change in Agreement (N = 43)

<table>
<thead>
<tr>
<th>Item Number</th>
<th>Selected Items</th>
<th>p value</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>I believe that I have good study habits.</td>
<td>.035</td>
</tr>
<tr>
<td>4</td>
<td>I currently have a strategic system of learning that I employ to enhance my academic performance.</td>
<td>.047</td>
</tr>
<tr>
<td>5</td>
<td>I currently have a strategic system of study that I employ to enhance my academic performance.</td>
<td>.043</td>
</tr>
<tr>
<td>8</td>
<td>I believe that I understand a variety of psychological principles that I can apply to learning and studying.</td>
<td>.000</td>
</tr>
<tr>
<td>9</td>
<td>I believe that I understand a variety of behavioral principles that I can apply to learning and studying.</td>
<td>.034</td>
</tr>
<tr>
<td>10</td>
<td>I will use an established schedule for studying several times a week.</td>
<td>.000</td>
</tr>
<tr>
<td>11</td>
<td>I believe I can make an “A” in every college course that I take.</td>
<td>.000</td>
</tr>
</tbody>
</table>

Procedure

Students enrolled in the CLASS course either through online or phone-in registration. The CLASS was offered as a one semester credit hour course through the Office of Extended Campus at the University of Central Missouri. The class met twice a week over a two-week period during each semester it was offered. The course was designed and taught as an overload by a psychology professor with 25 years of experience in teaching, research, counseling and conducting educational workshops within university communities. Prior to the start of the class, students were provided a course syllabus via Blackboard. Additionally, nearly 100 Power Point slides were made available on Blackboard for students to download and print out as desired. During the initial class meeting, students were given information regarding the history and rational for the creation and development of the CLASS course. Throughout the course, students were exposed to the Power Point slides which detailed both cognitive and behavioral aspects of the CLASS system via didactic lecture presentations. Class interaction and discussions were encouraged. Graded course assignments involved students reflecting on each lecture, engaging in retrospective and current introspection, and responding to such thoughts by writing paragraphs relative to their interpersonal experiences. These paragraphs were then posted to Blackboard by midnight before the next class meeting. Students were also required to develop a notebook containing at least six pages of annotated bibliography. This project consisted of summaries from articles, books and internet web sites relating to studying and learning in higher education. This project was also evaluated and graded by the instructor. Finally, the option to purchase several paperback textbooks (Berstein, Penner, Clark-Stewart, & Roy, 2000; Nist & Holschuh, 2006; Pauk 2005) to complement the primary course materials was provided to students in the class.

Results

Results of pretest-posttest administration of the CLAS indicated that the mean score increased from 79.28 (SD = 8.53) on the pretest to 93.21 (SD = 9.16) on the posttest. A dependent samples t-test indicated that the difference between the two means was statistically significant at the .001 level (t = -10.34, df = 42). Post hoc analysis of pre-post survey item responses indicated differences on selected items. The McMemar (2-tailed) Test of Marginal Homogeneity, a non-parametric statistical approach for determining differences in response rate on repeated measures
due to experimental intervention, was used to determine whether the proportions of agreement and disagreement on each item differed across pre and post survey intervals. Table I reveals the seven questions on which significant differences in responses were revealed. For each comparison, the exact significance value is reported below.

At pretest, 33% of students believed they possessed good study habits and only 42% believed they did not possess such. However, at posttest, 77% felt they possessed good study habits. The McMemar test indicated that these proportions were significantly different, \( p = .035 \).

At pretest, only 20% of students felt that they had a strategic system of learning in place that they employed to enhance their academic performance while 42% students felt they did not possess such a system. However, at posttest, significantly more students (74%) believed they had acquired such a system, \( p = .047 \). Similarity, 30% of students at pretest reported having a strategic system of study that they employed to enhance their academic performance while 47% of students were in disagreement with such insertion. On the other hand, 81% of the students at posttest believed they possessed such a system. The difference in proportions was significant, \( p = .043 \).

On the question, “I believe that I understand a variety of psychological principles that I can apply to learning and studying,” at pretest, 51% believed this to be true from themselves with 16% dissenting. However, upon posttest, a significantly higher proportion of students (91%) felt this to be true. This difference in proportion was significant, \( p = .000 \).

Similarly, in response to the question, “I would recommend the CLASS course be taken by all college freshmen,” 67% of the students agreed at pretest. This increased to 98% at posttest but the difference, while approaching significance, was not found to be significant, \( p = .07 \).

Finally, in response to the question, “I would recommend the CLASS course be taken by all college students at some point during college,” 68% concurred at pretest and 88% did so at posttest. This change in proportion of agreement was not significant, \( p = .271 \).

**Discussion**

Results of the present study revealed that the CLAS successfully measured changes in the subjective experience of the students enrolled in the CLASS course. More specifically, statistical analysis revealed that the instrument was able to identify changes in certain areas of functioning important to enhanced academic performance which are relevant to studying and learning and thus, retention and persistence in college (ACT, 2004; ACT, 2007; Jensen 2011). Finally, it was determined through item analysis that the CLAS was also successful at aiding the course instructor in evaluating the degree to which the goals of the course were met within the context of the two primary factors of student retention and
persistence (ACT 2004; ACT, 2007): building academic self-confidence and academic related skills. In other words, it appears that CLAS can be used to assess more specific goals such as: (1) increase college students’ academic mindedness, (2) challenge self-responsibility, (3) increase students’ academic skills and (4) provide students with an academic system of studying and learning they can use to enhance their scholastic performance.

Smith & Wertlieb (2005) reported that students who are better academically prepared tend to do better in college. In particular, this investigation revealed that 44% more students exited the course believing that they possessed good study habits. This appears consistent with goals 1, 3, and 4. One thing of interest is that in the present study, only 33% of the students believed they possessed good study habits. However, in the Noel-Levitz study of freshman attitudes, between 59.7% and 65.9% recently admitted freshmen reported taking careful notes and reviewing them thoroughly before a test, studying very hard for all courses, and being self-discipline in schoolwork (Noel-Levitz, 2014). A primary reason for such apparent discrepancy in percentages for these seemingly similar ideas is that, the Noel-Levitz (2014) study involved over 90,000 students relative to the small sample examined in the present study. Nevertheless, in support of the current findings, 54% more students embraced the concept of possession of a strategic system of learning as well as a strategic system for studying that they could employ to enhance their academic performance which seems to also address goals 1, 3, and 4.

This study also found that proportionally more students believe that they possess a significantly greater understanding of a variety of psychological (51% more) and behavioral (39% more) principles relative to learning and studying that they could apply as a result of having completed the CLASS. This finding seems to address goals 1 and 3. Another dramatic outcome in this study was the significant increase in the number of students who stated that they plan to use an established schedule for studying several times a week. At pretest, less than half (49%) of the students planned to use such a schedule. However, by the conclusion of the course, 32% more students (81%) agreed to do so. This finding appears to be in line with goals 1 and 2. This is good in light of the interesting note by Babcock & Marks (2010) that college students spend 27 hours a week in study and class which is roughly about the same amount of time that full-time kindergarten students spend in class. Finally, as a result of CLASS, there was significantly greater agreement among students relative to their belief in their ability to make an “A” in every college course they take (51% vs. 93%). This increase in confidence appears to address all of the goals of the Crystallized Learning and Academic Study System.

Limitations and Future Research

The present study has some limitations that should be addressed in future studies involving the Crystallized Learning and Academic Study System (CLASS) which uses the CLASS Action Survey (CLS) for measurement. A major limitation of this study was the small number of participants from only three sections of the course. Validation of this instrument can be acquired through the future use of the instrument with a greater number of participants from only three sections of the course. Validation of this instrument can be acquired through the future use of the instrument with a greater number of participants from only three sections of the CLASS. Additionally, the study was confined to a single geographical location within one department. To increase generalizability, the instrument should be administered to more diverse groups of students in a wider range of academic environments.

A third issue that needs to be addressed is the fact that the CLAS has never been subjected to validation studies. Future research might also involve attempting to identify instruments that purport to measure factors consistent with the goals of the CLASS course.
– thereby evaluating evidence for construct/convergent validity. The CLAS should also be submitted to confirmatory factor analysis to examine both the presence of factor clusters as well as the degree of factor loadings for each item. Another approach would be to eliminate those items that do not indicate difference or change in students’ attitude or learning as a result of being enrolled in the course. This approach would yield the 7 items which resulted from the item analysis performed using the McMemar statistical method. Finally, the external validity evidence for the CLAS could be assessed by comparing results following different approaches to pedagogy (i.e., assessment of didactic vs. online instruction) including those involving an appreciation of differences in students’ styles of learning. Therefore, future research using the CLAS is required to reveal the generalizability of the findings of this investigation.

Implications for College Student Personnel

The present study supports the use of the CLAS in the assessment of the CLASS course. It also seems to indicate that this approach to measurement should thus be considered as a method of formative assessment within the larger context of an institutional plan for student persistence. Colleges and universities seeking to strengthen their student persistence efforts are urged to refocus their attention on college student psychological and academic development towards graduation rather than on simply retention programming. Implementation of courses such as the CLASS system offers students an acceptable means of developing the necessary knowledge and insight into the types of behaviors that are necessary for students to succeed within a college or university environment. In considering the findings of this study, and applying the recommendations from ACT (2004) in the creation a structured, comprehensive persistence program geared toward assisting students as they make the transition to college life. Specifically, colleges and universities should: 1) Designate a highly visible, senior level person to coordinate retention and progression initiatives. 2) Analyze student characteristics and both behavioral (attending class, cooperating in the classroom, turning in assignments, socializing on campus, etc.) and psychological needs (taking interesting courses, meeting culturally unique needs in food services, housing, recreation, etc.) and then implement a formal retention and progression program that best meets those needs and the needs of the institution. 3) Take an integrated approach to retention and progression to graduation efforts that incorporate both academic and non-academic factors – viewing the college experience from a holistic perspective (person, traits and abilities, interests, needs, desires, goals and environmental constraints and demands). 4) Implement an early identification, assessment and monitoring system to focus on students at risk of attrition from the institution. Such strategies can complement related efforts by colleges to improve the academic preparation of their incoming freshmen. The CLAS appears to be a useful tool in the assessment of such institutional efforts.

Author’s Note

Arthur D. Kemp is an associate professor of psychology at the University of Central Missouri. An earlier version of this paper was presented as a poster at the International Assessment and Retention Conference in 2008. I wish to gratefully acknowledge the devoted work and good spirits of my very capable research assistants Amanda Bennett and Renee Mohan who aided me in earlier drafts of this manuscript. Address correspondence to Arthur D. Kemp, c/o the Department of Psychological Science, University of Central Missouri, Warrensburg, MO 64093; email: kemp@ucmo.edu.
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CREATING A POSITIVE CLASSROOM ENVIRONMENT TO MEET THE NEEDS OF THE FOSTER CHILD

MISTY LA COUR  
Kaplan University

PENNY McGLAWN  
Harding University

LAURA DEES  
University of West Florida

Foster children often struggle socially, emotionally, and academically in the school setting leading to school failure. By establishing a positive classroom environment, teachers can provide for the needs of the foster child while encouraging academic achievement. This study seeks to determine teacher best practices for meeting the needs of foster children to ensure success in the classroom. Themes emerged from the research indicating teachers’ best practices for incorporating proactive disciplinary techniques, praise and encouragement into the daily routine, and effective homework strategies. These best practices can be implemented by the classroom teacher to ensure the success of the foster children.

Keywords: Foster children, classroom management, praise and encouragement, homework

The current study surveyed sixty-one current K-6 teachers to determine perceptions and best practices implemented in the classroom to meet the needs of the foster child. The primary themes that emerged indicate the importance of establishing a positive classroom environment for the foster child.

Theoretical Framework

According to Bronfenbrenner, the microsystem most directly impacts the development of the child as it encompasses “the most immediate contexts in which the developing individual interacts with people, such as those between a child and family members living within the home” (Bohlin, Durwin, & Reese-Weber, 2009, p. 31).

In 2012 an estimated 686,000 children were victims of child abuse and neglect. More than half of all victims were between birth and 8 years of age” (Statman-Weil, 2015, p. 72). The purpose of foster care is to provide abused or neglected children with a temporary residence which acts as a safe-haven (Child Trends, 2011). Due to the trauma of abuse and neglect, foster children experience “negative behavioral, emotional, neurobiological, and developmental repercussions” (Statman-Weil, 2015, p. 73).

Proactive Classroom Management

The connection between the teacher and student is crucial to meeting the needs of the foster child. Foster children can often
be disengaged, lack involvement and react inappropriately in the classroom leading to disciplinary issues. To avoid disciplinary actions, the teacher can be proactive by helping the student know how to react to others in appropriate ways while incorporating praise and encouragement into the classroom setting (LaCour & McGlawn, 2015).

When a student begins to express negative emotions or behaviors, the teacher should have the student leave the situation. During this time, the teacher can assist the student in identifying the child’s feelings by asking questions and offering prompts. The teacher can set limits and expectations while involving the child in determining a positive solution to the problem (Gatrell & Cairone, 2014). “More than anything, children who have survived trauma need loving and nurturing adults who can support them in their most troubling moments” (Statman-Weil, 2015, p. 77).

Establishing a positive, caring classroom environment which supports the needs of the foster child is imperative to academic success. “Teachers should use more encouragement to boost confidence and self-esteem and less praise because students can become dependent on praise” (Manning & Bucher, 2013, p. 148). Encouragement, which focuses on specific tasks and indicates that the teacher believes in the student, can boost the student’s self-esteem and confidence resulting in a positive impact on the student’s behavior (Manning & Bucher, 2013). This positive impact on behavior can lead to the foster child developing the skills necessary to engage in positive interactions with others.

**Homework**

An additional method of supporting and encouraging foster families is through the decisions made regarding the assignment of homework. Homework can add an additional negative consequence to the life of a foster child. For disadvantaged students such as foster children, “grading penalties for incomplete homework are yet one more negative consequence” (Dueck, 2014, p. 53).

Educators must refrain from assumptions regarding why students have not completed homework assignments (Dueck, 2014). Foster children experience specific challenges related to the amount of time available to complete homework due to the vast number of required appointments they encounter as part of foster care. Examples of required appointments for foster children which must be completed after the end of the school day may include meeting with: attorney ad litem, Court Appointment Special Advocate, biological parents, counselors, and/or medical doctors. Due to the nature of the foster care placement, these appointments may be an hour or more away from the foster care home. This creates a situation which prevents foster care children from spending any significant amount of time on homework.

Instead of allowing homework to cause negative consequences for the student, the teacher can think outside of the traditional homework realm and take steps to create equity and meaningfulness in homework activities (Orr, 2014). Educators should focus on providing assignments which are purposeful and fair to all students, keeping in mind the impacts of trauma, an unstable home environment, and the time limitations foster children encounter (Orr, 2014). “In the quest for equity and meaningful practice, teachers are designing alternatives to traditional, one-size-fits-all homework” (ASCD, 2014, para. 1). Possible alternatives to traditional homework include no longer grading homework, assigning activities which build the parent and child relationship, and allowing students to take ownership of their learning (LaCour & McGlawn, 2015).
Method

Research Question

The purpose of this study is to identify strategies in-service elementary and middle school teachers (grades K-6) use in a regular, public school classroom setting to encourage and support foster children.

Participants

The participants are a convenience sampling of current K-6 teachers from three elementary schools and one middle school in a public school district in central Arkansas. The schools chosen to participate in this study reside in an area with an increased number of foster children. In addition to traditional foster care homes, the area containing the participating schools includes three foster care agencies, one of which is a group foster home. A total of sixty-one current K-6 teachers participated in the study with number of responses varying per item.

Data Collection

A survey instrument developed by the researchers was used to collect data. The survey contained open-response items which were developed from the review of literature. The open-response survey allowed participants the opportunity to write their own thoughts, providing the participants’ perceptions of best practices to develop a positive classroom environment to meet the needs of foster children. Teachers also believe that having a positive relationship with their own students is important. While self-regulation is the ultimate goal, few teachers reported that this was the case in their classrooms. See Table 1.

Procedures

The survey instrument was distributed to all participants through the school district email system. Participation in the study was strictly voluntary. Participants were allowed to answer the questions without constraint, enabling participants to indicate their own strategies used in the classroom by freely writing their responses. All responses were collected anonymously by the researchers through an online survey tool.

Data Analysis

The open-response survey items were analyzed for any emerging themes. The first step in analyzing the survey is open coding. Actual participant wording for themes are used whenever possible. Once units of meaning are coded, categories of emerging themes are established. Once all coded areas are categorized, the remaining elements are analyzed for any relationship to the established categories or any new emerging categories. Once initial categories are established, similar categories are combined as a major category or theme. This process is repeated until all category possibilities have been exhausted. Once the themes are established, summarizing of the data occurs to begin to make statements about the themes and subthemes emerging from the data (Ary, Jacobs, Razavieh, & Sorensen, 2006).

Results

Proactive Disciplinary Actions

The first open-response item in the survey asked participants to respond to the following statement: “To avoid disciplinary actions, discuss ways you have proactively helped students learn to react to others in appropriate ways.” Holding class discussions was the strongest emergent theme when analyzing the data. Classroom discussions appears to be the most likely response teachers use to teach students how to appropriately respond to others. Teachers also believe that having a positive relationship with their own students is important. While self-regulation is the ultimate goal, few teachers reported that this was the case in their classrooms.
Discussions.
A primary theme that emerged in the research related to the use of discussions as a method of proactive classroom management. One participant stated, “Personal connections to issues may be addressed by choosing books careful to lead discussions about how characters solved or could solve problems. Brainstorming solutions.” A teacher explained that “talking to them about how we give everyone second chances and we don’t ever want to make another person feel like they are bad or without any friends”. “I have pulled the child a side and explain why the behavior was inappropriate. I don’t think this necessarily is related to just foster children. Each child is different, and each child reacts differently. I believe you have to take each child as they are and build from that point on” was shared by another participant.

Relationships.
The importance of building relationships with students was a theme which also emerged from the results. One teacher stated, “Just trying to make that child feel safe and welcome in the classroom; enlisting some of my good students to befriend that student; showing that student that I care about them.” Another teacher shared the importance of “knowing students well so that you can help them connect.”

Role Play.
Using role play as a method to support and encourage proactive classroom management was an additional theme which emerged from the research results. One participant stated, “Talking about it with the students. Modeling the correct way to handle a difficult situation. I know our counselor also teaches different social skills as well to the students through books, stories and videos.”

Peer Share.
In addition, the importance of working with peers emerged as a theme related to proactive classroom management. One teacher expressed that “When doing partner or group activities, I have them always try and get different partners or in different groups to learn how to work with many different people around them. If a child is misbehaving towards another student I have them apologize to each other as well the way we accept each other apologies.”

Praise and Encouragement
Participants were asked to respond to the following question regarding the use of praise and encouragement in the classroom to support proactive classroom management: “How should praise and encouragement be provided to the foster child for any input or discussion the child engages in during read alouds?” Overwhelmingly, teacher participants believe that praise and encouragement should be offered the same to foster children as any other child in the classroom. Furthermore, praise and encouragement should be genuine and offered in a personalized manner based upon the needs of the specific child. Other emergent themes related to praise and encouragement are connection, specific, and creates lifelong readers. See Table 2.

Table 1. Appropriate Proactive Disciplinary Actions

<table>
<thead>
<tr>
<th>Themes:</th>
<th>Discussions</th>
<th>Relationship</th>
<th>Role Play</th>
<th>Peer Share</th>
</tr>
</thead>
<tbody>
<tr>
<td>Subthemes:</td>
<td>Books</td>
<td>Expectation</td>
<td>Practice</td>
<td>Cooperative learning</td>
</tr>
<tr>
<td></td>
<td>Positive reinforcement</td>
<td></td>
<td>Teach social skills</td>
<td>Self-Regulation</td>
</tr>
</tbody>
</table>

Note: N= 61
A primary theme which emerged from the research indicated that, overwhelmingly, teachers believe that all students in the classroom should equally receive praise and encouragement. One participant expressed this by stating, “They should be praised and encouraged just like any other child. Foster children do have various emotional baggage, but unfortunately I have other children who have more baggage than some of the foster care children I deal with. All children should be praised authentically for input the student adds to the class. After the child has contributed go on to explain why that was great insight or a good answer. In my class we talk about it is good to take a risk even if we are wrong. The classroom is a place where it is okay to be wrong. We are here to learn. They see me make mistakes, I take ownership of the mistake, they see how I have handled it, and I can see the students are working on handling it the same way. ‘Whoops, I made a mistake, did I learn from it?’ ‘Great.’ ‘If I made a mistake, I will explain I will fix it and go on.’

Genuine.

The importance of providing praise and encouragement which is genuine was another theme which emerged in the research. One participant stated, “I try to treat each student equally while still trying to address specific needs of each child. If too much false praise is given out, it becomes detrimental to the child’s reality of success. Praise is given when it is earned, yet there are times I look a little harder to find reasons for praise and it can usually be found somewhere.”

Personalized Praise.

Overwhelmingly, the participants expressed that praise should be personalized and specific. One participant stated, “Every child is different and needs different things. Many foster children self-sabotage with over the top praise. I think the key is to make praise specific and authentic. Instead of saying ‘You did a great job’ say ‘I like how you worked well with your classmates and made compromises instead of arguing.’”

Frequency of Praise and Encouragement

Participants were asked to respond to a follow-up question regarding praise and encouragement as follows: “How often should the praise and encouragement be provided?” Regarding the frequency, teachers believe that praise and encouragement should be offered often, consistently, and regularly. See Table 3.

Often.

The theme emerged indicating that the participants believe that praise and encouragement should occur often and regularly. One participant stated, “Praise and encouragement should be an expected and regular part of any child’s reading, whether a foster child or not.”

Consistently.

