Design of an Online Community – Executive Function in Education

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**Introduction and Background Information**

Executive function (EF) is an umbrella term used to describe the complex cognitive mechanisms that enable mental flexibility and goal-directed behavior (Meltzer, 2018). Development of the EF system occurs at different stages during childhood, adolescence, and young adulthood (Meltzer, 2018; Barkley, 2012). EF is responsible for individuals’ self-management, organization, planning, problem solving, self-motivation, task initiation and completion, task shifting, and behavioral inhibition and restraint (Barkley, 2012). Recent scientific research has linked certain prevalent mental disorders, such as ADHD, to EF deficiencies. In fact, ADHD is now widely recognized as a disorder of the brain’s cognitive management system, its EF (Brown, 2013; Barkley, 2012, 2015).

Most, if not all teachers have had students who struggle with certain EF related behaviors. Educators, researchers, and child study and mental healthcare professionals know the important role of EFs in educational success. They also recognize that no two students are alike in their EF strengths, weaknesses, and their cognitive abilities. Due to a lack of EF educational resources for them to consult, educators often resort to trial and error to discover ways to address EF issues in their classrooms.

Executive Function in Education (EFE) is an online community established in response to the absence of resources dedicated to this field. The purpose of EFE is to bring together dedicated individuals who share a common interest in this area, and who will support each other in their growth and understanding of this phenomenon. Target members include teachers, parents, child study and mental health professionals, researchers, students, and school administrators.

**Methodology and Design**

The methodological approach to development of this online community largely followed the works of Kraut & Resnick (2011) and Palloff & Pratt (2007). It began with understanding the importance of community, which Shaffer and Anundsen (1993) define as “a dynamic whole that emerges when a group of people share common practices, are interdependent, make decisions jointly, identify themselves with something larger than the sum of their individual relationships, and make a long-term commitment to well-being (their own, one another’s, and the group’s)” (Palloff & Pratt, 2007). This definition drove the vision for the EFE community, which seeks to draw global membership comprised of individuals dedicated to creating and sharing knowledge, providing support, and improving education.

There are several theories that support this definition of learning communities. Constructivism (Vygotsky, 1978), the theory that people construct knowledge and meaning from their experiences, is central to the identity and purpose of the EFE community. Situated learning (Lave & Wenger, 1991) is another underlying theory, as is discovery learning (Bruner, 1966), which suggests it is best for learners to discover information for themselves. Social development theory (Vygotsky, 1978), the theory that consciousness and cognition are the end product of social behavior also supports the definition of community that guides EFE.

Multiple EFE site features grew out of social and psychological understandings of how communities function. Palloff & Pratt’s (2007) concept of social presence and electronic personality contributed to the technical approach to designing features of the online community, including the personalized profile setup options. A primary goal of EFE is for members to feel comfortable and safe in expressing their views and sharing their knowledge. This is achieved by applying Palloff and Pratt’s (2007) six elements of successful learning communities; 1) honesty, 2) responsiveness, 3) relevance, 4) respect, 5) openness, and 6) empowerment. However, instead of applying these elements in an online course context, EFE embraces and adapts them to its own unique community.

The concepts of shared responsibility, rules, and norms guide the development and design of EFE (Palloff & Pratt, 2007). Although community managers, who are drawn from the membership, are responsible for managing various aspects of EFE, members are encouraged to play an active role in monitoring and decision-making with respect to content and design. This is evidenced by the poll feature, which allows members to voice their opinions and preferences regarding site design, which in-turn encourages member commitment to the community (Kraut & Resnick, 2011). The poll function also serves to assess and improve the effectiveness of the EFE community site. In addition, members share the responsibility for monitoring community activity to ensure compliance with the rules.

EFE site activities were determined by benchmarking other successful online communities. Forums, groups, events and article sharing are among the most popular activities found in online communities and have therefore been included in EFE. Discussion forums and groups allow members to find their niche interest within the community and share their relevant experiences with others (Kraut & Resnick, 2011). Examples of groups in EFE include *parents and care givers* and *educator strategies*. Members can start discussion forums to explore topics of their own interest including *promoting organizational skills*, *mindfulness meditation*, and *a diet to maintain good executive function*.

**Growing the Community**

Multiple strategies based upon Kraut & Resnick (2011) and Palloff & Pratt (2007) will be used to grow EFE membership, including bootstrapping and promoting sharing through outside social networks. New members will be encouraged to create content to attract more members (Kraut & Resnick, 2011). All postings in EFE have an accompanying Twitter, Facebook, and Google+ share button to allow members to share with other communities on those social networks.

**Comparing and Contrasting with Other Sites**

Two popular online communities were used to benchmark design ideas for EFE. Www.understood.org is an online community dedicated to helping parents of children with learning and attention issues. Although their membership numbers are not posted on the site, the largest group chat consists of 36,644 members engaged in 750 discussions. Like EFE, the option to share posts via Facebook, Twitter, Pinterest, and Google+ is highly visible on www.understood.org, as is the button to add events to Google Calendar. The *experts live* feature of the www.understood.org community is something that EFE can adopt after building its membership and identifying experts who are willing to deliver online webinars.

Www.chadd.org is unique in that it has two subcommunities dedicated to parents of children with ADHD and adults with ADHD. The parent community has 4758 members and contains two unique design features including a poll and an option to follow the groups. EFE adopted the polling option, however it does not currently have the follow button available for each group.

**Course Objectives Met**

The current project is evidence that course objectives for EDTC 816 have been met. The design and purpose of the EFE community is articulated using research-based methodologies and theoretical foundations. The technologies that enable activities and sharing are clearly described and available for viewing on the community site. Understanding of community leadership roles is evidenced by the leadership profiles presented on the site, along with clear rules and guidelines for members to follow. Knowledge of member rolls is evident throughout the site, including the community guidelines, which encourage members to play an active role in upholding the community rules and contributing to site content. Finally, the design and development of EFE fulfills the final objective for this course, which is to create a prototype of an online community.

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