Participants expressed the belief that praise and encouragement should be consistent. However, participants warned against the overuse of praise. A participant explained that, “An appropriate amount of praise should be given to all students for input, especially foster students. However, excessive praise may make them feel different and harm the

Table 2. Praise and Encouragement for Child Engagement

<table>
<thead>
<tr>
<th>Themes</th>
<th>Same</th>
<th>Genuine</th>
<th>Personalized Praise</th>
</tr>
</thead>
<tbody>
<tr>
<td>Subthemes</td>
<td>Connection</td>
<td>Specific</td>
<td>Lifelong Readers</td>
</tr>
</tbody>
</table>

Note: N= 35
situation. It also depends on the student and their personal preferences for how often and how much.”

**Homework**

Participants were asked to respond to the following question: “How can homework add an additional consequence (positive or negative) to the life of a foster child?” Most of the teachers who participated by responding to the survey felt that homework could be both positive and negative. See Table 4.

**Positive.**

Some of the participants indicated the positive impact of homework on the foster children. One participant explained, “Appropriate homework, meaning extra practice of an already taught skill, can have a positive effect if there’s not too much! The student can ‘show off’ what he/she has learned and have some one on one time with parent/caregiver.” Another participant stated “Homework can be a positive consequence for a child who has supportive foster parents. This can help the relationship between parent and student through helping with homework.” One teacher indicated “If the homework is something that can be done independently, then I feel it is a positive thing.”

**Negative.**

Many of the participants also indicated the negative impact of homework on the foster child. One teacher warned that, “Too much homework, or homework that the child cannot do on his own or with minimal help, may have a negative effect.” Another participant stated, “Depending on the personality of the student, they could feel homework is a negative consequence because of past experiences of a lack of support or ability.” One teacher shared “I think too much homework is not beneficial. Foster children usually experience global delays. They need time after school to run and play in order to stimulate their vestibular systems. They also need time to form attachments with foster parents, foster siblings, and other children. Many children also have huge gaps in their academics due to the chaotic home life that caused them to be placed in foster care. They are exhausted by the time they get home from school and they need a break.” An additional teacher stated “It gives the student daily goals but can also give pressure and take away time that can be used

<table>
<thead>
<tr>
<th>Themes</th>
<th>Often</th>
<th>Regularly</th>
<th>Consistently</th>
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<tbody>
<tr>
<td><strong>Subthemes</strong></td>
<td></td>
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<tr>
<td><strong>Note:</strong></td>
<td><strong>N=35</strong></td>
<td></td>
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</table>

**Table 4. Consequence of Homework for Foster Children**

<table>
<thead>
<tr>
<th>Themes</th>
<th>Positive</th>
<th>Negative</th>
</tr>
</thead>
<tbody>
<tr>
<td>Subthemes</td>
<td>Responsibility</td>
<td>Stress</td>
</tr>
<tr>
<td></td>
<td>Practice</td>
<td>Time</td>
</tr>
<tr>
<td></td>
<td>Interaction</td>
<td>Same</td>
</tr>
<tr>
<td></td>
<td></td>
<td>No Help</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Gaps</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Necessary Only</td>
</tr>
</tbody>
</table>

**Note:** **N=32**
Building relationships with foster families. If the work is completed it is good time to reward, but if not completed it can foster resentment or frustration with people in authoritative roles.” One of the participants warned that “if the homework is too difficult for the student to complete at home, then it can be a negative. Frustration between the child and the foster parent could develop.” One teacher stated that “When students do not have support at home, homework can be a struggle. I often offer support to students who I know do not have this support by being willing to meet them before school or during lunch or recess to help with any questions they may have.”

Discussion

Best practices in establishing a positive classroom environment through proactive classroom management, praise and encouragement, and implementation of effective homework techniques can positively impact the academic achievement of foster children. Through the survey results, teachers shared their own best practices implemented in the classroom to establish a positive classroom environment. The teachers indicated that they use discussions, relationships, role play, and peer share to proactively impact the disciplinary issues related to foster children. Teachers also shared details regarding how praise and encouragement should be the same for all students, genuine, and personalized. The research indicated that, in order for praise and encouragement to be effective, it should be offered often and consistently. Homework, on the other hand, can serve as both a positive and negative consequence for foster children depending upon the specifics of the homework assignment. Through the implementation of the presented best practices, participating classroom teachers established a positive classroom environment to better meet the needs of the foster children in their classroom.

Conclusions

Due to the trauma experienced by foster children, many encounter difficulties in the classroom. In order to be successful, foster children need a positive environment that encourages connections and relationship building with others while providing them with the tools to overcome the challenges of their difficult situation. Developing a positive classroom environment offers foster children the opportunity to succeed. Through the implementation of the best practices which emerged from the research results, teachers can create a classroom environment that positively impacts the foster child. Through the implementation of discussions, relationships, role play, and peer share, teachers can positively impact student behavior while building connections with the student. Providing genuine and personalized praise and encouragement creates a caring environment in which the student feels encouraged to succeed. Lastly, by providing appropriate homework assignments, the teacher can help build a positive relationship between the foster parent and the foster child. The implementation of these best practices helps ensure the academic success of the foster child.

The findings of this study can inform current K-6 teachers of techniques which have shown to be effective in establishing a positive classroom environment in order to meet the needs of the foster child while encouraging academic achievement. The best practices presented in this research study have been shown to be effective in the participating teachers’ classrooms and have led to positive impacts on foster children. The results of this study can be implemented by K-6 teachers to assist in preventing school failure for foster children.
References


ASCD. (2014). The end of homework. ASCD Express, 9(21).


Elementary school students in today’s urban classrooms face many life circumstances at home and in their communities that contribute to stress and coping needs. These stressors are often brought into the classroom, which impact learning, behaviors, and overall academic performance. Mindfulness has been used in classroom settings, particularly with older children and adolescents to help with behavioral and academic outcomes in school. The purpose of this pilot study was to test a 10-week Mindfulness program that was integrated daily at the morning homeroom check-in with a classroom of 4th graders, and compared to a matched comparison classroom. Teachers provided pre-intervention and post-intervention data on student behavior and academic performance; students gave qualitative feedback about the program. While there were no significant differences on the Mindfulness measures, teachers reported significant differences in prosocial behaviors, emotional regulation, and academic performance within group and across comparison groups. Students also reported high satisfaction with the curriculum and gave examples of how they used Mindfulness for emotional regulation and in classroom. Findings support the use of Mindfulness in urban classroom settings as a feasible option for students to help with personal stress and coping, as well as emotional and behavior regulation in schools and at home.
Students sitting in urban U.S. elementary school classrooms are faced with myriad competing factors vying for their attention in the learning environment. Urban students must not only attend to the teacher’s planned curriculum, but cope with other indicators of poverty (unreliable transportation, high mobility, malnutrition, poor healthcare) that have been associated with a child’s ability to successfully achieve academically (Duncan & Brooks-Gunn, 1999; Herbers, Supkoff, Heistad, Hinz, & Masten, 2012). Circumstances of poverty often means that students have less resources to cope with the stress created by these demands which only results in increased stress and anxiety (Duncan –Andrade, 2009) that negatively impacts students’ ability to focus, think deeply, and learn and ultimately, influences their academic performance (Shapiro, Schwartz, & Bonner, 1998). There is a need for urban students to improve their ability to cope with stress to improve their focus, and, in short, to be more Mindful and find more success in school. A number of innovative strategies have been piloted and employed to improve focus and attention in the classroom, one of them being Mindfulness practice (Napoli, Krench, & Holley, 2005).

Mindfulness has been used more generally in clinical practice for over 30 years as a form non-pharmacologic psychotherapy, and with much success (Carmody & Baer, 2008; Holzel et al, 2011). These studies have evaluated on the impact of Mindfulness instruction on both students (Flook, Smalley, Kitil, Galla, Kaiser-Greenland, Locke & Kasari, 2010; Napoli, Krench, & Holley, 2005; Mendelson, Greenberg, Dariotis, Gould, Rhoades & Leaf, 2010; Schonert-Reichi & Lawlor, 2010) and teachers (Gold, Smith, Hopper, Herne, Tansey & Hulland, 2010). The application of Mindfulness in the classroom setting has been largely ignored until recently and has become even more recognized as Social-Emotional Learning (SEL) and Positive Behavioral Interventions and Support (PBIS) initiatives have been instituted over the past two decades (Sugai & Simonsen, 2012). PBIS is “a framework for enhancing the adoption and implementation of a continuum of evidence-based interventions to achieve academically and behaviorally important outcomes for all students (Sugai & Simonsen, 2012, p. 2). These classroom interventions go beyond academic achievement for children in the classroom and impact everyday psychological wellbeing. The Moos Model of Stress and Coping (2002)—of which this study is based—describes a pathway of personal and environmental conditions, leading to transitory conditions (including behavior change interventions), leading to cognitive appraisal and coping skills, which ultimately impact health and wellbeing of the individual child. We believe this theory from health disciplines holds true for educational outcomes of our children as well. Mindfulness in the classroom context teaches young people coping and calming techniques that can be used across a student’s social ecology to help alleviate stress and cope with stressful situations.

The purpose of this study is to present results from a pilot study of Mindfulness in a single urban elementary school. Specifically, we examined the impact of a Mindfulness curriculum on elementary students’ prosocial classroom behaviors, emotional regulation, and academic competence. We hypothesized that students receiving the intervention will exhibit increased prosocial behaviors, regulate emotions, and show improved academic performance compared to those not receiving the intervention.

**Methods**

This is a community-engaged study of the effects of Mindfulness instruction with socio-economic and ethnically-diverse students in two 4th grade classrooms in a Denver (CO) public elementary school. The
school was chosen because of an ongoing instructional relationship with one of the investigators (AMR) and individual classrooms were picked by the principal based on similar student characteristics. The school was similar to many urban elementary schools in Denver in terms of diversity and indicators of poverty: eighty-three percent of the school population was not white or of Hispanic origin. Fifty-three percent were Hispanic, 19.5% Black or African American, 17% white, 4% Asian, and 5% reported “two or more” races (http://planning.dpsk12.org/enrollment-reports/standard-reports). Eighty-five percent of its students were on a free or reduced lunch plan, and often-used indicator of poverty. The study protocol was approved as minimal risk to human subjects by the Colorado Multiple Institutional Review Board.

Sample

Two 18-student classrooms were chosen to participate in the project. One classroom was picked by the principal to receive the intervention as first activity in the morning, while the other classroom engaged in a typical morning homeroom check-in. This study included 18 students with parent consents in the intervention group and 12 who were consented in the control group. Specific demographic characteristics for each classroom were not released to the investigators, nor were they approved for data collection as a part of this study by the school.

Intervention

The intervention classroom received 10 weeks of Mindfulness training using an amalgam of the MindUp (The Hawn Foundation, 2011) and Mindful Schools (Cowan, 2011) curriculums. A summary of curricular content is summarized in Table 1. Classes were 20-30 minutes, performed twice a week, as part of the regularly scheduled daily morning message time. The intervention was delivered by a certified Mindfulness instructor (AMR) who at the time had over 10 years experience working with at-risk youth and vulnerable adults.

Measures

Three surveys were administered to teachers and students pre- and post- intervention to evaluate the effectiveness of the Mindfulness curriculum:

The FasttrackTeacher Social Competence Survey (FTSC) was completed for each student by the homeroom teacher in each of the two classrooms. The FTSC measures student’s pro-social behavior, emotional regulation, and academic achievement as perceived by the teacher (Gifford-Smith, 2000) using 17 items pre- and post-intervention. Cronbach’s alpha for subscales in each group were similar.

The Child Assent Mindfulness Measurement Survey (CAMM) measures children’s ability to observe internal experiences, act with awareness, and accept internal experiences without judgment (Greco, Baer, Smith, 2011). It has previously been used in student populations with good reliability in middle school students. The 10-item CAMM was administered to individual students in both classrooms; a lower sum score of the scale range 4-40 is indicative of increased Mindfulness. The scale had strong reliability scores in our classrooms at baseline (Cronbach’s alpha= 0.73).

The Mindful Schools Survey is a qualitative inventory that measures teacher and students perceptions of the curriculum and Mindfulness practice (Biegel & Brown, 2010). Students fill out a 10-item survey about their classroom experience with Mindfulness, and one open-ended question about how Mindfulness has changed them. Teachers fill out a truncated survey of 4-items as well as an exit interview completed in tandem with a program facilitator.
Analyses

Demographic characteristics were analyzed using univariate summary statistics for each group. There was no missing data for any of the scales, nor individual items. The FTSC was re-coded to match the psychometric properties in the original scaling (Gifford-Smith, 2000). Factor analysis and Cronbach’s alphas were conducted on all scales to corroborate the original FTSC cohort data. We used paired Student’s t-tests for across-group and within-group analyses as items were deemed normally distributed for the FTSC and CAMM scores. Frequencies and univariate statistics were used for items in the Mindful Schools Survey; we also present qualitative examples of responses from the open-ended questions in that survey.

<table>
<thead>
<tr>
<th>Theme</th>
<th>Content</th>
<th>Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>Session 1</td>
<td>Unit 1: Getting Focused</td>
<td>Introduction/neurobiology posters. How our brains work.</td>
</tr>
<tr>
<td>Session 2</td>
<td></td>
<td>How our brains work. Worksheet/create rap on concepts</td>
</tr>
<tr>
<td>Session 3</td>
<td></td>
<td>The amygdala and Mindful awareness: Sensory input/counting to 10</td>
</tr>
<tr>
<td>Session 4</td>
<td></td>
<td>The amygdala and Mindful awareness: Mindful/unMindful worksheet</td>
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<tr>
<td>Session 5</td>
<td></td>
<td>The amygdala and Mindful awareness: Core practices of Mindful breathing</td>
</tr>
<tr>
<td>Session 6</td>
<td></td>
<td>The amygdala and Mindful awareness: Core practices of Mindful breathing</td>
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<td>Session 7</td>
<td></td>
<td>Neurons and controlling our breathing</td>
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<tr>
<td>Session 8</td>
<td>Unit 2: Sharpening Your Senses</td>
<td>Mindfulness of breathing: Finding your base</td>
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<tr>
<td>Session 9</td>
<td></td>
<td>Sensory stimulation: Reticular activating system (RAS)</td>
</tr>
<tr>
<td>Session 10</td>
<td></td>
<td>Awareness of thoughts: Past and future</td>
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<td>Session 11</td>
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<td>Neurotransmitters: Dopamine and the chemistry of pleasure and reward</td>
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<tr>
<td>Session 12</td>
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<td>Awareness of thoughts: Sending kind thoughts</td>
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<tr>
<td>Session 13</td>
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<td>Awareness of body: Cortisol and heart rate</td>
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<td>Session 14</td>
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<td>Awareness of body: Slow motion</td>
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<td>Session 15</td>
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<td>Awareness of taste: Mindful eating</td>
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<tr>
<td>Session 16</td>
<td>Unit 3: Attitude</td>
<td>Perspective taking: Opening the Mind</td>
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<tr>
<td>Session 17</td>
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<td>Heartfulness: Kind and caring on the playground</td>
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<tr>
<td>Session 18</td>
<td></td>
<td>Choosing optimism: The brain and optimism worksheet</td>
</tr>
<tr>
<td>Session 19</td>
<td></td>
<td>Gratitude: Looking for the good/compliment and kindness challenge</td>
</tr>
<tr>
<td>Session 20</td>
<td></td>
<td>Brains are built for compassion and empathy: Random acts of kindness</td>
</tr>
</tbody>
</table>
Results

Demographic characteristics of the classrooms were representative of the elementary school as a whole, though a slightly higher proportion of Hispanic (69.7%), white (27.3%), and Asian (7.6%) students than the school. These rates were similar to all 4th graders across the Denver Public School system: 56.5% Hispanic ethnicity, 23% white, 12.9% black, and 3% reported more than one race (http://planning.dpsk12.org/enrollment-reports/standard-reports).

Fasttrack Teacher Social Competency Scale. After Mindfulness instruction the intervention group saw statistically significant increases in every category of the FTSC (Table 3). Also, there were statistically significant differences across study groups post-intervention despite there being an increase of scores in the comparison group and higher means in the comparison group at baseline compared to the intervention group. For within-group analyses, there was a statistically significant increase in prosocial behaviors (mean change= -2.19, p= 0.00), emotional regulation (mean change= -0.98, p=0.00), and teacher’s report of academic achievement (mean change= -1.33, p=0.00) while the comparison group scores remained non-significant (Table 3).

CAMM outcomes. There were no statistically significant differences at baseline (t= 0.36, p= 0.72), nor post-intervention for either group (t= -0.43, p= .67). Results were not significantly different across comparison groups for either classroom for this Mindfulness measure (Table 3).

Mindful Schools Survey outcomes. On the 7-item survey evaluation of the training, students in the intervention classroom reported a variety of benefits from having Mindfulness a part of their school day. 100% of students said that they “enjoyed Mindfulness classes”, “would use Mindfulness again in the future”, and agree that they “think more children should learn Mindfulness.” Three-quarters of the students had taught someone else they know about Mindfulness. Their open-ended responses corroborated those findings of utility:

- “I use Mindfulness before a test.”
- “I used it [Mindfulness] at night so my voice in my head would go away.”
- “My favorite thing about Mindfulness is Mindful eating.”

Many students spoke of Mindfulness’s effectiveness in anger management and controlling emotions:

- “[I use it when] my sisters make me angry.”
- “Mindfulness helped me avoid fights.”
- “When I was upset, I use Mindfulness when I am mad [sic].”

The teacher in the intervention classroom described the impact on her students:

- She ranked the “program overall a 10 out of 10” and felt that 75% of students benefited from the practice.
- She felt students focused more quickly which increased teaching time by 11-20 minutes.
- Among the concrete changes she saw in the classroom: students could settle down better, exhibited more impulse control, paid attention more in class, showed more self-awareness, and could relate to one another better than before the intervention.

The benefits of Mindfulness seemed to permeate outside the classroom. The intervention classroom teacher described how other 4th grade teachers had commented on “marked improvements in [her] students as a result of the Mindfulness training” in terms of hallway and playground behaviors. Overall, teachers felt the Mindfulness made students more relaxed, more focused, and with less behavioral issues after having received training.
The purpose of this pilot study was to evaluate the effects of a Mindfulness curriculum in a single urban elementary school classroom. Both students and teachers in the treatment group reported increases in positive classroom behaviors, emotional regulation, and academic achievement after receiving Mindfulness instruction. Those students who participated in Mindfulness not only saw dramatic increases in those classroom behavior outcomes, but also saw other tangible positive increases over the control students.

We saw no differences within or between classrooms in regards to the outcome measure of Mindfulness using the CAMM scale. There could be a couple reasons for this. For one, students perhaps didn’t know what a Mindful state was pre-intervention and overinflated their responses, so when asked the same items post-survey, bias was introduced. Or, students simply didn’t understand CAMM items when it was administered. While it has been empirically tested among middle school aged youth (Greco, Baer, & Smith, 2011), the younger children in our sample might have misunderstood item meanings. Children and teachers gave remarkably high marks and qualitative feedback on the Mindful Schools Survey. This was not a surprise and is in-line with other Mindfulness studies performed in school settings (Napoli, Krech, & Holley, 2005; Schonert-Reichl &...
Teachers speak of positive changes among children and also in themselves when Mindfulness was a part of the classroom (Gold et al., 2010; Mendelson et al., 2010). Our reports from the classroom teacher could well be biased as the evaluation form was administered soon after the final class day, by the Mindfulness instructor herself.

**Limitations**

Our findings come with noted limitations. First, our findings are of a single pilot study in one urban elementary school, so they are not generalizable to other populations. In this same vein, the unit of analysis was the individual student; we were not able to perform multilevel analyses due to a strict sampling frame of this pilot study. Second, our sample size was small, though we used non-parametric tests for significance testing to be certain of standard t-tests (outcomes were similar in both analytic methods). Third, the standardized scale for Mindfulness—CAMM—has not been tested with children. We feel that null findings for that survey could be related to a lack of understanding of items among the students and measurement bias for overall scales. Finally, there could be Hawthorne Effect with responses for both students and the teachers. For the FTSC scale in particular, academic achievement was based on the teacher’s perception alone and not verified by exam scores.

Still, our findings confirm prior studies of the usefulness of Mindfulness in elementary school classrooms, but extends those benefits of the program to an urban setting with students arguably more at-risk academically and behaviorally compared to previous studies. With education policy ever-changing, Mindfulness instruction may have the potential to meet requirements of a Positive Behavior Interventions Supports program by both decreasing negative classroom behaviors and increasing social emotional learning. Additional research should be done to further examine the effects of such complimentary intervention instruction on a wider range of student behavior, and its potential as a P.B.I.S. program option (Sugai & Simonsen, 2012). Research can also confirm student and classroom academic improvement, another goal of education policy in the 21st Century.

Finally, Mindfulness among youth can be an important component of a healthy youth development framework, and contribute to resiliency among vulnerable youth who may be exposed to trauma. Mindfulness is often considered a coping skill that allows the young person to choose how to deal with adversity, control anger, and calm ones mind (Vo, 2015). Indeed, students can use Mindfulness outside the classroom for equally important life skills at home or in the community. And Mindfulness can complement behavioral health interventions, perhaps serving as an adjuvant to pharmacologic approaches in mental health services.

In conclusion, a short course of Mindfulness instruction was easy to implement in an elementary school classroom, with focusing sessions feasible in classroom preparation time, even without a trained instructor. While we saw no differences in our Mindfulness measure as reported by students, there were many positive classroom behavior changes in our intervention group that rippled beyond the individual child to the classroom milieu as a whole, and even throughout the school setting. Schools and districts might consider Mindfulness sessions for students, and trainings for teachers, as a possible Social-Emotional Learning and PBIS option for school environments.

**Acknowledgement**

We are grateful for the support of the University of Colorado’s Undergraduate Research Opportunities Program and Dr. Barbara Dray for serving as faculty mentor. Finally, we are grateful to our partner school, principal, teachers, and students for sharing their time and wisdom with us to learn more about Mindfulness.
References


ANALYSES OF TRENDS IN HIGH SCHOOL STUDENTS’ MATH-SCIENCE COURSE CREDIT ATTAINMENT AND REGISTRATIONS IN TEXAS

LIANG ZENG
G. HEROLD POELZER
The University of Texas-Rio Grande Valley

This study describes the trends in course credit attainment (CCA) of high school students in required and non-required science and math courses and trends in registration in non-required science and math courses in Texas between 1997 and 2009. Using Texas Public Education Information Management System data between 1997 and 2009, it presents research findings on 18 required and non-required high school math and science courses, including AP and IB Courses. Different from other studies, it focuses on CCA trends across ethnicities, gender, and those in or not in gifted programs. Furthermore, it investigates the gaps of CCA between Hispanic and White students within gifted or not in gifted programs and gender. It also investigates the trends in the gaps in CCA in the non-required courses with respect to the proportion of White and Hispanic students. In addition, the trends in course registration in the non-required courses are investigated with respect to the proportion of male and female students across ethnicities. Finally, the trends in proportions of male and female students, who attained credits in IB courses, are described within each ethnicity. Significant trends in gap dynamics between Hispanic and White students suggest problems with Hispanic minority students in the science and math education in high schools in Texas, especially since the Hispanic student population is steadily increasing and already surpasses the White student population. Knowledge of these trends has important ramifications for education policy making which, in turn, has a substantial influence on the economic future of Texas.

Introduction

That the fields of science, technology, engineering and mathematics (STEM) primarily make up the engines that drive a nation’s economy and directly determine its standard of living is a position commonly held in the Western world. Unfortunately, for the past few decades, the United States has experienced a shortage of engineers and scientists (Augustine, 2005; Carnevale, Smith, & Strohl, 2010; National Science Foundation, 2004a, 2004b; U.S. Department of Education, 2000). To make matters worse, the trends in gaps in both science and math achievement and in high school credit attainment rates between White and Asian students on the upper end and African American and Hispanic students on the lower end give cause for concern (Alliance for Excellent Education, 2009; Grigg, Lauko, & Brockway, 2006; U.S. Department of Education, 2007; Aud et al., 2010).
Should this trend continue and the demand for unskilled workers further deteriorate, the states may morph into welfare states as the economy slowly grinds to a halt. The state of Texas is in a particularly vulnerable position. The 2006 Census shows that the relative growth in the Hispanic population is notable: In 1997, the Texas population was 19,439,337 with 28.0% Hispanics and 57.9% Whites, whereas in 2011, the Texas population had increased to 25,883,999 with 39.5% Hispanics and 44.3% Whites (Texas Department of State Health Services, 2011, 2014). The high school student population change was even more notable. Compared to the 1997 student population of 1,124,355 with 35.1% Hispanics and 47.9% Whites (Texas Education Agency, 1999), the 2009 student population was 1,327,815 with 44.7% Hispanics and 36.6% Whites. Hispanic students made up the 12.8% difference in student populations and exceeded the White student population by 8.1% (Texas Education Agency, 2010). This shift in population increases the concern for reducing the gaps in science and math achievement and in CCA between White and Hispanic students.

The Texas Higher Education Plan for closing the gaps states the following:

Reaching the goal will also require increasing participation from every population group, but especially Hispanics and Blacks. The White college enrollment rate of 5% continues to exceed the 3.7% participation rate for Hispanics and the 4.6% rate for Blacks. Hispanic and Black Texans will increase from 42% to 52% of the state’s population by 2015. Unless Texas significantly increases the enrollment rates of all of its people, demographic shifts will steadily reduce the number of students enrolling in higher education from the current 5 to 4.6% by 2015 (The Texas Higher Education Coordination Board, 2005, p. 9).

Past and current research on this topic looks at high school completion rates, credits earned in mathematics and science, achievement scores, and gaps in the performance among various ethnic groups (Alliance for Excellent Education, 2009; Dalton, Ingels, Downing, & Bozick, 2007; U. S. Department of Education, 2011; National Science Foundation, 2006; Nord et al., 2011). This research paper, however, looks at the gap problem from a new perspective: It compares CCA between gender and ethnicity of students in gifted and not in gifted education programs taking required and non-required courses. Rather than focusing on achievement, it emphasizes trends in CCA and in course registration rates of high school students in Texas between the years 1997 and 2009.

Specifically, this study addresses the following research questions: In the State of Texas, do trends exist in the high school credit attainment rates and in the registration rates for required and non-required courses for those in or not in gifted education programs? If so, do these trends differ within gender across ethnicity and between genders within ethnicity? And, are the gaps closing between Whites and Hispanics? Finally, is the proportion of students from a specific population who register in a specific non-required course changing? And, if so, in what direction—increasing or decreasing?

**Literature Review**

This research focuses on trends in high school math and science CCA, in gaps between White and Hispanic students, and in course registration in required and non-required courses. It delineates these trends as they exist between students in and not in gifted education programs, between gender, and among ethnicities in the State of Texas. The number of combinations is such that the researchers were unable to find any other research in the literature that is similar.
Consequently, this literature review concerns itself with research that is somewhat related to this study collected from statistical reports from national and state databases.

Much of the literature reviewed is concerned with the phenomenon of gaps: gaps in citizens’ educational attainment among countries (Organisation for Economic Co-Operation and Development, 2012; United States Census Bureau, 2010), gaps in high school completion rates, gaps in grade point averages, gaps in achievement scores, gaps in number of rigorous courses taken (Nord et al., 2011), and so on. However, the gaps of relevance in this study are the gaps mentioned in the previous paragraph and, in particular, the gaps between Whites and Asians on the upper end of CCA and African Americans and Hispanics on the lower end of CCA at the high school level in the State of Texas.

For instance, the State of Illinois’ Prairie State Achievement Examination administered in 2002 shows that the math scores of Hispanic and African American junior high school students are lower than those of all other students in Illinois (Illinois State University, 2005). However, no difference occurs in scores based on gender within each ethnic group. In addition, Hacker (2006) reported that The Texas Assessment of Knowledge and Skills Examination shows African American and Hispanic students scoring below average in both science and math. Further, the science assessment from the National Assessment of Educational Progress (U. S. Department of Education, 2009) shows the gaps between White and Asian students compared to African-American and Hispanic students on the overall science achievement scale. Whereas 73% of Asian/Pacific Islanders and 72% of White students achieve at basic or above levels, 42% of Hispanics and 29% of African-Americans score at these levels. In math, the average scaled score reveals a similar pattern: With a full scale score of 300, Asian/


A trend in gaps also appears when comparing the percentage increase in the number of students completing a rigorous curriculum by the time of graduation. A rigorous curriculum consists of 4 credits in English, 3 in social studies, 4 in mathematics (including pre-calculus or higher), 3 in science (including biology, chemistry, and physics), and 3 in a foreign language (Nord et al., 2011). The credits refer to Carnegie Units, each of which requires 120 hours of classroom instruction. The percentage of each of the four ethnic groups completing a rigorous curriculum by graduation in 1990, 2005, and 2009 is as follows: Asian/Pacific Islander, 13, 22, 29, respectively; White, 5, 11, and 14; Hispanic, 2, 8, and 8; and African-American, 2, 6, and 6. The gap widens between Whites and Hispanics (of interest to our study) as shown by the percentage difference of 3, 3, and 6 in 1990, 2005, and 2009, respectively. Interestingly, the gap between Asian/Pacific Islanders and Whites also widens from 8% in 1990 to 15% in 2009. However, in general, the pattern remains the same: Asian/Pacific Islanders have the largest percent increase in completing a rigorous curriculum, followed by Whites, Hispanics and African Americans.

**Research Methodology**

**Methods and Procedures**

**Data source.** The data consist of the academic records of all high school students in the State of Texas retrieved from the Texas Education Agency (TEA) database. These students had registered in or completed 18 science or math required or non-required courses during the thirteen year time period 1997-2009. The student population had increased from approximately one million to one and one third million during that same time interval.
Variables in study. The variables in the study consist of ethnicity, gender, gifted program status, required/non-required courses, CCA, course registration, and time interval. The eighteen courses analyzed include 13 non-required and 5 required courses (see Table 1). Of the 13 non-required courses, 6 are Advanced Placement courses (AP) and 6 are International Baccalaureate (IB) courses. The Physics course was not required during the time span of this study; it recently became a requirement in 2012. All courses were two semesters, except Algebra II and Physics, which were one semester.

Analysis. The trend analysis uses IBM SPSS Statistics 19 for Windows and Excel to generate graphs, cross tabulations, and curve estimations. The significance level is set at 0.05.

Procedures. The study first describes the trend in high school student enrollment over the 13 year period (1997-2009) for males and females within ethnic classifications. The description includes bar graphs and line graphs of relative changes. The appendix includes a relevant table of absolute changes.

Next, the students are arranged according to the following hierarchy (see Figure 1): First, the courses are dichotomized into required and non-required; then, all students are divided into students in gifted or not in gifted education (GT) programs which, in turn, are grouped into male and female categories. Finally, each of these categories is further divided into the following ethnic classifications: African-American, Asian, Hispanic, Native-American, and White. For both required and non-required courses within this framework, the following calculations are performed:

a. For required and non-required courses, the percentages of CCA over a thirteen year period are calculated for each ethnic group, for example, male Asians in gifted education programs taking Algebra I. The percentages

<table>
<thead>
<tr>
<th>Table 1. Required and Non-Required Courses</th>
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</thead>
<tbody>
<tr>
<td>Required courses</td>
</tr>
<tr>
<td>AP Physics C</td>
</tr>
<tr>
<td>Physics</td>
</tr>
<tr>
<td>IB Biology I</td>
</tr>
<tr>
<td>IB Biology II</td>
</tr>
<tr>
<td>IB Chemistry I</td>
</tr>
<tr>
<td>IB Chemistry II</td>
</tr>
<tr>
<td>IB Physics I</td>
</tr>
<tr>
<td>IB Physics II</td>
</tr>
</tbody>
</table>
are performed by dividing the number of students in a specific category (e.g. male Asians in gifted education programs) who attained credit in a particular course by the total number of students in that population (male Asians) enrolled in the course and multiplying by 100. For instance, for each year, the number of male Asian students in gifted education programs that attained credits in Algebra I is divided by the total number of male Asian students who took that course. This is done to determine whether the percentages of male Asians in gifted education programs attaining credit in this required course changes over the 13 year period.

b. To clearly illustrate the nature of the changes in the gaps between White and Hispanic students, with respect to CCA percentages, curve estimations for these groups are calculated and plotted to analyze the trends and gap dynamics.

c. Also, for non-required courses within each ethnic group, the proportions of females and males registering in a particular course are calculated to see if any changes occur in registration practices between females and males. For example, for each year, the number of Hispanic females registered in AP Physics is divided by the number of Hispanic female high school students enrolled in that year. Note that for registration trend analysis, the students in the gifted and non-gifted education programs are aggregated since for non-required courses, they compare favorably with each other with respect to CCA.

d. Finally, although the number of students registering in IB courses is relatively small, a trend analysis provides
Results

This section describes the absolute and relative changes in Texas student populations, the trends in their CCA in required and non-required courses (including gaps between Hispanics and Whites), and the trends in their course registration in non-required courses.

I. Absolute and Relative Student Population Changes within Each Ethnicity

Figure 2 shows the trends in absolute student enrollment numbers for females and males, respectively. The number of female students has grown from 532,426 to 657,549, a 24.5% increase over 13 years, whereas that of male students has grown from 563,455 to 692,759, an increase of 22.9%. The total high school population has grown from 1,095,881 to 1,350,308, a 23.2% growth.

Overall, Figure 3 shows that whereas the proportion of Whites decreased, the proportion of Hispanics increased relatively rapidly. Other ethnicities showed much smaller population increases. More specifically, the percentage of White females decreased 13.17% (48.49% to 35.32%), while the percentage of other ethnicities increased as follows: Hispanics 9.02% (32.71% to 41.73%), African-Americans 0.55% (13.61% to 14.16%), Asians, 0.91% (2.45% to 3.36%), and Native Americans, 0.11% (0.23% to 0.34%).

This pattern is similar for males: the percentage of Whites decreased 10.66% (48.30% to 37.64%), while the percentage of other ethnicities increased as follows: Hispanics, 8.74% (34.90% to 43.64%), African-Americans, 0.81% (13.93% to 14.74%), Asians, 0.97% (2.63% to 3.60%), and Native Americans, 0.14% (0.24% to 0.38%). Note that in 2006 the White and Hispanic high school student populations were approximately equal.

II. CCA of Ethnic Groups and Gaps in CCA between White and Hispanic Students

Required courses and gaps. This section, including Figures 4-13, describes the percentage of male and female students within each ethnicity in GT or not in GT programs who attained credits in the following five required courses: Algebra I, Algebra II, Biology, Chemistry, and Integrated Physics and Chemistry. In addition, it describes the trends in CCA gaps between White and Hispanic students. Finally, it describes the trends in CCA gaps between White and Hispanic students. In general, it gives a relatively detailed analysis of the graphs pertaining to Algebra I followed by briefer analysis of Algebra II. The graphs of the remaining courses are left to the analysis of the readers. Detailed calculations will be provided by the authors upon request.

Algebra I. Figure 4 shows the trends in CCA percentages in Algebra I for females and males in GT and not in GT programs. In general, a higher percentage of students in GT programs attained course credit than students not in GT programs. Further, the difference in performance between Asians
Figure 2. Trends in absolute student enrollment numbers for females and males from 1997-2009, respectively.

Figure 3. Trends in relative (percent) student enrollment for females and males from 1997-2009.
and Whites on the one hand and Hispanics and African-Americans on the other was substantial: for students in GT programs, the difference in CCA amounted to about 10% whereas for those not in GT programs, it approximated 20%.

In terms of number of students, for example, Figure 4 shows that in year 2006, 5.5% (127) of the White females in GT programs did not attain credit, compared to 13% (292) of the Hispanic females; and 16.9% (7,608) of the White female students not in GT programs did not attain credits, compared to 30.5% (19,475) of the Hispanic females.

Figure 5 shows that all gaps between White and Hispanic students decreased over time, but in different ways and at different rates. Whereas CCA for White females in GT Programs remained constant at 95%, CCA for Hispanic females increased from 85% to 90%. So, the gap decreased 5%, and was 5% in 2009. For males in GT programs, the trend is slightly different. Both Hispanic and White males increased credit attainment; however, the rate of increase was slower for White males (from 92% to 93%) than for Hispanic males (82% to 85%). So, the gap decreased 2%, but it was still 8% until 2009.

The CCA was considerably lower for students not in GT programs than for those in GT programs. Approximately 82% of White females attained course credit in 1997 compared to 86% in 2009—a gain of 4%. For Hispanic females, the gain was 8%, going from 67% to 75% over the same time period. The gap between White and Hispanic females decreased from 15% to 11%. For males not in GT programs, the CCA pattern was similar. White males increased from 77% to 82%—a gain of 5%, whereas Hispanic males increased from 61% to 67%—a gain of 6%. The gap between White and Hispanic males decreased 1%, going from 16% to 15%.

**Algebra II.** Figure 6 shows an increase in CCA for students both in GT and not in GT programs. As in Algebra I, females attained course credit at a higher rate than males, and Asians and Whites attained credit at a higher rate than Blacks and Hispanics. Gaps were smaller for those in GT programs than for those not in GT programs.

The gap in CCA between Hispanic and White females in GT programs decreased by 3% (from 8% to 5%); for males, the decrease was 1% (6% to 5%) (see Figure 7). For Hispanic and White females not in GT programs, the gap began and ended at 10%; for males, the gap began and ended at 9%.

Similarly, the percentages of CCA and their trends in Biology, Chemistry and Integrated Physics and Chemistry are described in Figures 8-13, respectively:

**Summary.** In general, for all the required courses, females and males in GT programs exceeded the CCA of females and males not in GT programs by 5% to 10%. Also, in all courses, the CCA of both Whites and Asians exceeded that of Hispanics and African Americans by 5% to 15%. Females exceeded males in CCA, whether in GT programs or not. Hispanic and African American females CCA in GT programs were about the same as White and Asian females not in GT programs; a similar finding occurred between Hispanic and African American males. Males not in GT programs had the lowest CCA. The gaps in CCA between Hispanics and Whites varied considerably: decreased, remained constant, or increased.

**Non-required courses and gaps.** Figures 14-27 describe the percentage credit attainment in each of the seven non-required courses for male and female students within each ethnicity in GT or not in GT programs: AP Biology, AP Calculus AB, AP Calculus BC, AP Chemistry, AP Physics B, AP Physics C, and Physics. It also describes the trends in the gaps between White and Hispanic students for these aforementioned courses.
Figure 4. Course credit attainment percentage in Algebra I (Note: The graph on the lower right begins its vertical axis with the percentage of 55, in order to accommodate the data.)
Figure 5. Percentage gaps in course credit attainment between White and Hispanic Students in GT and not in GT Programs in Algebra I.
Figure 6. Course credit attainment percentage in Algebra II.
Figure 7. Percentage gaps in course credit attainment between White and Hispanic students in GT and not in GT programs in Algebra II.
Figure 8. Course credit attainment percentages in Biology.
Figure 9. Percentage gaps in course credit attainment between White and Hispanic students in GT and not in GT programs in Biology.
Figure 10. Course credit attainment percentages in Chemistry.
Figure 11. Percentage gaps in course credit attainment between White and Hispanic students in GT and not in GT programs in Chemistry.
Figure 12. Course credit attainment percentages in Integrated Physics and Chemistry.

Females in GT Program: % Credit Attainment in Integrated Physics and Chemistry

Males in GT Program: % Credit Attainment in Integrated Physics and Chemistry

Females not in GT Program: % Credit Attainment in Integrated Physics and Chemistry

Males not in GT Program: % Credit Attainment in Integrated Physics and Chemistry
Figure 13. Percentage gaps in course credit attainment between White and Hispanic students in GT and not in GT programs in Integrated Physics and Chemistry.
Figure 14. Course credit attainment percentages in AP Biology.
Figure 15. Percentage gaps in course credit attainment between White and Hispanic students in GT and not in GT programs in AP Biology.
Figure 16. Course credit attainment percentages in AP Calculus AB.
Figure 17. Percentage gaps in course credit attainment between White and Hispanic students in GT and not in GT programs in AP Calculus AB.
Figure 18. Course credit attainment percentages in AP Calculus BC.
Figure 19. Percentage gaps in course credit attainment between White and Hispanic students in GT and not in GT programs in AP Calculus BC.
Figure 20. Course credit attainment percentages in AP Chemistry.

Females in GT Program: % Credit Attainment in AP Chemistry

Males in GT Program: % Credit Attainment in AP Chemistry

Females not in GT Program: % Credit Attainment in AP Chemistry

Males not in GT Program: % Credit Attainment in AP Chemistry
Figure 21. Percentage gaps in course credit attainment between White and Hispanic students in GT and not in GT programs in AP Chemistry.
Figure 22. Course credit attainment percentages in AP Physics B.

Females in GT Program: % Credit Attainment in AP Physics B

Males in GT Program: % Credit Attainment in AP Physics B

Females not in GT Program: % Credit Attainment in AP Physics B

Males not in GT Program: % Credit Attainment in AP Physics B
Figure 23. Percentage gaps in course credit attainment between White and Hispanic students in GT and not in GT programs in AP Physics B.
Figure 24. Course credit attainment percentages in AP Physics C.
Figure 25. Percentage gaps in course credit attainment between White and Hispanic students in GT and not in GT programs in AP Physics C.
Figure 26. Course credit attainment percentages in Physics.
Figure 27. Percentage gaps in course credit attainment between White and Hispanic students in GT and not in GT programs in Physics.
Summary. In general, for all the non-required courses, females and males in GT programs had a percentage CCA rate about 2% to 3% higher than females and males who were not in these programs. Also, in all subjects, the CCA rate for both Whites and Asians exceeded that of Hispanics and African Americans by 4% to 5% for both gifted and non-gifted program students. The gaps in CCA between Hispanics and Whites varied considerably in the non-required courses as they did in the required courses: decreased, remained constant, or increased.

III. Proportion of Students Registered in Non-required Courses Including AP, IB, and Physics Courses

Part III describes trends in the proportions of females and males who registered in each of the non-required courses in all ethnic categories. For instance, for each year between 1997 and 2009, the proportion is calculated through dividing the number of Hispanic females who registered in AP Chemistry by the total number of Hispanic females in high schools.

AP courses. Figure 28 depicts the students’ course registration in the following six AP courses: AP Biology, AP Calculus AB, AP Calculus BC, AP Chemistry, AP Physics B, and AP Physics C. In general, a larger proportion of Asians consistently registered in AP courses, followed by Whites and other ethnic groups. Registration gaps were relatively large between Asians and Whites, smaller between Whites and the remaining ethnic groups, and nearly indiscernible between Hispanics and African Americans.

Further, the more abstract or rigorous the course, the fewer were the students who registered. For example, within the same discipline, a relatively smaller proportion registered in AP Physics C than in AP Physics B or Physics. Across disciplines, the proportion of students registered in the following order from highest to lowest: AP Biology B, AP Chemistry, AP Calculus BC, AP Physics B and AP Physics C. Females were more proportionally represented than males in AP Biology, AP Chemistry, AP Calculus AB, and Physics. However, males were more represented than females in AP Physics B, AP Physics C, and Calculus BC.

For AP courses in general, the proportions of Asians who registered increased more rapidly than that of Whites, and the proportions of Hispanics and African Americans remained fairly constant over the years in question.

Physics. According to Figure 29, the proportion of Asians registering for the Physics course was higher but increased at a slower rate than that of Hispanics, African Americans, and Whites, whose proportions increased at an approximately equal rate.

One percent of Asian, White, Hispanic, and African American male students amounted to 250 Asians, 2608 Whites, 3023 Hispanics, and 1021 African Americans, respectively, in 2009. In that year, 0.70% of White males compared to 0.18% of Hispanic males registered in AP Calculus BC: White Males exceeded Hispanic males by 0.52%, which means that 1572 more Hispanic males would have registered in this course had the proportion of White and Hispanic males been equal.

IB courses. Figure 30 shows the course registration for the following six IB courses: IB Biology I, IB Biology II, IB Chemistry I, IB Chemistry II, IB Physics I, and IB Physics II. The percent scales on the vertical axes vary considerably in order to make the graphs more readable, due to the relatively small number of students registered.

In all six IB courses, clearly the Asian groups were, proportionally, the most represented followed by White and then by Hispanic or African American groups. For example, in the IB Chemistry I course, the proportion of white males registering in the course was 0.04% (107 students), whereas the proportion of Hispanic males registering in this course was 0.02% (48 students). Had Hispanic students registered in the same
Figure 28. Course registration trends in six AP courses.
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proportion as White students, their numbers would have doubled from 48 to 96.

The percentages of students represented in AP courses exceeded those represented in comparable IB courses by a factor of 10 and, in some cases, by a factor of 100. The pattern of proportional registration for the ethnic groups was similar between AP and IB courses: Asians followed by Whites, then African Americans or Hispanics.

Discussion

This research identifies the trends in absolute and relative changes in the high school student population and the trends in high school student CCA and course registration between 1997 and 2009 in the State of Texas. Trends appear within the context of required and non-required courses, students in GT and not in GT programs, gender, and ethnic groups. And, of particular interest, are the trends in gaps in CCA that occurred between White and Hispanic students.

The amassed information of this study regarding STEM courses makes it possible to pinpoint progress in CCA for a specific ethnic group, specific gender, and specific program, and thus focuses on courses that may require slight or vigorous educational intervention. For instance, looking at Figure 13, Integrated Physics and Chemistry, one might be less concerned with the CCA of and the gaps between White students and Hispanic students in GT programs than with that of the students not in GT programs.

In general, for both required and non-required courses, students in GT programs had a higher percentage of CCA than those not in GT programs. Asians and Whites had a higher percentage of CCA than Hispanics and African Americans. One would expect that students in GT programs form a more able group than students not in these programs; hence, students in GT programs are more likely to complete the courses in which they are enrolled.

Asians and Whites performing better in CCA than African Americans and Hispanics in the high school science and math courses in Texas is consistent with the pattern across the nation whether one looks at high school completion rates, achievement scores in math

**Figure 29. Course registration trends in Physics course.**

![Graph showing female and male course registration in Physics relative to their respective populations from 1999 to 2009 for different ethnic groups.](image)
Figure 30. Course registration trends for six IB courses.
### Table 2. Projected Cost to the State for Female Students Repeating Algebra I (Year 2009)

<table>
<thead>
<tr>
<th>Program</th>
<th>Ethnicity</th>
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<th>%</th>
<th>Cost</th>
<th>Cost Difference</th>
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<tbody>
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<td>14731</td>
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<td>4782</td>
<td>11.6</td>
<td>$1,912,800.00</td>
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<td></td>
<td></td>
<td></td>
<td><strong>$7,926,000.00</strong></td>
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and science, or proportional registration in the more rigorous courses. CCA has a substantial economic impact for courses that need to be repeated. For example, for Algebra I in the Texas educational system, in 2009, out of the 2,501 Hispanic female students enrolled in GT programs, 216 did not attain course credit. And for the 2,075 White female students, 86 did not attain course credit. Also, for the 66,058 Hispanic female students not enrolled in GT programs, 14,733 did not attain course credit, nor did 4,782 of the 41,401 White female students. The economic impact for both females and males is shown in Table 2 and Table 3, respectively, assuming that the cost is $400 to repeat a course.

The total cost for females and males to repeat this course is $19,866,000.00. Realistically, even if 2% did not repeat the course due to death, moving, illness, dropout and the like, the cost would be $19,468,680.00 and, if 5% did not repeat the course, the cost would still be $18,872,700.00. The cost of repeating the course for males is 1.5 times greater than the cost for females, and the cost due to the gap between White and Hispanic students is 0.46 times or approximately one-half the total cost.

Interestingly, to a large extent, this condition can be ameliorated. Tyson, Lee, Borman and Hanson’s (2007) longitudinal study of Florida high school students who took advanced-level science and math courses in high school and completed a baccalaureate in STEM fields within six years of graduating from high school found that African Americans were as likely as Whites to receive a degree, and that Hispanics and Asians were more likely than Whites to attain a degree—Hispanics being approximately 1.3 times as likely and Asians between 2.6 and 3 times as likely.

The result of Tyson et al.’s longitudinal study suggests that it behooves Texas to put a great deal of effort into closing the gaps in CCA between Hispanic and White students who register in non-required courses. This means taking initiatives that enable and encourage African American and Hispanic students to register in the non-required math and science courses and, once registered, to raise their achievement scores and to complete their courses. These observations suggest that those persons responsible for the education of the nation’s youth aspire to allocate adequate resources to identify the major causal factors pertaining to this problem and to initiate research based intervention measures to alleviate it: This suggests monetary, human, and physical resources, along with pilot studies across the state. Addressing this problem will have desirable consequences in the long run, foremost of which is the development of our youth to their fullest potentials—a goal that every school district touts as its primary raison d’être. Commensurate with this development is the economic benefit that will accrue to our society and raise its standard of living. Failure to address this problem adequately, however, is likely to lead, in the end, to the status of a welfare society.

### Table 3. Projected Cost to the State for Male Students Repeating Algebra I (Year 2009)

<table>
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<tr>
<th>Program</th>
<th>Ethnicity</th>
<th>Registered</th>
<th>No Credit</th>
<th>%</th>
<th>Cost</th>
<th>Cost Difference</th>
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<td>299</td>
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<td>GT</td>
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<td>123</td>
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<td>Not in GT</td>
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<td>72433</td>
<td>21056</td>
<td>29.1</td>
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<td>Not in GT</td>
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<td>46191</td>
<td>8472</td>
<td>18.3</td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td>$11,940,000</td>
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References


Appendix

Table 4. High School Student Populations within Gender and Ethnicity

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<table>
<thead>
<tr>
<th>Males</th>
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<tbody>
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<td>Year</td>
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<td>Asian</td>
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<td>Native American</td>
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<td>Total</td>
</tr>
<tr>
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</table>
Science teachers need to evaluate their lessons and units of study, frequently, to stay abreast of recommended trends in the curriculum. Self evaluation is involved here. A quality science program must be implemented in order to assist learners to achieve as optimally as possible. Which guidelines should then serve in self evaluation?

**Criteria to use for Self Evaluation**

Criterion number one, are inquiry methods used for pupils to acquire necessary subject matter? With inquiry methods, pupils are assisted in raising questions pertaining to the ongoing lesson. Lecture is kept to a minimum and used when necessary to clarify and make content meaningful. Explanations given by the teacher are used as scaffolds to bridge gaps between the known and the unknown. With inquiry approaches in pupil learning, subject matter is acquired in depth whereby learners analyze concepts and generalizations inherent in an ongoing learning experience. Here, pupils then achieve content inductively in moving from specific learnings to broader ideas such as concepts and generalizations. Opposite of inquiry approaches is survey procedures of instruction which attempt to emphasize isolated facts. Survey procedures of instruction stress a shallow method whereby much ground is covered in a minimal amount of time.

Criterion number two emphasizes reflective thinking whereby learners have time to think about what has been acquired. Inherent is attaching meaning and understanding pertaining to relating, sequencing, and elaborating of science learnings. Retention of subject matter is salient in ongoing units of study.

Reflection also aids in perceiving relationships between and among objectives in ongoing lessons as well as between units of study. Questions raised by pupils assist in noticing gaps in instruction which need remediation.

Criterion number three stresses the necessity of experimentation. High quality experiments might well assist in emphasizing the work of a scientist. Being clearly visible to all, the experiment needs to be relevant to the ongoing lesson/unit of study. Learners should be involved in setting up the experiment. Active involvement is preferable to being a passive recipient of knowledge and skills. Thus with careful observation, pupils may hypothesize the outcomes of an experiment, realizing the hypotheses are estimated guesses which need checking through experimentation. Each hypothesis needs recording so duplications are minimized. The focus is upon what happens during and after the experiment. Extension of the outcomes provide rich experiences for pupils.

Criterion four extending the learning opportunities might well pertain to computer and library book integration. Search engines assist learners to locate related information.
by using key words. On the screen, pupils notice possible sources of related information on locating relevant subject matter. Using the appropriate information acts as a checking of the hypothesis as well as providing for its extension. E-books assists all pupils to achieve well since help is provided here with word recognition as well as a related definition, if needed. Library books, in general, are available in a variety of topics and information to guide indepth learning.

Criterion five pertains to using problem solving methodology in reading in the science curriculum. Pupils with teacher guidance need challenges to select problems within the confines of reading printed materials. Careful reading of subject matter is salient. Too frequently, pupils gloss over what is being read and in the offing fail to realize major concepts and generalizations. Prior to reading, pupils need to experience advanced organizers. This procedure provides background information to aid in understanding sequential ideas. Meaning and understanding are two vital concepts in the reading process. Close reading is then necessary in comprehension. It might be necessary to have purposeful rereading of the content when stressing close reading. When providing advance organizers in securing readiness for reading, pupils identify problems areas, which follows with an hypothesis, and its testing.

If pupils need assistance in word recognition, the teacher should help with the necessary phonic elements; learners might also be helped with the utilization of context clues. These help pupils to become independent in word recognition. The content read forms the basis to provide for an enlightened discussion to make for indepth learning including the following:

- analyzing and synthesizing subject matter
- summarizing key facts, concepts, and generalizations
- collaborative recording of the summary
- appraising summary content
- contrasting and comparing the summary with ideas gleaned from experimentation
- inferential reading when noticing ideas between the lines.

The evaluation of the summary might well be compared with other print reference sources. Critical thinking is involved in making these comparisons. Information needs to be accurate and relevant. These need to be compiled in a folder, representing book form, assisting pupils later in the review process.

Criterion six. Pupils need to develop relevant writing skills to record and appraise written products. The concept of Peer Review maybe emphasized here as is done when professional writings are being considered for publication by an editorial board. Criterion must be developed as in a rubric to assess, analyze, and synthesize the science product. Protocols need to be followed in the review process such as

- each sentence needs to have a subject and predicate
- adjective and adverbs, as in individual words or phrases, need to be used when clarifying ideas. Grammatically correct sentences aid in meaning making.
- written work must make sense and be understood
- diagnosis and remediation needs to take place when specific kinds of errors are made.

A reputable scientist is a good writer who realizes his/her responsibilities as a sender of
information so that it is received meaningfully by the receiver. It takes time and effort to become a proficient writer and effort must be put forth in achieving self-efficacy. Writing experiences might well involve the following:

- writing up the experiment results
- writing a report on a self-chosen topic
- writing summaries of science literature read
- writing a contribution to a classroom newsletter
- writing an outline for an oral report.

Criterion seven. Pupils may develop projects individually or collectively. The purpose of the project must be clear in the minds of involved learners. Once a clearly defined purpose is inherent, then pupils need to plan the doing of the project. Meticulous efforts must be put forth in planning a quality product. In implementing the plans, each committee member has knowledge of his/her role; creativity is salient to stress within these role frameworks. The final product needs appraisal as well as evaluating the ongoing processes involved in doing the project.

Criterion eight. A quality science current events program needs to be in the offing with vital objectives in the offing. There are a plethora of events occurring locally, nationally, and internationally, involving happenings which are relevant to pupils. These might be very disastrous and learners need to comprehend the scientific principles making up a current events happening. The following occur the year around and pupils need to share acquired information here:

- earthquakes happen in different places on the planet earth. The shifting of the earth surface due to underlying faults, among other causes, need to be understood. How needs are met for victims of earthquakes brings to bear social studies content such as morality and ethics.
- freezing rain can topple electrical lines, trees, and cause much damage in general. People depend upon electricity for heat and illumination; heat, particularly, in winter is essential for livelihood as is electricity for air conditioning in the hot summer months.
- tornados can wipe out entire small cities, such as Greensburgh, Kansas in 2010, or do extensive damage in sections of a larger city. A mess then results in the cleanup operations with tangled wire, uprooted trees, concrete blocks, and wooden structures.
- hail, among other things, can destroy farm crops, roofs on buildings, and kill livestock, relating in a tremendous loss.

Very frequently, news items appear in the media pertaining to and involving the world of science.

In Conclusion

Guidelines assist in developing a quality science curriculum. It helps in providing for balance in the curriculum when noticing gaps in choosing objectives, learning opportunities, and evaluation procedures.

References


META MODERNISM: AN INTRODUCTION

JOEL SNELL
Kirkwood College

The author introduces Hegel. From the triad (Hegelian Dialect), he briefly gives an overview of the history of philosophy. In true Hegelian form, it is now time to reform “Postmodernism” and replace it with “Meta modernism.” Postmodern had a short life from 1950 to now and has left few adherents. It is confusing and unstructured. On the other hand, it critiqued authority and softened reason from the numbers driven modernism of recent years.

Introduction

Hegel

Although Hegel used it briefly, the grid thesis-antithesis-synthesis had been popularized by Marx and Engels and now used by many across the political spectrum. At the moment, it appears that pre-modern (to 1650) was contested by modernism (until 1950) and at the moment we live in a post-modern society and this last one is now becoming undone in 2015 or slightly before. (______, 2016)

This ongoing Hegelian struggle reaches back in history to 6 major eras of western and middle eastern philosophical thought up today. It encompasses 300-400 philosophers. (______,2015-2-22)

Discussion

Premodernism (up to 1650) starts at the beginning of written culture. Ways of knowing came from signs and revelations from God. The church was the instrument to give this message and this information to the clergy and then to the masses.

Modernism evolved around 1650 and information was gained by empiricism (knowing through one’s natural senses) or what is later called science. Reason (organized logic) prevailed. Religion shared authority with science. By the 1950’s, reason had become raw and number counting was helpful, but often wrong. The computer results could vastly differ from reality.

Postmodernism

From the 1950’s to say 2015, the postmodern drew from many sources, both natural to spiritual. Authority of any kind was deconstructed. As valuable as this may be, it was also an invitation for organized chaos. Truth of some sort up to a period of discovery was replaced by interpretations.(Vaughn, 1980)

At this time, the author was published discussing how trimodernism, that is the three (pre/mod/and post mod ) can come together to make some sense of postmodernism. (Snell, Joel C. 2012/ 3: 66-67)

Meta modernism

Although there were early glimmerings in the 50’s to the turn of the century, postmodernism appeared to become foolish. From 2007 onward a new more stable modernism, meta modernism comes from the dialect of the previous two modernisms.

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The source of information comes from” deconstructed bundles of information that form and send trajectories along accepted parameters and oscillate from one side to another until a contemporary message is created.” Authority is still questioned and deconstruction is still honored. However, there are boundaries. The boundaries may be wrong in the future, but work for us at the moment. Empiricism is also used. In other words, this strategy allows for barriers, but also can allow some chaotic butterflies and black swans.

In other words, we are searching for validity not interpretations. One knows that outcomes can vary, but it reduces the dizzy interplay of verbiage. Postmodernism was the first paragraph to Meta Modernism. We tried it and it didn’t work so well. So now comes a philosophy that is more organized and inter-connected. We hope that it informs. We are grateful to postmodern for its ability to deconstruct. There should be more and this presentation falters, because Meta Modernism is still in its early stages. Hopefully top philosophers can flesh out more so that academia may choose to use it.

We expected post modernism to teach us about reality, it did not get the job accomplished. Hopefully, we may learn more about the wider world inside and outside of us with meta modernism. If not, the dialect will work it’s will and self destruct. (2015/1-1)

**Summary**

Here is what appears to have happened.

PREMODERN emerged when the groups could communicate by written language. The first and original source was that God sent messages either directly or through the church. These messages were titled revelation.

MODERNISM was given birth by 1650, individuals and groups hungered for direct contact with a problem. The source was at first counting and creating, later called empiricism and the results were called findings based on reason. It became organized logic. Unfortunately, modernism in its drive for number count began to have models and findings that were totally in error. Further, one could easily lie with numbers to the few that understood them.

POSTMODERNISM (1950-2015) was supposedly the antidote to the number generated modernism. This was a brief period before it sank. Search was followed by interpretation and soon chaos emerged among scholars. We need another strategy.

META MODERNISM is supposedly its replacement. Deconstruction, multiple sources, and boundaries appear to be the center of this approach. One hopes that this generally works. The pragmatist want to know what does this means? How can one use it? Importantly, from philosophy, this approach bleeds and metastases into all the humanities, arts, social sciences, education and numerous other areas. We need an approach that is open and understandable and cannot be used to hide even more distortions. Best of all, meta modernism comes from many sources. Both pre modern and modernism are not dead. Average talented folks use these strategies and survive. What they don’t need is more fog that gives specific academics supposed insight, but leaves the rest of us out. That grants are wasted and anti-intellectualism prospers.

Specifics beyond this are emerging. The most important point is that boundaries should drive a model that has limits and can be verified so that it stands the test of validity and reliability. Ultimately, if most of the masses do not understand it, this replacement shall perish. The future belongs to the philosopher that can make reality that is complicated more understandable and workable. The rest of this is for the future.
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Conclusion

This has been a discussion of a new philosophical thought that would create a dialectical grid of pre-modern/ modern/ and meta modern. Time will tell if this grid survives.

Selected References


THE CASE OF CURIOSITY AND THE NIGHT SKY:
RELATIONSHIP BETWEEN NOCTCAELADOR AND THREE
FORMS OF CURIOSITY

WILLIAM E. KELLY
Robert Morris University

DON DAUGTRY
Texas A&M University - Kingsville

The purpose of this study is to examine the relationship between noctcaelador (psychological attachment to the night sky) and curiosity. A measure of noctcaelador and three curiosity scales (perceptual curiosity, epistemic curiosity, and curiosity as a feeling of deprivation) were administered to 233 university students. Correlations indicated that all three curiosity scales were significantly, positively related to noctcaelador. Regression analyses indicated that the only curiosity scale to uniquely predict noctcaelador was perceptual curiosity. Curiosity as a possible mechanism for the development of noctcaelador was posited. Limitations of the current study and suggestions for future research were offered.

Author Note
Portions of this paper were presented at the 2014 meeting of the Southwestern Psychological Association.

Previous research has found that between 57% and 62% of adult samples report having engaged in some observation of the night sky at least once weekly (Kelly, Kelly, & Batey, 2006; Mace & McDaniel, 2013). Further, in one sample night sky watching was ranked third as an evening activity following reading and watching TV (Holbrook, 2008). Despite apparent interest in the night sky by some individuals, little psychological research has investigated characteristics of those who engage in night sky watching or their motivations for doing so.

Kelly (2003, 2004) identified a single factor that accounted for a majority of the variance in night sky watching attitudes and behaviors. Kelly (2003) termed this construct noctcaelador, defined as a psychological attachment to the night sky. To date, noctcaelador has been related to variables that reflect a flexible, yet rational, cognitive style such as openness to experience (Kelly & Kelly, 2010), creativity (Kelly & Kelly, 2014), unusual mental processing and perceptual experiences (Kelly, 2006; Kelly & Daughtry, 2005), and rational problem solving (Kelly, 2005).

Though some correlates been identified, little is known about the motivations underlying night-sky watching and no theoretical model for noctcaelador has been proposed. To develop a model, more research examining variables that might partly explain the development and maintenance of noctcaelador is needed. The purpose of the current study was
to examine the relationship between noctcaelador and one possible correlate, curiosity.

As an individual differences variable, curiosity has been conceptualized as a desire for new knowledge or experience often aroused by complex or ambiguous stimuli (Litman & Silva, 2006). Researchers conceptualize curiosity as an intrinsic motivation to explore and seek-out personally meaningful experiences and information (Kashdan, Rose & Fincham, 2004). Silva (2008) found that curiosity was more likely to occur when focused on a novel stimulus and the individual’s perceived ability to understand that stimulus.

Previous research has found that curiosity often predicts positively valenced outcome variables. For instance, curiosity has been found to predict more meaning in life and life satisfaction as well as more engagement in personal growth-oriented experiences (Kashdan & Roberts, 2004; Kashdan & Steger, 2007). It should also be noted that curiosity has been related to less healthy outcomes as well. For instance, Jovanovic and Gavrilov-Jovanovic (2014) found that curiosity was related to potentially destructive and dangerous risk-taking behaviors among adolescents.

Previous research has identified three forms of curiosity: 1) perceptual curiosity, evoked by complex or ambiguous sensory stimuli (Collins, Litman, & Spielberger, 2004), 2) epistemic curiosity, aroused by complex ideas or ambiguous concepts (Litman & Spielberger, 2003), and 3) curiosity as a feeling of deprivation, aroused by a need to know when information is lacking or unclear or problems have yet to be solved (Litman & Jimerson, 2004).

The possibility of a relationship between noctcaelador and curiosity is supported by their shared relationships with two other variables. Previous research has found that both noctcaelador and curiosity have been related to the broad band personality variable known as openness to experience (Kashdan et al., 2009; Kelly & Kelly, 2010). Further, noctcaelador and curiosity have been related to need for cognition (Kelly, 2005; Olson, Camp, and Fuller, 1984). Taking a nomological network approach (Cronbach & Meehl, 1955), these shared relationships suggest that noctcaelador and curiosity might share common, meaningful variance in that both involve an open cognitive style that requires mental focus. Therefore, it was hypothesized that noctcaelador would positively, significantly correlate with measures of curiosity. Given the nature of the night sky as a complex sensory stimulus (i.e., Kelly, 2008), noctcaelador was expected to most strongly relate with perceptual curiosity.

Method

Participants and Procedure

After obtaining informed consent, 233 students (182 females, 51 males) enrolled in undergraduate psychology courses at two small universities in the Southern United States completed the scales described below. The average age of the sample was 25.1 years (SD = 7.1).

Measures

**Noctcaelador Inventory (NI; Kelly, 2004).** The NI (sample item: “I feel an emotional connection to the night sky”) is a unidimensional 10-item scale. Participants responded using a 5-point Likert scale, 1=“Strongly Disagree” to 5=“Strongly Agree.”

**Perceptual Curiosity Scale (PCS; Collins et al., 2004).** A 10-item version of the PCS (“I like exploring my surroundings”) was used to measure perceptual curiosity, curiosity about external sensory stimuli. Participants responded using a 4-point scale, 1=“Strongly Disagree” to 4=“Strongly Agree.”

**Epistemic Curiosity Scale (ECS; Litman & Spielberger, 2003).** The ECS (“I enjoy exploring new ideas”) measures curiosity about ideas and concepts. It includes 10 items rated...
on a 4-point scale, 1=“Strongly Disagree” to 4=“Strongly Agree.”

Curiosity as a Feeling of Deprivation Scale (CFDS; Litman & Jimerson, 2004). The CFDS (“I can spend hours on a single problem because I just can’t rest without knowing the answer”) includes 15 items and measures curiosity as a desire to learn new information or clarify unclear information. Participants responded using a 4-point scale, 1=“Strongly Disagree” to 4=“Strongly Agree.”

Items for each scale were summed to produce total scores. Higher scores indicated more of the respective traits. The cited articles contain psychometric information for each scale.

Results

As seen in Table 1, NI scores were significantly, positively correlated with PCS, ECS, and CFDS scores. To examine which curiosity scales predicted unique variance in NI scores, a simultaneous regression was calculated entering scores for the three curiosity scales simultaneously as predictors and NI scores as the criterion. Together, the curiosity scales accounted for 13%, \( F(3, 223)=12.5, p<.001 \), of the variance in NI scores. An inspection of the within groups predictors revealed that the PCS was the only curiosity scale that accounted for significant unique variance in NI scores (\( \eta^2=.050, \beta=.31, t=4.5, p<.001 \)). As unique predictors of NI scores, the ECS (\( \eta^2=.02, \beta=.06, t=.65, p=.50 \)) and CFDS (\( \eta^2=.000, \beta=.04, t=.50, p=.50 \)) did not near statistical significance.

Discussion

The results of the current study suggest that night sky watchers, especially those who are attached to the night sky, tend to be curious. They seem particularly curious about sensory stimuli as compared to ideas and a need to know or understand information. This seems reasonable considering the complex, visual nature of the night sky.

The finding that noctcaelador was related to curiosity about perceptual stimuli was consistent with previous research that suggested a relationship between noctcaelador and interest in perceptual aesthetic stimuli (Kelly, 2008). These findings are also consistent with previous research that found a relationship between need for cognition and both noctcaelador (Kelly, 2005) and curiosity (Olson et al., 1984). Together these findings suggest that both noctcaelador and curiosity might involve an interest in, and intensity of focus on, a particular visual stimulus (Kashdan et al., 2004; Kelly et al., 2006). Thus, one road to the development of noctcaelador might be curiosity about the complex, visual stimulus that is the night sky. Individuals who repeatedly engage in night sky watching due to curiosity might subsequently become attached based on sheer familiarity (Zajonc, 2001). Research is needed to test this possibility.

Future research is needed to further understand the mechanism behind the relationship between noctcaelador and curiosity. One line of investigation could center on the possibility that curiosity about the night sky was encouraged by significant others or media. Another line of study could examine brain-based mechanisms associated with how night sky

### Table 1. Correlations Between Measures and Internal Consistencies

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<td>1. NI</td>
<td>.37</td>
<td>.30</td>
<td>.25</td>
<td>.90</td>
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<tr>
<td>2. PCS</td>
<td>.66</td>
<td>.55</td>
<td>.82</td>
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<td>3. ECS</td>
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<td>4. CFDS</td>
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Note: \( N = 233 \). NI=Noctcaelador Inventory; PCS=Perceptual Curiosity Scale; ECS=Epistemic Curiosity Scale; CFDS=Curiosity as a Feeling of Deprivation Scale. All correlations significant \( p<.01 \).
watching might facilitate positive emotions (Kelly, 2003). For instance, it is possible that the cognitive activity resulting from curiosity about the night sky facilitates stimulation of the cortex of the brain resulting in regulation of negative emotions (Öhman, 2008).

Limitations of the current study include reliance on relatively brief self-report inventories and the exclusive use of a college student sample. Researchincluding some form of behavioral measures of night sky watching and curiosity might be useful to further elucidate if the findings observed in the present study can generalize to external criterions. Replications using more diverse samples also might serve to increase the generalizability of these results to broader populations. Finally, due to the correlational nature of the study, cause-effect cannot be determined.

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The educational experiences of students engaged in different contexts of learning, particularly curriculum delivered and international travel and residence experiences may be related to problem-solving skills and game decisions and efficiency of high school students engaged in modified game play during physical education class. This study explores the idea that tactical game performance and efficiency may be different in a school comprised primarily of English-speaking high school students who traveled to and reside in South Korea and who are immersed in the International Baccalaureate (IB) curriculum as compared to counterparts in a traditional high school curriculum in the United States. Two treatment groups of high school participants engaged in game play after instruction in an Ultimate unit of instruction. The IB Korea treatment group (n = 17) showed no better volume of play or game efficiency than the US traditional curriculum treatment group (n = 17). Thus, no conclusions can be drawn that either curriculum model impacted game decisions, volume of play and efficiency in this particular investigation.

Middle and high school students engaged in physical education learning activities during the course of an academic year may be able to strengthen problem-solving and decision making skills necessary for success in the other curricular areas of the schools. It is also possible to support the problem-solving and critical thinking initiatives emphasized by teachers in other subject areas by having physical education students engage in learning activities and contemporary instructional model-based lessons which focus more on tactical decision-making. Because of the focus of some contemporary physical education instructional models on the development of game sense and tactical decision-making/problem-solving, it is possible that schools with certain types of curricular emphases and requirements may put physical education students in better position to become more tactically sound while competing in various sporting activities than would other types of curricular requirements in other schools. It is also possible that a focus on tactical decision making in physical education could support a critical thinking culture.
in the entire school curriculum framework, particularly the highly praised International Baccalaureate (IB) curriculum.

Many IB schools are attended by students who travel to and live in other countries. In this growing global society, it is possible that middle and high school students attending schools in other countries may have an advantage over young people who have not traveled outside of their countries, particularly those in the United States. By simply traveling and living in another country and having to understand economic, social, political, and cultural issues as well as living according to a different set of customs and expectations, American students may demonstrate the ability to solve problems and make decisions in different ways than their American counterparts without the experience of traveling and living abroad. Now, add to that the curricular experience of those who attend middle and high schools using the International Baccalaureate (IB) curriculum, it is possible that the entire experience would enable these middle and high school students to make better and more appropriate tactical decisions in physical education class than those American students without that same set of global experiences.

Curricular Influence

Within traditional college preparatory high schools, American students have demonstrated a lower proficiency on core subjects and a lower entry rate into post-secondary education programs than students in eight other countries, including Canada, Ireland, and South Korea (Carnoy & Rothstein, 2013). In 2006, the Association for Career and Technical Education (2006) identified three education gaps in secondary education in the United States (U.S.):

a. Domestic achievement gap, which can be described as the disparity in learning among American students in relation to racial and economic status;

b. International achievement gap between U.S. students and young people from other nations; and

c. Ambitions gap, a compilation of factors contributing to a lack of focus and purpose among American youth (cite the authors of Re-inventing the American High School part one).

While it has been widely acknowledged in the last two decades that more rigor and accountability has been needed in American secondary education (Carnoy & Rothstein, 2013; National Commission on Excellence in Education, 1983; No Child Left Behind Act, 2001; ). The model of education that is delivered traditionally in public education this country is vastly different than what is delivered in other countries by schools that utilize curricula grounded on critical thinking skills, such as the International Baccalaureate (IB) Programme and Advanced Placement courses (Park, Caine, & Wimmer, 2014). Within curricular models such as IB, critical thinking skills are emphasized, such as interpretation, inference, recognizing connections and analytical skills (Atkas & Guvan, 2015). This pathway is grounded in critical thinking skills that assist in the maintenance and improvement of democratic community cultures because of the reliance on trust and human will that is present in a democracy (Atkas & Guvan, 2015). Additionally a close link exists between critical thinking skills and achievement, and this emphasis on critical thinking can help students achieve and maintain successful careers more easily (Akinoglu, 2001). The IB diploma program has been characterized as academically challenging and as excellent preparation for students to be successful in college and life (Park, Caine, & Wimmer, 2014). In Park, Caine, and Wimmer’s (2014) systematic review of 20 relevant articles related to the IB program, the authors summarized the characteristic of students...
enrolled in IB programs. They found that instead of academic performance being the most important issue for their IB experience, instead the students seemed more interested in conforming to engage in the navigation process through a prestigious social construction of student culture. This result highlighting the perceived prestige of the IB Programme and the emphasis in many schools on middle school students engaging in a specific IB middle years’ curricular program to prepare them for success in the high school IB Programme (IB, 2008; Corlu, 2014) supports the notion that the IB curriculum has a rigorous academic reputation and emphasizes critical thinking skills (Aktas & Guven, 2015).

A distinguishing characteristic of the (IB) Diploma Programme is a concern with the whole educational experience of each student. The curriculum framework and the supporting structures and principles are designed to ensure that each student is necessarily exposed to a broad and balanced curriculum. The learner profile and the core are positioned at the center of the program, reflecting the priority given to affective as well as cognitive dispositions, and a concern with developing competent and active citizens as well as subject specialists. The core requirements of theory of knowledge, the extended essay and creativity, action, service broaden the educational experience and challenge students to apply their knowledge and understanding in real-life contexts. Students study six subjects concurrently. These include two languages, one subject from individuals and societies , one from experimental science, one mathematics subject, and one subject from the arts or another subject from the groups 1 to 5. (pg. 5, The Diploma Programme: From principles into practice)

Curricular Influences, Problem-Solving, Game Sense, and Tactical Game Decisions

In Towards a Continuum of International Education (2008), the IB curriculum is described as a pathway with a central purpose of teaching and learning to help students develop and apply concepts for understanding the world, solving problems, and communicating. Additionally, it is designed to teach for understanding and it uses guiding questions to ensure that the knowledge and skills being taught are relevant and meaningful. It is with this same emphasis that a contemporary curricular model in Physical Education is modeled. Teaching Games for Understanding (TGfU; Bunker & Thorpe, 1982) “is a learner-and game-centered approach to sport-related games learning with strong ties to a constructivist approach to learning” (Griffin & Patton, 2005, pg 1 in Griffin and Butler’s Teaching Games for Understanding: Theory research and practice). It is within this model that physical educators organize learning activities so that they ask students guiding questions to steer them to make correct tactical decisions during game play (Butler & Griffin, 2010). The learning activities focus on the implementation of modified games as teachers set conditions on the games to over-emphasize specific learning objectives during practice opportunities. TGfU emerged from a desire by educators to teach in a way that students understand games and make intelligent decisions during game play. This involves developing “game sense.” When teachers develop game sense, they focus on developing tactical and strategic thinking. In this approach, the teacher or coach facilitates and creates situations for players to find solutions to game problems themselves. It puts students in position to accumulate the wisdom to make intelligent decisions about their play. Goals associated with TGfU involve (a) comprehending the shape and flow of the game; (b) Understanding available...
options quickly and making decisions; (c) Understanding location of opponents and anticipating type and direction of movements; (d) Understanding individual offensive and defensive structures; (e) Understanding how opposition plays; and (f) Developing positional sense (Almond, 2011).

The alignment of TGfU to an emphasis on critical thinking skill development is seen as students in TGfU learning activities are expected to construct meaning from situations in which they are placed. Additionally, TGfU as a curriculum model in physical education allows students to develop deeper understanding, synthesize, make decisions and use that information as they seek to move tactically and successfully during game play (Butler & McCahan, 2005; Metzler, 2011; Mesquita, Farias, & Hastie, 2012).

Because of the close alignment of critical thinking skill development in TGfU and the IB secondary diploma program, it is possible that students in IB schools can be more successful academically when they participate in physical education programs that allow them to be engaged and guided with questions in game-based learning activities that are modified with specific conditions and focus on building tactical decision-making skills (Farias, Mesquita, & Hastie, 2013). Research is clear that models focusing with games-centered approaches can impact students’ game performance positively (Everhart, 2013; Harvey & Jarrett, 2014; Memmert, Almond, Bunker, Butler, Fasold, Griffin, Hillmann, Hutterman, Klein-Soetebier, Konig, Nopp, Ratlischlag, Schul, Schwab, Thorpe, & Furley, 2015). However, few studies, if any, have explored the relationship of tactical-based physical education curricular and school-wide critical thinking-focused curricula, such as the IB. A first step may be to investigate differences in tactical game performance in game-centered physical education programs delivered in IB and traditional high schools. It would be also meaningful from a global perspective to include in any investigation students attending IB schools in countries outside of the United States.

The purpose of this study was to determine the game performance differences of high school students in an IB-focused school in Asia and an American high school with a traditional college and career preparatory pathway.

Methods

Participants

Two groups of high school students were compared within the study with one group attending high school in an English-speaking school in South Korea, one which delivers the IB curriculum model. The second group attended high school in Pennsylvania (USA) and completing a traditional curriculum model. Two experienced high school teachers (both male with over 18 years teaching experience) were selected to teach an introductory lesson on Ultimate Frisbee (invasion game focus) to juniors and seniors and then to teach a follow-up lesson focusing on tactical game performance with a large part of the lesson devoted to small-sided, modified game play. One teacher taught in an American high school with approximately 1,300 students and the other teacher taught in an English-speaking international high school in South Korea as a part of a K-12 school enrolling approximately 1,500 students. The international school used the International Baccalaureate diploma program as its primary high school curriculum. The American school used a traditional approach with core subjects and electives, also allowing students to opt to take Advanced Placement (AP) classes, although it was voluntary and a small percentage of students opted for this choice. While a difference in class size was present between the physical education classes in these two schools (American traditional average size was 22 students; IB school in Korea was 16 students), the number of students involved in the observed modified games was...
controlled so that only six to eight students were playing on a team in the modified games at any one time. The primary investigator filmed lessons during two class periods that were taught by each of these teachers. A remote lapel microphone was worn by the teacher so that all conversations could be heard and recorded when filming.

**Instructional Focus**

In order to keep instruction on Ultimate consistent between both teachers at each school, both teachers were asked to teach an introductory Ultimate lesson, using guiding questions and modified games, two components within the Teaching Games for Understanding (TGfU) model (Bunker & Griffin, 2010; Metzler, 2011). For the subsequent class period for those same students in each of the two periods filmed for each teacher, the teachers organized the students into teams so that between six to eight students would be playing in small-sided games with a 10-minute duration. The teachers still taught from the perimeter of the games so that feedback and encouragement could be utilized by students while playing. All filmed lessons of modified game play took place on the athletic fields at the specific schools’ campuses.

**Filming Protocol**

When filming at the International Baccalaureate high school in South Korea, one course section of juniors and seniors was filmed on day one for a 45-minute class period while a second course section of juniors and seniors (taught by the same teacher) was filmed on a subsequent day for the same amount of time. After a warm-up period of five minutes that included stretching, filming took place during modified game-play of Ultimate with two games occurring simultaneously on the athletic field composed of contemporary artificial turf. Teams were comprised of six to seven players on each team. For each of the games, participants engaged in game-play during a 10-minute filming protocol. In the traditional physical education program in the high school in the Northeastern region of the United States, the filming of game play took place outside on the same type of contemporary artificial turf with six to eight students engaged in the game on each team as the games were filmed. This allowed for 12 participants to be assessed during data collection phase as the primary investigator viewed the filmed game segments and used the instrumentation (see below) for analyzing game performance and efficiency of tactical decisions and movements. One course section of juniors and seniors participated on the first day and a second course section of juniors and seniors participated on a subsequent day (same teacher). For both filming sites, the course instructors stood on the sidelines and provided encouragement and managerial instructions during game play. A remote microphone was worn by both teachers at both school sites during filming.

**Instrumentation for Data Collection**

Game performance and tactical decisions made by participants were assessed with the Team Sport Assessment Procedure (TSAP), developed by Grehaigne, Godbout, and Boutier (1997). Its purpose is to measure tactical decisions, movements and game performance in invasion games (Osln, Mitchell, & Griffin, 1998). Observers document the frequency of occurrence of tactical game decisions and movements employed by game participants. See Figure 1 for a look at the details of the instrument, one that emphasizes gaining possession of the ball, disposing of the ball, and generates a performance index and score. Student performance in games are assessed with this instrument, one in which different types of decisions and skill executions can take place within a game context. If a student has a score greater than one, this is an indication that a student performed more appropriate/
efficient responses than inappropriate/inefficient responses. For the TSAP, this scoring process was field tested with undergraduate physical education students. As a part of that process, the students served as coders and used the TSAP while observing individual students playing in game conditions (Everhart, 2013; Richard, Godbout, & Grehaigne, 2000). For a closer look at The TSAP instrument recording form, see Figure 1.

**Validity of the Instrument**

The measurement process and the instrument components of the game performance instrument (TSAP) were designed and tested by experts in the field to determine its validity. To determine face validity, undergraduate students were given a questionnaire to assess the degree to which they thought the test was appropriate and fair. Of those students, 95% stated that they preferred being assessed during game play as opposed to the traditional skills testing completed in isolation (Everhart, 2013; Richard, Godbout, & Grehaigne, 2000). Content validity was obtained by physical education teachers and coaches by having them analyze the TSAP to make sure the content was appropriate and measured what it was intended to measure. Feedback from these professionals with 10-30 years of experience was used to improve the instrument until consensus between all the panel of experts was achieved (Everhart, 2013; Richard, et al., 2000). Construct validity of the TSAP was field tested across three categories of games: invasion (soccer and basketball); net/wall (volleyball); and, field/run/score (softball) and was used in three separate studies of sixth-grade physical education classes (Everhart, 2013; Richard, et al., 2000).

**Instrument Reliability**

In order to determine the reliability of the TSAP, the test-retest method (Baumgartner & Jackson, 1991) was used and generated a reliability coefficient of .84 (Richard, Godbout, and Grehaigne; 2000). The results from these studies suggest that this instrument procedure provides a valid and reliable method for assessing game performance. Although skills are an important part of game performance, without the ability to make tactical decisions and move efficiently during game play, it is difficult to be successful in playing a game.

**Inter-Observer Agreement**

In order to make sure that the observation of game performance outcomes for this current investigation was consistent and reliable, three observers assessed six participants in each of two five-minute game segments of the same film and record the frequencies of participants engaging in the game-related actions found on the TSAP in the specific categories (possession of the ball and disposing of the ball). The number of agreements and disagreements of the frequencies for each of these game segments was calculated to determine the percent of agreements for the observers. This calculation was generated with the following formula (Bakeman & Gottman, 1997; Everhart, 2013):

\[
\frac{\text{agreements}}{\text{agreements} + \text{disagreements}} \times 100
\]

For reliability purposes, the observers then talked through their assessment decisions as they used the TSAP. Official coding of the filmed participants in the games did not occur until the three observers agreed on 100% of the tactical game decisions and movements for six participants in each of two 5-minutes segments.
**Note:** Please observe one student at a time to determine how many times they do one of the following actions during game play. Record a tally in the grid with the associated action then complete the formula to calculate the performance score (volume of play and efficiency index).

\[
P_B = \text{Volume of Play} \ (CB + RB) \\
\text{CB} = \text{Conquered Balls} – \text{interception, steal, recovered off missed shot} \\
\text{RB} = \text{Received Balls} – \text{catch without immediately losing control} \\
\]

\[
L_B = \text{Lost Balls} \ (NB + LB) \\
\text{NB} = \text{Neutral Balls} – \text{routine pass which does not put opponent in jeopardy} \\
\text{LB} = \text{Lost Balls} - \text{turnover} \\
\]

\[
A_B = \text{Attack Balls} \ (OB + SS) \\
\text{OB} = \text{Offensive Ball} – \text{pass which puts pressure on opponent and often leads to score} \\
\text{SS} = \text{Successful Shot} – \text{shot which scores or when possession is retained after it} \\
\]

**Performance Score**

- **Volume of Play** (described above)
- **Efficiency Index**
  \[
  \frac{CB + AB}{10 + LB} \\
  \text{OR} \\
  \frac{CB + OB + SS}{10 + LB}
  \]

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**Team Sport Performance Assessment includes (a) Volume of Play and (b) Efficiency Index**

This is an assessment for each individual student you wish to observe for a given time. Look at the possible scores: (a) Volume of Play; and (b) Efficiency Index. The higher the score, the more involved in the game appropriately students will be (1.29 is better than .897; .897 is better than .453).

Calculate the Volume of Play: _______________________________
Calculate the Efficiency Index: _______________________________
Using the TSAP

While viewing the filmed five-minute game segments for all participants, the investigators used the TSAP to record each tactical movement and decision by all filmed participants. The ability to rewind and fast forward film allowed the investigators to make sure that no tactical decision or movement by any filmed participant was missed thus ensuring accuracy. Following filming of all participants engaged in games in all class sections for both schools, the primary investigator used the TSAP procedures to calculate game efficiency and game performance for all participants.

TSAP Calculations of Volume of Play and Game Efficiency Index

The dependent variables to be measured were two categories of scores generated with the completion of the TSAP: (a) volume of play (b) efficiency index score. The limitation to this research design is the threat to internal validity of prior experience in multiple groups’ participants. That is, the degree to which groups are comparable prior to the study could prevent researchers from concluding that the treatment caused any differences between the two groups (Everhart, 2013).

Data were collected and entered from the observations of 10-minute games for both treatment groups during physical education class after a day of initial instruction in the basics of the less-than-traditional sport, Ultimate. The data that were entered included the volume of play and the game efficiency scores generated from the various categories on the TSAP. Volume of play is calculated by adding together the number of conquered balls and received balls. The efficiency index is calculated by first adding the number of conquered balls, offensive balls, and successful shots then dividing that number by the addition of 10 plus the number of lost balls. The volume of play and game efficiency data collected during viewing of the 10-minute game segments for both treatment groups for all participants were entered into an Excel spreadsheet and those data were exported to SPSS for data analysis purposes (Everhart, 2013). An Analysis of Variance (ANOVA) was conducted to compare the differences in game performance between the two treatment groups on two different dependent variables, volume of play and efficiency index. This was used to determine whether significant differences occurred between groups for the end of unit and midpoint game performance assessments.

After entering scores into SPSS 16.0 statistical package (SPSS Inc. Headquarters, Chicago, IL), an Analysis of Variance (ANOVA) was used to perform the comparison of scores between groups for game performance and volume of play. The ANOVA was used to analyze the differences in volume of play and game efficiency between the two treatment groups. Because only two groups were involved, a post hoc test was not needed. The first treatment group was IB curriculum participants attending high school in South Korea, a school delivering the IB model. The second treatment group was the group attending high school in Pennsylvania (USA), one which continues to deliver the traditional American high school curriculum.

Research Question

An alpha level of .05 was set prior to the data collection and the null hypothesis stated that there was an assumption that there would be no difference between the two groups on the two game performance score categories. The primary research question for this study asked if IB high school students in an English-speaking school in South Korea exhibited better game tactics and efficiency than high school students attending in Pennsylvania (USA), a school delivering a traditional American curriculum. Game performance (volume
of play and efficiency index) was used as the primary indicator of student learning for this study (Everhart, 2013; Grehaigne, Godbout, & Boutier, 1997; Mitchell, Griffin, & Oslin, 2008; Oslin, Mitchell, & Griffin, 1998). As indicated earlier, the TSAP was used as the data collection instrument for determining game performance of participants.

Results

Results from the ANOVA indicated that no significant differences occurred for volume of play or efficiency index scores between the traditional high school group in the USA and the IB group attending school in South Korea, F (1, 17) = 48.854, p<.604. The mean volume of play score for the IB group in Korea was 2.7 and it was equaled by the American traditional curriculum group (2.7). The standard deviations were 2.28 and 2.23, respectively, for volume of play. The mean game efficiency score for the American traditional curriculum group was 3.04 while the IB in Korea group mean for game efficiency was 2.69. Standard deviations for this measure were 2.37 and 2.18, respectively.

The purpose of this study was to determine if English-speaking high school students in an IB curriculum school in South Korea played ultimate more efficiently and with better tactics or game decisions than counterparts in an American traditional curriculum high school. The results in relation to the primary research question for this study there is no difference in the game performance when comparing the two groups on volume of play and game efficiency. The null hypothesis, which states that there would be no difference between the two groups on game performance, is accepted. No differences were found.

Discussion

The experiences of adolescents traveling to a foreign country and residing in that country are vastly different than the daily lifestyle and experiences of American adolescents without those types of experiences. Additionally, when those same adolescents attend school in another country, whether English-speaking or not, the curriculum delivered by those schools may make a difference in how those adolescents solve problems and how critically they are able to think on a daily basis. Much of the travel and residence experiences and the day-to-day curriculum engagement influencing decision-making and critical thinking may play a role in how well high school students play sports and make related tactical decisions during game play.

This investigation was conducted to compare game performance and tactical decisions/game efficiency of high school students in an American school with a traditional curriculum with those students who attended a school in South Korea which delivers the prestigious IB Curriculum, a curriculum model known for an emphasis on critical thinking including the study of two non-native languages. While the results did not demonstrate a significant difference between the two groups of high school students in the volume of play or game efficiency, it is possible to use the process and results for further study to determine relationships and differences between various student groups and schools associated with more the experience of adolescents traveling and residing in another country as well as attending a school using the IB curriculum. How this combined experience of adolescents relates to the emphasis of critical thinking in physical education class may shed a light on school-wide teaching and learning practices which may impact how well adolescents in physical education class are able to apply strategies for game engagement and subsequent lifetime engagement in physical activity.
It is not possible to draw conclusions from this specific investigation as it relates to one of the types of schools impacting decision-making and game-efficiency of students participating in physical education learning activities. However, by engaging in this investigation, it was possible to see that preface variables of teachers and context should be considered in the follow-up investigations. It is also possible that each individual school context should be studied separately at first to determine the variety of characteristics and teaching-learning patterns that are ongoing within English-speaking high schools in South Korea that deliver the IB curriculum. The physical education literature already provides a description of what teaching and learning look like in American traditional schools (Griffey & Housner, 1991; Hawkins & Sharpe, 1992). Once subsequent studies provide comparable understanding of teaching and learning in IB schools in South Korea, it will then be possible to control more for those variables in further studies.

It is important to use this information to continue pursuing research on global teaching practices that impact learning in different types of schools. Further, the study of school context in the general teacher education and teaching literature may provide a resource for designing investigations that will be able to study the immersion of students in an entire school culture and climate and how that immersion and engagement impacts teaching and learning as well as tactical game decisions and game-efficiency in physical education classes.

References


ATTITUDES AND OPINIONS OF CLASSROOM TEACHER CANDIDATES REGARDING MULTICULTURALISM

CUNEYT AKAR  
Usak University Faculty of Education/Turkey

MUSTAFA ULU  
Dumlupinar University Faculty of Education/Turkey

The purpose of this study is twofold. The first objective is to develop a valid and reliable measurement tool for measuring the attitudes and opinions of classroom teachers regarding multiculturalism. The second one is to study the classroom teachers’ attitudes and opinions towards multiculturalism in terms of gender, socio-economic and devoutness variables. A literature study has been conducted during the development of the scale and the identified features have been itemized and added to the item pool. By the end of this process, 71 items have been created. The items were then evaluated by two expert academics, and after having been arranged in line with the feedbacks and suggestions, they were applied to 201 classroom teachers who were studying at the Faculty of Education of Uşak University. The reliability coefficient of the scale was calculated as .953. After having eliminated the items whose item-total correlation were below .35, a 6 dimensional 32-item scale has been created as a result of the exploratory factor analysis. The obtained data was then applied to a Confirmatory Factor Analysis. As a result of the analysis, a model, based on two main dimensions and consisting of 3 sub dimensions, has been developed. When the compatibility indices were examined, the model was found to be acceptable. Therefore, under the light of the obtained data, it was concluded that the scale was valid and reliable.

As a result of the study, it was established that the classroom teacher candidates had a positive attitude towards multiculturalism. It was observed that the students had sufficient knowledge and awareness regarding multiculturalism, yet the behavioral reflection of such knowledge and awareness was not satisfactory. In general, the lowest average was found in the “personal expectation” dimension. Moreover, significant correlations, albeit at a low level, were encountered between some of the variables and multiculturalism.

Keywords: Multiculturalism, Multicultural education, Classroom teacher candidates, Confirmatory Factor Analysis
Introduction

There are a good number of definitions for culture. According to Taylor, culture is a compilation of sum total of knowledge, belief, arts, ethics, law, customs, skills and habits acquired by virtue of being a member of a society (Bozkurt, 2006). Culture is a man made product and includes everything produced by human beings (Aslan, 2001). Pederson (1991) defines culture in such a way as to include such ethnographical variables as race, nationality, ethnic background, language and religion and such demographical variables as age, gender and location and such status related variables as social, educational and economic status as well as other formal and informal relationships (quoted by Çoban et. al, 2010).

Today, societies and therefore cultures are extensively in interaction with each other than ever before. Many people, having left their familiar culture and surroundings for various reasons, have migrated and are migrating to different cities and countries, in short, to places that have partially or completely different cultural values than their own. This causes various problems for both the migrants and locals alike. A new culture, a new set of rules, norms, beliefs, customs and practices are significant issues that have to be adapted to. Therefore, the interaction between people from different countries, regions, cities, towns, villages and having different languages, racial and religious backgrounds are increasingly on the rise, and thereby making cultural interaction is a concept that has to be addressed (Selçuk, 2005). On the other hand, one appreciates the fact that the concept of nation-defined narrowly within the boundaries of nation-state systematic-fails to fully embrace different ethnic, religious and cultural groups within a given nation state (Giddens, 1985; quoted by Kaya, 2007). As a result, contemporary nation states are compelled to redefine and make sense of the modern citizenship concept within the framework of universal values (Cırık, 2008).

Multiculturalism and Multicultural Education

Multiculturalism is defined by the coexistence of different age groups, sexual orientations, disabilities, social classes, ethnical, religious and language backgrounds and cultural characteristics (APA, 2002). Multicultural education is defined as the reflection of educational policies and school practices that cater for different societal expectations on education so as to reduce prejudices, identity and power conflicts in societies consisting of different cultural, ethnic, racial, religious, lingual and sexual backgrounds (Banks, 1977; quoted by Polat, 2009). Multicultural education advocates the implementation of multicultural policies in education. The basis for such thought and approach is supported by various democratic and epistemic foundations (Yazıcı, Başol and Toprak, 2009). In theory, it can be argued that the main purpose of multicultural education is to recognize and acknowledge differences in the society and build a common living space based on universal human values.

Multicultural education was first launched by the activists and educators for providing justice to the African Americans. In time, it has come to be used as an instrument for supporting social justice for people that have been discriminated on the basis of their race, class, gender, skills/disability and sexual orientation in the past and at present. Today, educators from all over the world employ multicultural education for delivering better education to the discriminated students and migrants (Banks, 1993 & 2007; Park and Watson, 2011; Ahn, 2013).

When educational models have been developed based on the socio-cultural structures of the countries, multicultural education contributes significantly to the national solidarity, social peace and democratic culture thanks to its significant educational functions such as unifying cultures around a common human
capital rather than ethnicizing the education itself, promoting respect for human beings and cultures, providing equality in education, improving social and cultural understanding, developing critical thinking skills and breaking down prejudices (Yazıcı, Başol and Toprak, 2009). Therefore, it seems inevitable that such studies should also be conducted in our country as well. It can be argued that the education programs put in place from 2005 onwards are more in line with this particular approach than their predecessors. Achievements and activities observed in this respect in the life and social sciences curriculums prepared for primary schools can be given as an example (MEB, 2005& 2015; Acun, Demir ve Göz, 2010). Having adopted an individual subjectivity oriented constructivist approach, renewed curricula offer more opportunities for multicultural education practices. By assuming the leadership of multicultural education, teachers should place the student at the center of attention and raise unprejudiced individuals that uphold social justice mentality and respect universal and cultural values (Tay and Baş, 2015). Naturally, in delivering such education, the skills, knowledge and training of the teacher is of particular importance.

When the literature has been reviewed, one can encounter studies conducted on school principals, teachers, teacher candidates and academics in Turkey. The studies suggest that school principals (Polat, 2012), teachers (Toprak, 2008; Yazıcı et. al, 2009; Söylemez and Kaya, 2014), teacher candidates (Polat, 2009; Anil and Yavuz, 2010; Çoban et. al, 2010) and academics (Demir, 2012) have positive opinions regarding multiculturalism. Based on such studies, it can be argued that there is a positive approach towards multiculturalism in Turkey. However, it is also evident that multiculturalism is a fairly new concept in educational studies and practices in Turkey. For this reason, it is believed that conducting more studies on this subject will contribute to this particular field. Considering the significance of the primary school period in teaching basic values, it is of particular importance that the studies regarding classroom teachers and classroom teacher candidates should increase. In this respect, the present study follows two main objectives. The first objective is to create a valid and reliable attitude scale regarding multiculturalism, and the second objective is to study the classroom teacher candidates’ opinions and attitudes towards multiculturalism in accordance with the gender, socio-economic status and devoutness variables. While there are various scales readily available with respect to multiculturalism, it can be argued that introducing a new scale with different dimensions to the literature will be beneficial for researchers in terms of having alternative tools in conducting their studies. In the same vein, presenting the opinions and attitudes of classroom teacher candidates towards multiculturalism is regarded as important in terms of its contribution to the literature and future studies and practices.

**Method**

This study is a descriptive research based on descriptive survey model. Descriptive method is used in the case of researches that aim to describe an existing situation (Karasar, 1984: 83). The study group consists of 201 classroom teacher candidates studying at the Faculty of Education of Uşak University. 30% of the teacher candidates are female and 70% of them are male.

**Data Collection Tool**

The literature has been reviewed in an effort to determine the characteristics of multiculturalism. Such characteristics have been itemized and gathered in an item pool. And then other scales developed in the literature regarding multiculturalism have been reviewed and other items that were not included in the pool but regarded as important added to the
pool. As it stood, the item pool had 71 items. The 71-item draft text has been reviewed by two expert academics and corrected accordingly in line with the feedback and suggestions received. The items have also been evaluated by a language expert to take their final form. The items have been arranged based on a five-likert type scale. The students have been asked to tick the box that reflects their opinion best out of the following statements “I don’t agree at all (1), I don’t agree (2), I’m not sure (3), I agree (4) and I completely agree (5)”. In interpreting the items of the scales, (5-1)/5 formula has been employed, out of which the value of .80 has been determined. Based on the aforementioned finding, the student arithmetic mean values for 5 likert type items have been interpreted as follows: “I don’t agree at all”: 1.00-1.79, “I don’t agree”: 1.80-2.59, “I’m not sure”: 2.60-3.39, “I agree”: 3.40-4.19, “I completely agree”: 4.20-5.00.

Data Analysis

In addition to the descriptive statistics, t test, Pearson Product-Moment Correlation Analysis technique, Exploratory Factor Analysis (EFA) and Confirmatory Factor Analysis (CFA) have been employed for the independent groups in analyzing the data. Exploratory factor analysis has been performed in order to understand how many dimensions the scale required, how the items differed from or converged with one another and to what extent they accounted for the variance in ensuring the structural validity of the scale. Moreover, a Confirmatory Factor Analysis has been performed in order to verify the dimensions found following the exploratory factor analysis and the nature of the items included in the dimensions. Average standard deviation values of the teacher candidates’ opinions regarding multiculturalism have been calculated. While a “t test for independent groups” has been performed to determine whether there was a differentiation in the opinions in terms of gender variable, a “pearson product-moments correlation coefficient” has been calculated for identifying the relationship between the levels of socio-economic status and devoutness and the perception of multiculturalism.

Findings

The findings have been presented in two stages. First of all, the findings regarding the validity of the scale have been presented and then the findings obtained from the implementation have been listed in the form of tables.

1. Findings Regarding the Development of the Multiculturalism Scale

a. Findings Regarding the Exploratory Factor Analysis

An exploratory factor analysis has been performed to maintain the structural validity of the attitudes and opinions towards multiculturalism scale. The sample adequacy has been determined through the performance of Kaiser-Mayer-Olkin sample adequacy coefficient (.868) and Bartlett Sphericity Test ($\chi^2_{(595)} = 2867.580; p<.01$) prior to the factor analysis. The findings regarding the factor analysis of the scale have been presented in Table 1 below. As a result of the factor analysis thus conducted, the incompatible items and those below the total correlation value of .35 have been eliminated. After the elimination of the incompatible ones, the scale consisted of 32 items. It has been further established that the scale consisted of six dimensions with more than one equity and accounted for 69% of the variance. The equities of the factors have been calculated as 13.74, 3.09, 2.20, 2.18, 1.48, 1.43 respectively. While the factor load values of the items included in the scale vary between 0.843 and 0.554.

The first dimension has been named as “Effort/Behavior” as it included such items as efforts on the part of the teacher candidates to eliminate racial inequalities, being together with people from different religious, sectarian,
Table 1: Results Regarding the Exploratory Factor Analysis

<table>
<thead>
<tr>
<th>Name of the Factor</th>
<th>Item No.</th>
<th>Factor 1</th>
<th>Factor 2</th>
<th>Factor 3</th>
<th>Factor 4</th>
<th>Factor 5</th>
<th>Factor 6</th>
</tr>
</thead>
<tbody>
<tr>
<td>Effort/behavior</td>
<td>13</td>
<td>.824</td>
<td></td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td></td>
<td>14</td>
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<tr>
<td></td>
<td>15</td>
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<tr>
<td></td>
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<td></td>
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<tr>
<td></td>
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<td>.635</td>
<td></td>
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<tr>
<td></td>
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<td></td>
<td></td>
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<tr>
<td></td>
<td>6</td>
<td>.508</td>
<td></td>
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<tr>
<td>Sensitivity</td>
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<tr>
<td></td>
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<tr>
<td></td>
<td>39</td>
<td>.669</td>
<td></td>
<td></td>
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<tr>
<td></td>
<td>33</td>
<td>.636</td>
<td></td>
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<tr>
<td></td>
<td>32</td>
<td>.535</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Knowledge/awareness</td>
<td>71</td>
<td>.794</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Quality of education</td>
<td>68</td>
<td>.765</td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td></td>
<td>69</td>
<td>.758</td>
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<td></td>
<td>70</td>
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<td></td>
<td>67</td>
<td>.738</td>
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<td></td>
<td>65</td>
<td>.719</td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Personal expectation</td>
<td>21</td>
<td></td>
<td>.843</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td></td>
<td>19</td>
<td></td>
<td>.822</td>
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<tr>
<td></td>
<td>20</td>
<td></td>
<td>.813</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td></td>
<td>22</td>
<td></td>
<td>.657</td>
<td></td>
<td></td>
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<tr>
<td></td>
<td>23</td>
<td></td>
<td>.593</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>General expectation</td>
<td>59</td>
<td></td>
<td></td>
<td>.828</td>
<td></td>
<td></td>
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</tr>
<tr>
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<td>61</td>
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<td>.740</td>
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<tr>
<td></td>
<td>58</td>
<td></td>
<td></td>
<td>.738</td>
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<tr>
<td></td>
<td>60</td>
<td></td>
<td></td>
<td>.732</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>52</td>
<td></td>
<td></td>
<td>.554</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cronbach Alpha Total: .953</td>
<td></td>
<td>.891</td>
<td>.875</td>
<td>.886</td>
<td>.883</td>
<td>.885</td>
<td>.859</td>
</tr>
<tr>
<td>Disclosed variance</td>
<td></td>
<td>13.74</td>
<td>3.10</td>
<td>2.20</td>
<td>2.18</td>
<td>1.48</td>
<td>1.42</td>
</tr>
<tr>
<td>Total: 69</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<td></td>
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</tr>
</tbody>
</table>
ideological and cultural backgrounds and doing their best for the benefit of those people, working for developing relationships and breaking down religious/sectarian prejudices and helping to facilitate communication. The second dimension has been named as “Sensitivity” as it included such items as being tolerant of differences, being aware of and respecting the cultural and ethnic characteristics associated with such differences. The third dimension has been named as “Knowledge/Awareness” as it contained such statements as being aware of the fact that people may have different opinions depending on their age, espouse different ideological opinions, sexual preferences, religious beliefs and come from different ethnic backgrounds. The fourth dimension has been named as “Quality of Education” as it contained such statements as the teaching of multicultural education as a different subject, increase in the value of the teacher’s job as the cultural structure of the classroom differs, preparation of educational curriculums by taking into account the students coming from various different cultural backgrounds, and the necessity of preparing television/radio programs with multicultural themes. The fifth dimension has been named as “Personal Expectation/Benefit” from multicultural education as it contained such statements as multicultural education will contribute to the development of a positive personality, teacher candidates will benefit from learning many things from students with different cultural backgrounds, multicultural education will help understanding other nations, multicultural education will be beneficial in ending racist prejudices. The last dimension has been named as “General Expectation/Benefit” from multicultural education as it contained views regarding the multicultural education’s role in the elimination of students’ prejudices over racial and ethnic relations, promotion of tolerance among the students, elimination of sex discrimination and other forms of discrimination. Correlations regarding the sub dimensions of the attitudes and opinions towards multiculturalism scale are presented in the table 2 below.

As seen in the table 2, the dimensions of Effort/behavior (.80), Sensitivity (.80), Quality of the multicultural education (.77), Personal expectation/benefit from multicultural education (.70) and General expectation/benefit from multicultural education (.78) have a highly significant positive relationship with the entire scale. Whereas the dimension of knowledge/awareness (.44) has been found to have a positive and mid level significant relationship.

Table 2: Correlations regarding the sub dimensions of the attitudes and opinions towards multiculturalism scale

<table>
<thead>
<tr>
<th></th>
<th>(1) Effort/behavior</th>
<th>(2) Sensitivity</th>
<th>(3) Knowledge/awareness</th>
<th>(4) Quality of education</th>
<th>(5) Personal expectation</th>
<th>(6) General expectation</th>
<th>(7) Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>(1) Effort/behavior</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(2) Sensitivity</td>
<td>.550**</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(3) Knowledge/awareness</td>
<td>.262**</td>
<td>.157*</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(4) Quality of education</td>
<td>.492**</td>
<td>.569**</td>
<td>.265**</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(5) Personal expectation</td>
<td>.477**</td>
<td>.554**</td>
<td>.215**</td>
<td>.407**</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(6) General expectation</td>
<td>.556**</td>
<td>.601**</td>
<td>.195**</td>
<td>.628**</td>
<td>.438**</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>(7) Total</td>
<td>.805**</td>
<td>.806**</td>
<td>.442**</td>
<td>.766**</td>
<td>.701**</td>
<td>.781**</td>
<td>1</td>
</tr>
</tbody>
</table>

** Significant on the level of 0.01
* Significant on the level of 0.05
b. Findings Regarding the Confirmatory Factor Analysis

A confirmatory factor analysis has been performed in order to verify the scale structure that was found through exploratory factor analysis. As a result of the EFA analysis, a model, based on two main dimensions and consisting of 3 sub dimensions, was developed. After having reviewed the items contained therein, the main dimensions have been named as “Attitudes” towards multiculturalism and “Opinions” regarding multiculturalism. It was established that the sub dimensions of “Effort/Behavior”, “Sensitivity” and “Knowledge/Awareness” fell into the category of “Attitude” towards multiculturalism dimension. On the other hand, the sub dimensions of “Quality of Education”, “Personal Expectation” and “General Expectation” were included in the “Opinion” regarding multiculturalism dimension. The chart of this model is presented in the Figure 1.

According to the Confirmatory Factor Analysis the chi square fit values of the model are as follows: $\chi^2 = 909.6; \text{df}=545; p<.00; \chi^2/\text{df}= 1.669$. Such value is low as compared to the standard value $[<.3]$ put forward regarding the compatibility of the model. When the EFA fit indices are reviewed, such values seem to relatively confirm the model $[\text{GFI}=.813; \text{AGFI}=.784; \text{CFI}=.904; \text{IFI}=.905; \text{RMSEA}=.57]$. Although it is possible to observe values that are below the GFI and AGFI standard coefficient values, the CFI and IFI values are above such coefficient values. The model is regarded as a good fit if the values found as per the standard coefficients are above the values of .85 and .90. Moreover, if the RMSEA coefficient is between .08 and .06, it is a good fit; if between .06 and .00 it is a perfect fit (Byrne, 2010; Schermelleh-Engel, Moosbrugger, and Müller, 2003; Şimşek, 2007). In this study, the RMSEA value has been found to be a perfect fit. On the strength of this finding, it can be argued that the structural validity of the scale has been largely confirmed.

Reliability of the Scale

Reliability calculation has been made through Cronbach Alpha. Based on this calculation the reliability coefficients of the sub dimensions included in the first main dimension of the scale have been established as follows: Effort/behavior (.891), Sensitivity (.875) and Knowledge/awareness (.886). The reliability coefficients of the quality of education, personal expectation and general expectation sub dimensions, which are included in the second main dimension, are found as .883, .885 and .886 respectively. The reliability coefficient calculated for the entire scale is .953. When the reliability analysis results are observed, it is evident that the Cronbach Alpha coefficients

Table 3: Criteria values of the fit indices and fit index values of the scale

<table>
<thead>
<tr>
<th>Fit indices</th>
<th>Good fit</th>
<th>Acceptable Fit</th>
<th>Values obtained from the scale</th>
</tr>
</thead>
<tbody>
<tr>
<td>$\chi^2/\text{sd}$</td>
<td>$0 \leq \chi^2/\text{sd} \leq 2$</td>
<td>$2 &lt; \chi^2/\text{sd} \leq 5$</td>
<td>1.69</td>
</tr>
<tr>
<td>RMSEA</td>
<td>$0 \leq \text{RMSEA} \leq .05$</td>
<td>$.05 &lt; \text{RMSEA} \leq .08$</td>
<td>.057</td>
</tr>
<tr>
<td>IFI</td>
<td>$.95 \leq \text{IFI} &lt; 1.00$</td>
<td>$.90 \leq \text{IFI} &lt; .95$</td>
<td>.905</td>
</tr>
<tr>
<td>TLI</td>
<td>$.95 \leq \text{TLI} &lt; 1.00$</td>
<td>$.90 \leq \text{TLI} &lt; .95$</td>
<td>.904</td>
</tr>
<tr>
<td>CFI</td>
<td>$.95 \leq \text{CFI} &lt; 1.00$</td>
<td>$.90 \leq \text{CFI} &lt; .95$</td>
<td>.905</td>
</tr>
<tr>
<td>GFI</td>
<td>$.95 \leq \text{GFI} &lt; 1.00$</td>
<td>$.80 \leq \text{GFI} &lt; .95$</td>
<td>.813</td>
</tr>
<tr>
<td>AGFI</td>
<td>$.95 \leq \text{AGFI} &lt; 1.00$</td>
<td>$.80 \leq \text{AGFI} &lt; .95$</td>
<td>.784</td>
</tr>
</tbody>
</table>
Figure 1. Demonstration of the analysis values that are standardized with respect to the constructed model
calculated for the sub dimensions of the scale and the entire scale are fairly high. Therefore it can be argued that the scale is reliable. On the strength of such results, it can be argued that the structural validity and reliability of the scale are confirmed.

2 Findings Regarding Implementation

The scale has two main dimensions, each having three sub dimensions. The average score of the first main dimension, namely “attitude towards multiculturalism” has been found as 3.75 (I agree). The average scores of the sub dimensions of attitude are as follows: “Effort/Behavior” (3.38), “Sensitivity” (3.54) and “Knowledge/Awareness” (4.32). According to such averages, knowledge has been established as “I completely agree”, sensitivity as “I agree”, and effort/behavior as “I’m not sure”. According to such data, the teacher candidates are highly knowledgeable about the matter, but their sensitivity diminishes based on knowledge and their ability to convert the same into effort and behavior diminishes even further.

The average score of the second main dimension, namely “opinion regarding multiculturalism” has been found as 3.40 (I agree). When the sub dimensions of opinion are reviewed, the lowest average score is found in the “Personal Expectation” sub dimension, represented by 3.36 (I’m not sure).

The average scores of “Quality of Education” and “General Expectation” sub dimensions have been established as 3.41 and 3.43 (I agree) respectively. The overall average of the scale is found as 3.58 (I agree).

When the table is reviewed, it is seen that the classroom teacher candidates’ opinions regarding multiculturalism do not differ based on gender both on the sub dimension levels and total scores. Based on this finding, it can be argued that the opinions of the male and female students are more or less similar.

Table 6 reviews the relationship between the demographic variables of teacher candidates and their perception of multiculturalism. While it is observed that there is not a highly significant relationship between the two, there is nevertheless a significant relationship between three variables. According to this, the level of knowledge/awareness dimension decreases with the increase in the number of siblings (r=-.19). It is also seen that the general expectation increases in line with the increase in income (r=.16). The effort/behavior dimension decreases with the increase in devoutness (r=-.17). Other than the aforementioned dimensions, no significant relationship has been identified between the demographic variables and the total scores, main dimensions and sub dimensions of the scale.

<table>
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<th>Main Dimensions</th>
<th>N</th>
<th>Avg.</th>
<th>SD</th>
<th>Sub Dimensions</th>
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<th>Average</th>
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<td></td>
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<td>201</td>
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Discussion, Remarks and Conclusion

This study has been conducted with a view to developing a valid and reliable measurement tool that will measure the attitudes and opinions of the classroom teacher candidates regarding multiculturalism and identifying the students’ approaches to multiculturalism in terms of various variables based on such data. Based on the data gathered from the study conducted on 201 students, a 32 itemed 5 likert type scale has been created. The reliability value of the scale is Alpha .953. The result of the exploratory factor analysis has revealed that the scale consisted of 6 dimensions. The dimensions in question have been named based on the characteristics of the items as “Effort/Behavior”, “Sensitivity”, “Knowledge/Awareness”, “Quality of Education”, “Personal Expectation” and “General Expectation”. As such, the scale accounts for 69% of the variance. And then the data thus gathered was subjected to a Confirmatory Factor Analysis, the result of which analysis revealed that the structural validity of the scale was largely confirmed. As it stands, it can be argued that the scale is valid and reliable.

The average scores of the classroom teacher candidates regarding multiculturalism have been found around 3.58. Such value is represented by the statement “I agree” as per the 5 likert type scale. Based on this result it can be suggested that the classroom teacher candidates have a positive opinion about multiculturalism. Such findings are consistent with the findings put forward by Polat (2009) Anıl and Yavuz (2010) and Çoban et. al (2010) who also conducted studies on prospective teachers. Similar results have also been found by the studies conducted on school principals (Polat, 2012), teachers (Toprak 2008; Yazıcı et. al 2009; Söylemez and Kaya 2014) and academics (Demir, 2012) regarding multiculturalism. Based on the present study and other studies conducted on the subject matter, it can be argued that, on the whole, there is a positive opinion about multiculturalism in Turkey.

When the sub dimensions are reviewed, it is observed that the average score of the attitude dimension is higher than the general average. Moreover, the sub dimensions of the attitude dimension -Knowledge/Awareness, Sensitivity and Effort- also goes from high to low. Based on this result it can be suggested that the classroom teacher candidates have sufficient knowledge about multiculturalism. However, when it comes to sensitivity and

| Table 5: T test as per gender |

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Table 6: Correlations showing relationships between multiculturalism characteristics and demographic variables

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<td>11. Quality of Education</td>
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<td>12. Personal Expectation</td>
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** Significant on the level of 0.01
* Significant on the level of 0.05
making effort, in particular, the average scores are seen to decrease. This finding is consistent with the finding suggested by Ezra, Millet and Patkin (2006) (quoted by Polat 2009) where the participants were informed about multiculturalism but inadequate in terms of converting such knowledge into action.

When the opinion dimension is reviewed, however, it is seen that this particular dimension is below the general average score. The highest average scores observed within the sub dimensions of this dimension are that of the “General Expectation” and “Quality of Education” respectively. The lowest average score is observed in the “Personal Expectation” sub dimension. It can be argued, based on such findings, that the classroom teacher candidates place more importance on the common public good and quality of education than on their personal expectations or benefits.

It can be suggested that the classroom teacher candidates’ attitudes and opinions regarding multiculturalism do not differ based on gender. In their study conducted on teachers, Yazıcı, Başol and Toprak (2009) found that the opinions of teachers did not differ based on gender. Such findings can be interpreted as gender not being an influential variable on the attitudes and opinions regarding multiculturalism.

When reviewed in terms of correlations, it is seen that there is a significantly low relationship between the correlations and three variables. According to this, knowledge/awareness scores decrease with the increase in the number of siblings. General expectation increase with the increase in income. Effort/behavior decreases with the increase in devoutness. However, the correlation values have been found to be low. It can be suggested that more studies are required to be conducted on this subject matter.

Recommendations

As a result of this study, it can be said that a valid and reliable measurement tool has been developed for the purpose of measuring the attitudes and opinions of the classroom teacher candidates regarding multiculturalism. Therefore, it can be recommended that various studies should be conducted using this measurement tool.

As a result of the study, it has been found that the classroom teacher candidates have a positive opinion about multiculturalism. However, despite having high levels of knowledge/awareness regarding the issue their ability to convert such knowledge into action has not been found satisfactory. In this respect, it can be recommended that students be engaged in activities that encourage their ability to apply their knowledge into action. It is observed that there is no significant relationship between the independent variables and the attitudes and opinions regarding multiculturalism, except for three variables (which are also found to be low). It can be recommended that different variables be put in place for the future studies.

Various other studies also confirm that there is generally a positive attitude towards multiculturalism in Turkey. However, taking into consideration the possibility that the participants felt obliged to state what is socially acceptable, qualitative and therefore more in depth studies are also recommended to be conducted in this particular subject matter.
References


This study intends to explore the perspectives of school administrators, teachers, and parents on the rights and responsibilities of teachers and parents in terms of organizational citizenship. The study was designed as a qualitative research. The study group consisted of 95 participants in total (20 school administrators, 20 teachers, 15 parents, 20 pre-service teachers, who are senior students at Recep Tayyip Erdogan University, Faculty of Education, and 20 pre-service teachers, who have graduated from various faculties but taken pedagogical formation training). The participants, who were all working in Rize, Turkey during the 2014-15 academic year, were selected through purposive sampling. The data was collected by semi-structured interview forms, and analyzed by descriptive and content analysis. Finally, it was discussed in relation with the related literature. According to the findings of the study, the participants believe that being a member of the school community brings about a set of rights and responsibilities for all sides. Nearly all of the participants disregarded the political rights, generally making reference to civic and community rights which focus on responsibilities and are shaped by the position held at school.

Keywords: Organizational Citizenship, School Management, Parents, Teachers, Students, Principals

Introduction

Literature related to Organizational Citizenship Behavior has expanded considerably since 2000, the date when the first study on this topic was published in Turkey. Around one thirds of these studies focus on educational organizations. However, the organizational citizenship fundamentally requires the development of holistic approaches. Indeed, relating OCB and the citizenship concept in political philosophy, and likening educational organizations to the state, or considering that the members are the citizens, may breed more holistic approaches. Just as governments have citizens, schools have teachers, students, parents, administrators, and just as governments have candidate citizens, schools have candidate teachers. These citizens, who are the members of the school community, have certain rights and responsibilities pertaining to the education process and school’s administration. There are many studies in the literature about educational rights, and the
effectiveness of education and school; however, few studies exist focusing on the conceptualization of mutual rights of school, school administration, and their members within the framework of the citizenship concept in political philosophy. To this end, this study aims to conceptualize the views of school administrators, teachers, and parents about their citizenship rights and responsibilities as to organizational citizenship. For this purpose, it intends to categorize rights and responsibilities within the framework of organization citizenship as reported by the participants. Thus, it is hoped that the study will contribute to the literature related to Organizational Citizenship System (OCS), and that the citizenship relation between the school and its members will be conceptualized taking into account the balance between mutual rights and duties.

**From Good Soldiers to Active Citizens: Organizational Citizenship System**

As Organ, Podsakoff and MacKenzie (2006: 63) assert, the concept of OCB is based on various paradigms of organization theory such as Chester Barnard’s (1938) organization as a cooperation system and willingness to contribute, Roethlisberger and Dickson’s (1939) informal organization and collaboration, Blau’s (1964) economic and social exchange, Katz and Kahn’s (1966) extra-role behaviors, Leader-Member Exchange Theory, Williamson’s (1975) transaction cost economics, and Ouchi’s (1980) markets, bureaucracies, and clans. However, one of the earliest contributions to OCB, probably influenced by these paradigms, was Organ’s (1977) suggestion of more subtle forms of worker contribution to organizational productivity like helping co-workers, following the spirit as well as the literal rules of workplace governance, and accommodating the changes (cited in Organ, Podsakoff and MacKenzie, 2006). Based on this understanding, in 1983, Smith, Organ, and Near introduced the notion of organizational citizenship behavior (OCB), which can be defined as individual behavior that is discretionary, not directly or explicitly recognized by the formal reward system, promoting the efficient and effective functioning of the organization (Organ, 1988:4; Borman, 2004; Organ, Podsakoff and MacKenzie, 2006:3). Another major contribution to the development of OCB is Graham’s proposal that the political dimension be added to the OCB concept (1986) and the existing literature in the fields of philosophy and political sciences be related to citizenship studies, in particular to the subject of OCB (Graham, 1991). Unlike the other OCB researchers who emphasize workers can contribute to the organization by merely displaying citizenship behavior, Graham (1991) stresses that the organization citizenship behavior should observe the balance between compliance, obedience, and loyalty, which, for him, is the wholesome and meaningful way of defining citizens’ rights and responsibilities in an organization. An analysis of the OCB related literature that has formed in nearly 40 years reveals that, although major developments have occurred regarding the conceptualization of OCB, classification of OCB, and performance of OCB studies in markedly different contexts, or a holistic concept of organizational citizenship has not been developed which adapts the citizenship concept in political philosophy to the organization context. As the very title of Organ’s book Organizational Citizenship Behavior: The Good Soldier Syndrome (1988) suggests, OCB was initially associated with the good soldier syndrome. This system refers to only performing the good and appropriate things for the system’s and organization’s benefits for the sake of individual factors at all conditions (Vigoda-Gadot, 2006). Thus, as Bies (1989) stresses, the OCB approach is based on pro-management biases, which cause the political and moral dimensions, pretty important for organizations and their
citizens, to be disregarded. Particularly after Graham’s proposal that the political dimension be added to the OCB concept (1986), political and participation related dimensions of OCB were increasingly discussed, which was followed by Organ’s (1988) adding the participation related dimension to the unique OCB classification (Graham, 1991). However, the limitations mentioned by Bies (1989) and Vigoda-Gadot (2006) seem to have remained. Thus, it is particularly important to see that the members of an organization are more than good soldiers that contribute to the organization in any way whatsoever, but they are active, participating members in compliance with the understanding of citizenship in political philosophy. Indeed, Organ, Podsakoff and MacKenzie (2006:15) too claimed that OCB related research is not geared towards developing a novel organization theory or combating a certain thought. In addition, as Barker aptly suggests (2006:3), Organ’s and Graham’s approaches are extremely pragmatic, focusing almost only on organizational performance. This situation points to the necessity of developing an organizational citizenship approach that will define the relation between the organizations and their members based on the balance of mutual rights and responsibilities and that will eliminate the limitations caused by only focusing on organizational interests. Thus, unlike the approaches that hinge solely on the pioneers of OCB and the interests of the organization, the OCS approach will help adapt the understanding of citizenship in the political philosophy to the organizational context and will help increase the quality and effectiveness of schools, as well as the level up to which the members of the school organization achieve their goals as citizens (Yaylacı, 2004; Yaylacı, 2011). Organizational citizenship system can be defined as a rather new approach going through the initial stages of its development. This approach may possibly mature through theoretical and empirical studies. D.W Organ’s OCB concept including the citizenship concept into the organizational context, J.W.Graham’s political philosophy based contribution, and R.A. Barker’s discussion of the theory of the organizational citizenship provide the sources of OCS thought. Yaylacı (2004) attempts to explain an organizational citizenship relation particularly based on Organ and his advocates and Graham’s conceptualizations and OCB in a model. In this model, organizational citizenship is defined as a relation that breeds mutual rights and responsibilities for the organization and its members and that is built on contract and social exchange. Rights and responsibilities are mutual in civic, social, and political aspects. It is with this relation that the set of rights and responsibilities become effective in the emergence of OCB and augmentation of organizational performance.

Basically, OCS aims to establish a relation between the organization and its member, one that is similar to the relation between the government and the citizen. This primary goal is markedly influenced by the thought that the individual should be protected against the government rather than by the thought that an individual is an element at the service of the organization (Yaylacı, 2004). From the viewpoint of OCB, the concept of political citizenship has a central importance. The conceptualization of citizenship is a pretty old phenomenon, dating far back to the times of Ancient Greek. To recap, a citizen implies an individual equipped by certain rights and responsibilities granted by law (Gündüz and Gündüz, 2005; Heywood, 2012). At this point, Gordon’s (2007:9) comparison pertaining to the citizenship in the nation-states and worker unions is highly functional in the definition of citizenship at schools. While an individual gains the right to be a citizen by migration or birth in nation states, at schools, he or she gains the right to be a citizen through membership as a teacher, students,
administrator, or parent. To be the citizen of the school will be a state mostly formed in the democratic participation processes, and a set of rights and responsibilities that does not apply to those outside of the school will be created (Yaylacı, 2011). The concept of political citizenship is a concept that pertains to relational bonds, rights, and responsibilities. The citizen concept, incidentally, is derived from ‘cite’, and is used to refer to the residents of a city (Graham, 1991:251; Gündüz and Gündüz, 2005). In this case, the school organization, which can be treated as a quasi state, can be considered as a ‘cite’ accommodating individuals in it and providing them with certain rights and responsibilities. The members of the school organization are in a position that resembles the ‘citizens’ of this ‘cite’, and connected to the school organization by legal and political ways. As Heywood (2012) states, citizenship exists in the balance between the citizen’s rights and responsibilities. Leaving from this balance, it is possible to draw a general framework of the rights and responsibilities set that will emerge as a result of the citizenship relation between the school and its members.

Methodology

Research Design. Qualitative research is an interpretive, naturalistic approach to the world, including methods such as participant observation or case studies which result in a narrative, descriptive account of a setting or practice (Parkinson and Drislane, 2011; Denzin and Lincoln, 2005). The present study has a qualitative research design; it intends to conceptualize the rights and responsibilities of theachers and parents as school citizens, based on self-reports in the context of organizational citizenship system.

Sample. In the study, criterion sampling, one of the purposive sampling methods, was used to select the sample. The sample group consists of 20 school principals and 20 teachers who work in primary and secondary schools, 15 parents and 20 teacher candidates who are university students studying in the faculty of education, Recep Tayyip Erdogan University, Rize, and 20 candidate teachers who hold university degrees from different fields and who have received formation training in the Faculty of Education, Recep Tayyip Erdogan University. In brief, the sample includes a total of 95 participants.

Data Collection. The data was collected by a semi-structured questionnaire prepared by the researcher. It included open-ended questions probing the rights and responsibilities of the member of the school community.

Analysis. Content analysis was used in the study. This method aims at reduction and interpretation of qualitative data and determination of the basic consistencies and meanings. A significant characteristic of content analysis is making inference, and its main purpose is to make interpretation based upon observed and described components in messages. To develop a systematic interpretation of such concepts and themes, the text was summarized into smaller content categories with respect to codes based on specific rules. As a result, the content analysis brings similar data together under specific concepts and themes. The goal of analyzing a text in content analysis is to arrive at common themes and determine codes according to a priori through a process of careful reading (Patton, 2014; Bilgin, 2006; Yıldırım and Şimşek, 2006; Büyüköztürk, Çakmak, Akgün, Karadeniz and Demirel, 2009; Lichtman, 2010:194). Content analysis may be used in an inductive or deductive way. Deductive content analysis is used when the analysis is based on previous knowledge and the purpose of the study is theory testing, while inductive content analysis is used when there is insufficient former knowledge about the phenomenon or when this knowledge is fragmented. In inductive content analysis, the categories are derived from the data while, in
deductive content analysis, the categories are predetermined based on the literature. Both inductive and deductive analysis processes have three main phases: preparation, organizing, and reporting (Kyngas and Vanhanen, 1999; Lauri and Kyngas, 2005 as cited in Elo and Kyngas, 2008). As a matter of fact, in this study, 122 statements, 55 about rights and 67 about responsibilities, were identified in the first reading of the interview forms. Then, the researcher and another colleague independently focused on these to produce codes directly related to rights and responsibilities. Two independent sets of codes were compared for overlaps and disagreements. Then, the researchers negotiated over the codes, ending up in 103 codes (48 about rights, and 55 about responsibilities). Then, three other researchers who were specialized in the fields of educational sciences and law of education were asked to classify these codes inductively into main themes and categories related to rights and responsibilities. In this process, the researcher himself as well made a classification based on Marshall’s (1950) and Graham’s (1991) rights of citizenships classifications in a deductive way. The researchers tried to unify these classifications in the final phase. The summary of participants’ views on rights and responsibilities were presented in the Findings Section in relevant tables, which were accompanied by verbatim quotations from the participants. The clustered codes and classes and derived relations were discussed in relation with the existing literature in the Discussion Section. When direct quotations from participants were shared, their age, gender, post, and to which group they belong to were also indicated (e.g. teacher below the age of 40: 40-F, Teacher). The pre-service teachers who are university students are denoted by US-Pre-Service Teacher, while the pre-service teachers who are students of formation are denoted by FS-Pre-Service Teacher. The results of the study were reported accompanied by verbatim quotations from the participants where possible; the interpretation and discussion of the results are presented in a separate section.

**Results**

**The Participants’ Views on Teachers’ Rights and Responsibilities**

Table 1 presents the participants’ views on teachers’ rights and duties as members of school. The school administrators, parents, and pre-service teachers all emphasized the importance of career development opportunities provided for teachers. In the words of a pre-service teacher, *the school administrators should not regard teachers as individuals who only teach; they should also organize art days, trips, and seminars, which will help teachers to self-actualize* (F-22, US-Pre-Service Teacher). The administrators, teachers, and pre-service teachers pointed to the importance of professional autonomy in a peaceful work environment. In the words of a participant, *the school administration has to prepare the ideal conditions for teachers* (21-F, US-Pre-Service Teacher). Another participant stressed the study environment as it prepares the education setting; complete technological equipment should be provided for the teachers, *and a setting conducive for education should be established, for teachers have a right to working in such an atmosphere* (F-22, US-Pre-Service Teacher). An administrator participant stated his/her belief that *teachers have a right to perform education at a peaceful environment in decent classrooms equipped with technical facilities* (M-44, Principal) while another administrator expressed his/her views on relations between the employees in the workplace environment: *the teachers have a right to a workplace conducive to respect, like, and tolerance; the school should ensure such an environment* (57-M, Principal). The preservice teachers and school administrators
emphasized the teachers’ rights to occupational autonomy. Preservice teachers also added that going through an orientation program is a right of the teachers who will start working at a school.

Parents and pre-service teachers stated that teachers have a right to professional autonomy. Formation students pointed to the following as teachers’ rights: To have autonomy while teaching, to be able to express opinions about school freely, to feel respect when they share their ideas, to be shown tolerance when they are a newcomer at a school, to work with a non-interventionist administration, to participate in the decision-making process. A participant who is a formation student and teacher candidate mentioned these rights: I need be free in my work, I mean my teaching style, the administrators should not mess with me and I should participate in decision making process (24-F, FS-PS-Teacher)

It is noteworthy that the administrators see administrators’ support as a right is in compliance with these statements. In particular, a teacher stated the following: the school administration should be fair to teachers (38-M, Teacher). Another teacher highlighted the importance of occupational support in his/her following words: The school is responsible for enabling the teachers to perform their occupational activities (34-F, Teacher). A participant who is a teacher candidate mentioned the necessity of protecting teachers especially against parents: One of the rights of teachers is that the school should protect and support the teacher, and stand for him or her when necessary. The school should defend the teachers against parents and the top administration. Unfortunately teachers have become subject to enforcement and criticisms from varied groups (22-F, US-PS-Teacher)

Table 2 presents the participants’ views on teachers’ responsibilities. As can be seen here, the responsibilities mentioned in unison are related to teachers’ having to do their jobs effectively and educate students in the best way possible.

<table>
<thead>
<tr>
<th>Administrators</th>
<th>Teachers</th>
<th>Students</th>
</tr>
</thead>
<tbody>
<tr>
<td>To be informed about and granted personal rights and benefits To be provided with opportunities for professional development To work in a convenient environment To feel that he/she belongs To feel that he/she is valued To be appreciated</td>
<td>To work in a comfortable environment To receive support from school managers To request and be provided instructional materials</td>
<td>To be supported by parents To earn good salary</td>
</tr>
<tr>
<td>Parents</td>
<td>Pre-service Teacher</td>
<td>Formation Students</td>
</tr>
<tr>
<td>To be provided with opportunities for professional development To have professional authority and autonomy</td>
<td>To be supported by school administration in the education process To go through an orientation program To work in a secure environment To be provided with opportunities for professional development To work in an institution protecting their rights To be provided with social activities</td>
<td>To have autonomy while teaching To be able to express opinions about school freely To teach with the style they prefer To feel respect when they share their ideas To be shown tolerance when they are a newcomer at a school To work with a non-interventionist administration To participate in the decision-making process To able to criticize/evaluate the school administration</td>
</tr>
</tbody>
</table>
A participant stated that a main responsibility is to work in accordance with the vision of the school: *the teachers have the responsibility to educate individuals according to the school’s vision and mission* (F-22, US-Pre-Service Teacher). According to some participants, this responsibility means having to do the jobs defined by law. A parent expressed this as follows: *the school administration has the right to require the teachers to do their job fully and on time in accordance with the guidelines set in advance* (48-F, Parent). Similarly another teacher stated the following: there is curriculum a school has to comply with and *certain principles and regulations it has to obey. Teachers, all the personnel, and students respect the school’s loyalty to these* (F-22, US-Pre-Service Teacher). A participant teacher said the responsibilities of a teacher are the *tasks and activities dictated by the regulations* (37-F, Teacher), making reference to the official job descriptions to define teachers’ responsibilities. The administrators, in particular, indicated that teachers should basically comply with the organizational culture established at school, professionally develop themselves continuously, and do their jobs in the best way possible. In particular, an administrator said *teachers are supposed to develop themselves continuously, find alternative ways to increase their teaching effectiveness, to motivate students, and to attach as much importance to personal development of students as to their technical education* (M-44, Principal). Another administrator drew attention to school culture and collaboration with parents; *the teachers should adapt to school culture, do their job duly, establish good relations with students and parents and provide them with guidance* (M-44, Principal). Some participants also think that teachers are
supposed to implement the instructional curriculum and gain the students certain skills, as well as modify their teaching according to students’ talents and support them affectively, rather than remain restricted by the curriculum. A participant eloquently worded this: *the teachers should go beyond the curriculum and develop emotional bonds with the students and help them better connect with the school* (37-M, Parent). It was also added that the teachers are responsible for compliance with the school rules, protection of the school and its facilities and equipment, preservation of the school routines. For example, a preservice teacher participant said, “Our responsibilities at school include preserving the school equipment, being respectful of the school administration, and cooperation with them” (23-M, US-PS-Teacher).

The Participants’ Views on Parents’ Rights and Responsibilities

Table 3 summarizes parents’ rights as seen by the participants and reveals that participants view parents’ rights mostly in relation with supporting school in their endeavors. A teacher stated, “Inasmuch as *the main goal is to prepare the student for life, the school should make the parents and others more aware, and have effective communication with them*” (42-F, Teacher).” Thus, this participant stressed that the parents’ right to be informed about the students is restricted to being informed about the students’ performance. Another participant highlighting communication between parents and school stated the following: *there needs to be a good dialogue between the school administration, students, and parents* (45-M, Parent). While a parent said that *the school should provide a peaceful and secure atmosphere for all stakeholders* (45-M, Parent) to indicate his/her expectation of the school, none of the other participants mentioned anything about the right to involvement in decision making process at school. Table 4 presents the participants’ views on parents’ responsibilities. Similar to their views on parents’ rights, participants, while expressing their views on parents’ responsibilities, focused on meeting students’ needs, cooperating with school, and giving support to teachers and administrators. However, it is noteworthy that the pre-service teachers indicated parents’ responsibility to express their complaints and suggestions in case of any negativity. A parent explained parents’ responsibilities within the framework of cooperation with teachers: Parents have to be in cooperation with teachers *and do their best to achieve this* (F-22, US-Pre-Service Teacher). Another participant dwelled on parents’ responsibility to meet students’ instructional needs: parents should observe students and make sure that students go to school with proper dress code and right equipment (M-44, Principal).

**Discussion**

The rights and responsibilities derived from participants’ responses were categorized according to the main research questions of the study and classified under main themes and subthemes by the researcher and three other academicians. Contributor A decided that rights and responsibilities can generally be classified under the main themes of Legal, Social and Personal, and the subthemes of obeying rules, study environment, cooperation, effective education, respect, coordination, communication, sense of responsibility, dedication, autonomy and effective administration. Contributor B’s main theme were organizational, personal, and educational, while his/her classification pertaining to rights and responsibilities were about organization, satisfaction, cooperation, administration, organizational ownership, autonomy, equality, persons, society, support, emotions/affective, occupations, students, physical conditions, and universal and educational-instructional
Table 3. The Participants’ Views on Parents’ Rights

<table>
<thead>
<tr>
<th>Administrators</th>
<th>Teachers</th>
<th>Students</th>
</tr>
</thead>
<tbody>
<tr>
<td>To have their children at a school maximizing students’ performance</td>
<td>To be informed by teachers about an issue when necessary</td>
<td>To know their complaints will be seriously considered</td>
</tr>
<tr>
<td>To be welcomed, assisted, and well-listened to</td>
<td>To be able to communicate their expectations to school and to take feedback</td>
<td></td>
</tr>
<tr>
<td>To be well-informed about students</td>
<td></td>
<td></td>
</tr>
<tr>
<td>To cooperate</td>
<td></td>
<td></td>
</tr>
<tr>
<td>To easily reach the administrators</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Parents</td>
<td>Pre-service Teachers</td>
<td>Formation Students</td>
</tr>
<tr>
<td>To be given opportunities for collaboration</td>
<td>To help meet educational expectations</td>
<td>To be granted cost-free education</td>
</tr>
<tr>
<td>To be given educational support by school</td>
<td>To ensure safety of students</td>
<td></td>
</tr>
<tr>
<td></td>
<td>To attend to social events organized by school</td>
<td></td>
</tr>
</tbody>
</table>

Table 4. Parents’ Responsibilities according to Participants

<table>
<thead>
<tr>
<th>Administrators</th>
<th>Teachers</th>
<th>Students</th>
</tr>
</thead>
<tbody>
<tr>
<td>To meet basic needs of students</td>
<td>To inform school about their children</td>
<td>To support and To help teachers and school</td>
</tr>
<tr>
<td>To help school activities</td>
<td>To support the school</td>
<td></td>
</tr>
<tr>
<td>To cooperate with the school</td>
<td>To work harmoniously with teachers and administrators</td>
<td></td>
</tr>
<tr>
<td>To be in dialogue with the school</td>
<td></td>
<td></td>
</tr>
<tr>
<td>To make financial contribution when needed, To take care of the students, pay attention to them</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Parents</td>
<td>Pre-service Teacher</td>
<td>Formation Students</td>
</tr>
<tr>
<td>To support school activities</td>
<td>To give constructive criticism to school, Collaboration</td>
<td>To support the school</td>
</tr>
<tr>
<td>To meet the needs of children</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

aspects. In Contributor C’s classification, main themes are individual, organizational, and instructional. The subthemes were pertaining to individuals, occupation, administration, responsibilities, society, leadership, rules, students, and education and instruction. These groupings of main themes and subthemes were integrated within the framework of Marshall (1950) and Graham’s (1991) classification by the researcher. It is likely that such a procedure will produce a consistent classification of rights and responsibilities based on the concept of citizenship in political philosophy. Here, the labels of civic, social and political were the main themes used for the classification of rights and responsibilities. It was seen that the categorizations produced by the three researchers who contributed to this study lend themselves to being combined under these labels. Also, the researcher examined similar or overlapping labels in the groupings that indicate the subthemes to produce the rights and responsibilities classification shown in Table 5. As can be seen in Table 5, rights and responsibilities bring about certain mutual commitments and expectations between school and its citizens.

An analysis of rights and responsibilities in the civic dimension shows that expecting to be treated with respect defines the right of school citizen while the school’s having to treat the school citizens with justice defines responsibility. Another dimension wherein the school and its citizens have mutual responsibilities and rights is human relations. All citizens of school have a right to an environment
of such merits as respect, cooperation, and effective communication. And the school has the duty to create a suitable environment for human relations.

The rights that fall into the category of social rights resemble the social state concept in the political field. As Kara (2009) asserts, in the concept of social state, the state is defined as a structure which will undertake responsibilities and do the tasks assigned to it. As Fix and Laglagaron (2002) state, social rights refer to access to certain societal and social benefits and to social investments such as opportunities for occupational training and labor market. The majority of rights and responsibilities voiced by the participants of this study fall into the category of social rights. This also shows how much is expected of the school as regards social rights. What is defined in very general terms as the right to education includes such factors as the quality of education and self-development. The results of the study show that the participants expect the school, as a state, to provide the students, teachers, and parents with opportunities to develop themselves. The opportunities for self-development are varied. As regards students, for example, students should not be limited to the curriculum but be given opportunities for social development, in particular. Teachers can have opportunities for developing their professional capacity. Parents may be given self-development opportunities as to child upbringing and parental involvement. Teachers and parents have a right to an ideal instructional environment and study environment as to teaching materials and equipment, physical conditions, course content, and methodology, meeting both individual expectations and universal standards. This right breeds, for the school, responsibilities to meet these conditions.

The participants’ views on rights and responsibilities in the political dimension seem to be bear quite different characteristics in terms of the relation between the school and its citizens. Three basic citizenship approaches, which are defined by Gündüz and Gündüz (2005) as liberal-contractarian, collective and republican, and a state structure that forms based on this, are valid in political philosophy. There are some reflections of these approaches in the data derived from participants’ views. However, overall, there are mostly references to the republican concept of citizenship and state in views as regards political rights and responsibilities. A quote from a participant somewhat reflects the father-state belief: the school is the father; the family, the mother, and the student is the child. (M-24, US-Pre-Service Teacher. As can be seen here, when the school is taken as a state, the school is assigned the role of a father. Citizens’ involvement in the school processes and administration, and decision making processes are major citizenship rights. The school administration is responsible for creating mechanisms to promote participation in this respect. However, as can be seen in the findings of the research, few, if any, references were made to citizens’ right to participation. Overall, the participants ignored the political

<table>
<thead>
<tr>
<th>Citizens of school</th>
<th>Justice, Organizational Ownership, Human relations</th>
<th>Effective education, Study environment, Organizational processes, Opportunities for self-development</th>
<th>Participation Compliance Autonomy Accountability</th>
</tr>
</thead>
</table>

Table 5. Mutual Rights and Responsibilities of School and Its Citizens
Rights and Responsibilities of Teachers and Parents as School Citizens

Another important right which was not mentioned by the participants is the right to choose school. According to Brouillette (1999), this right, which was not attached much importance previously, has become a focal point of the initiatives geared toward the improvement of education. The families’ right of choice is important as it has made the schools more accountable and education more effective.

The results of this study have revealed that the right to participation in the school administration and the right to have a say in the school activities were not indicated for the teachers and parents. As for parents, these results are in concordance with those of Addi-Raccah and Ainhoren’s study (2009); in their study, teachers’ attitude to parental involvement is more negative on professional and bureaucratic governance level, whereas it is more positive on cooperation-partnership oriented governance level. As Onsman (1996) claims, as regards the parents’ role, the terms parent involvement and parent participation are confused. Parent involvement refers to acting a supportive role in and attending the school processes on voluntary basis, whereas parent participation means parent’s participating in the decision making processes at school and realizing the administrative duties together. This also applies to the findings of the present study. Most educationalists regard parent involvement as the only form of participation and find it sufficient. The related literature point to the importance of teachers’ involvement in school administration and decision making process for the effectiveness of the school (Wu and Tseng, 2015). However, the findings of studies carried out in different countries show that the participation level of teachers is lower than expected, and they are mostly involved in decisions pertaining the students. Participation is also at a low level in administrative issues. Moreover, teachers wish to be involved in all aspects of the decision making process at school and at increased levels, so do the new teachers demand greater participation in decision making (Sarafidou and Chatziioannidis, 2013; Turnbull, 2004; Swanepoel, 2009; Brown, et al., 1994; Ndiku, Simiyu and Achoka, 2009; Aksay and Ural, 2008). The findings of the present study are somewhat different from those of other studies. The fact that the participants of this study, teachers in particular, disregarded the political rights and responsibilities pertaining to involvement can be explained twofold: awareness level about rights and different citizenship understandings and experiences in different societies and societal segments. In political respect, greater importance was attached to the responsibilities of the school citizens, which agrees with some of the results in the existing literature. Ersoy (2012) found out that the participants perceive those who first of all adopt social and moral values approved by society as good citizens. Similarly, Holden (2004) found out that parents advocate the social and moral side of the citizenship education at school more than societal involvement. According to Şahbudak and Ayan (2011), this situation can be explained to some extent by the fact that citizenship is a product of the social engineering project, which the administrative elite in Turkey have tried to establish in a top-down way, and under the influence of west to some extent, since the Ottoman modernization. Duman and Doğdu (2010) point out that, in the initial years of the Turkish Republic too; the citizenship education put greater emphasis on responsibilities than on rights, particularly teaching citizens their main responsibilities towards the state. Ersoy (2012) explained this quoting from Üstel (2004): it is a consequence of an education process imposing the understanding of “passive citizens doing their duties”. Ersoy added the political events of 1970-1980 in Turkey may have undermined the public interest in politics. Janoski (2014) asserted that
a similar situation applies to China, where the understanding of citizenship is predominantly based on communitarian model. He claimed that, although improvements of citizens’ rights have been a major goal as a result of Confucianism, the focus has been more on responsibilities than on rights. Thus, it seems that there is a far more intensive understanding of citizenship based on responsibilities in communities which have a cultural background different from the western societies. According to the findings of this study, the participants displayed a fairly limited understanding of citizenship concept in the political dimension, which reveals a lot about the extent to which they are conscious about citizenship.

A general overview of the findings of this study shows that all the participants agree with that being a member of a school grants certain rights, as well as requiring certain responsibilities for all groups. This views expressed by the participants are quite important from the viewpoint of OCS. In OCB concept, an awareness of the fact that the members of the school community have mutual rights, as well as responsibilities, is far beyond the approaches reflecting only the mainstream tendencies and focusing only on citizens’ responsibilities, and it is of utmost importance for a wholesome establishment of citizenship relations. Many studies conducted in Turkey revealed that the members of school community have a positive attitude towards and a high level of awareness about rights and democratic values (İlgan, Karayiğit and Çetin, 2013; Yılmaz, 2011; Yazıcı, 2011; Akın and Özdemir, 2009; Öcal, 2011; Çarkçı and Er, 2010; Keleş and Tonga, 2014; Saracağlu, Evin and Varol, 2004; Dolmacı and Kuşat, 2015). These results reveal important clues about owning rights and adopting a democratic government concept based on human rights, which seem to be overlapping with some results of the present study pointing to the existence of an awareness of the owned rights. However, it was observed that the way the rights were expressed varied across groups. According to participants, the different statuses held at school brought about different sets of duties and responsibilities. For example, it is thought that those who are in administrative position have mostly rights and duties related to responsible administration, those who are in teaching position have rights and duties related to the teaching process, those who are parents related to support to school. Few participants talked about rights and duties pertaining to organizational processes, administration, and involvement in administration. Some participants eloquently expressed this. A school administrator said everybody within the school organization has certain rules; the student has the right to a good education; the parents have the right to perfect education for their children (F-22, US-Pre-Service Teacher). Thus, he/she underscored that the positions held produce rights brought by the position. Similarly, another school administrator stated the following: Each stakeholder has a duty of his or her own; the student has to learn; the teacher has to teach; the parents have to cooperate with the school (37-M, Principal).

Conclusion

This study intends to make a rights and responsibilities classification, based on the participants’ views and the conceptual heredity pertaining to political citizenship concept. The results suggest that participants’ perceptions of organizational citizenship notion are remarkably influenced by the citizenship style they experience in their societal environment. A general analysis of the participants’ views reveals that the concept of passive citizenship, which puts greater weight on responsibilities than on rights, is overwhelming. The findings of this study point to the need for an awareness process as regards school citizenship. For
example, a dynamic and interactive process of citizenship negotiation that will embark on between schools and their citizens will facilitate such awareness that will affect all sides, the administrators, teachers, parents, and pre-service teachers. Another major result of the research is that the endeavor to effectively educate the students, who are regarded as the very cause of the existence of schools, has a twofold effect on the conceptualizing attempts related with organizational citizenship: it reinforces and facilitates. Merely focusing on success in the education of students may cause some of the elements of citizenship to be disregarded, particularly on the political level. Moreover, the school should be considered as a structure where all the stakeholders will devotedly pay effort somewhat as in the good soldier syndrome, rather than as a setting where the stakeholders rationally come together within the balance of rights and responsibilities. Nevertheless, considering that the very cause of a school as an organization is to give effective and high-quality education to students helps develop a potential for an understanding of citizenship based on rights and responsibilities balance. Indeed, what makes the rights and responsibilities of different groups at school legitimate is the good education their own children and students receive. If this can be clearly seen, then it is most likely that the school’s authoritarian impact, like that of the father-state, which has a formative and monotyping structure, can be prevented.

Implications and Recommendations for Further Research

Schools should establish a citizenship oriented relation with its members, and to this end, they may start a transparent and a constructive negotiation process with the citizens, and form unique contracts for this. Awareness raising activities for all citizen groups can be organized to help them become more conscious school citizens. However, trainings for this purpose may not suffice alone for the establishment of an effective OCS; active citizenship should be experienced by all parties.

Further research should be conducted to explore all the aspects of organizational citizenship. Theoretical and empirical research should be conducted to develop approaches based on organizational citizenship at school and the consequent balance of mutual rights and responsibilities. New research should extend to different school types, stages, and all school citizens, besides students.
References


