

CREATING AND STRUCTURING CHESS PROFESSIONAL DEVELOPMENT FOR TEACHERS IN THE UNITED STATES

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Upon hearing the suggestion that teachers offer chess in the classroom, educators often respond, “Chess? You mean the game, chess?” In the United States, chess does not have the cultural heritage found in many other countries. Most teachers have no knowledge of chess history other than the name of Bobby Fischer from the Paleolithic period of the 1970s. Bridging that knowledge gap and creating and structuring professional development in chess for teachers requires a commitment to meet their unique needs. Though philanthropy and political mandates have had an impact in some areas of the country, for the majority of the United States, achieving a lasting presence for chess in education requires support for the game from within that community. Imbedding chess within the educational community demands effort and creativity on the part of the chess community to help educators understand and accept chess as an educational tool.

Successfully creating chess professional development requires planners to consider the following factors: recognize context, create awareness, reach decision makers, and identify resources. The first requirement is to recognize the context in which educators operate. Teachers face decreasing resources and increasing demands. Galluci, Peck, and Sloan, (2010) in their study of the implications of performance assessment policies, recognized that the current discussion of education reform occurs “amid a rhetoric of ‘crisis,’ ‘risk,’ and ‘failure’” (4, page 451). Understanding this context means presenting the value of chess so that teachers believe that the game can convey key educational concepts, engage students, and meet administrative classroom requirements. Underlying this approach is answering the question, posed directly by some teachers, “Why should I take time out to learn and teach chess rather than just teach as I normally do?”

A second factor is to create awareness of the benefits of chess in settings appropriate to the education community. Existing opportunities for professional development built into the annual schedule of the school system can be tapped to create this awareness and build the demand for longer training. These occasions may last from an hour to a full day and will likely include

teachers from a broad spectrum of subject areas. Pointing out the value of these events, Patrick (2009) determined, “it is the responsibility of every district to provide superior ongoing professional development for teachers throughout their career” (9, page 280). These conferences highlight current educational trends and topics and a presentation about chess places the game in the middle of the educational conversation. Local, regional, and state education conferences present invaluable openings to expose teachers and administrators to the game. The teachers and administrators who are the target audience for future professional development events attend these conferences. At the very least, a conference presentation adds credibility to local chess education efforts. The goal in any case is to lay the groundwork for the value of chess and the possibility that any teacher can use this tool.

Even when one has achieved this groundwork, the next step must be taken to reach the decision makers who are essential to the creation of a professional development event that is recognized by the school system. Every region is different and these key individuals may include teachers, administrators, parents, area university staff, and even community leaders. Without the support of key decision makers, educators may not receive credit for the professional development offering and may not even be encouraged to attend. Their support is certainly critical if the professional development requires financial assistance.

The final factor for success in creating professional development is to identify the resources required for the scheduling of the event. These resources include physical facilities, financial support, and appropriate individuals. Whenever possible, facilities should be used that house other professional development offerings by the school system. Since the event should be viewed as primarily educational, the setting should reinforce that idea. Financial support, especially for longer professional development events, may include teacher stipends as well as materials. If the school system does not provide the finances, funding from the community should be solicited. Finding the appropriate individuals to solicit or provide adequate support can mean the difference in creating and maintaining a professional development presence. As a consultant to both the chess and education communities, I have discovered that educational foundations, universities, and even area businesses are often willing partners.

In addition to creating an awareness of chess, the structuring of the professional development to be offered is key to its adoption by educators. Updating teacher skills through professional development is standard procedure in American school systems. Loucks-Horsley, et al, (2003) indicated that it has “remained a key strategy in the educational reform movement” (6, page 44). Calling it “crucial,” Drew (2011) posited that professional development is one of the

factors that should be “significantly” increased if teachers are to continue in their profession (2, pages 88, 206). Moss, Noden, and Vacca, (1994) called attention to the fact that professional development is an ongoing process that should be:

- Hands-on, relating directly to classroom teaching and learning;
- Individual, evoking a personal, reflective response;
- Collaborative, joining professionals in working partnerships;
- Gradual and long-term, taking time and commitment (8, page 672).

Any effort to create chess professional development should take these elements into account.

Structuring a presentation about chess for a period of one day or less requires setting clear goals for the instructor and the audience. A typical conference session of forty-five minutes offers the chance to present limited chess knowledge for an audience who may never have seen a chessboard. This information then becomes the springboard to the connection of chess to literacy, math, critical thinking, and life skills. Engaging the audience in solving a simple chess position enables them to identify similar critical thinking processes they desire for their students. This type of presentation generates interest and requests for additional information that can be addressed after the session. The longer the presentation, the greater the opportunity the presenter has to establish the connections between chess and classroom instruction in greater detail.

Before addressing the structure and content of a multi-day professional development, some consideration should be given to teacher recruitment and incentives for this longer timeframe. Educator participation should be solicited by personal contact as well as through the school system’s existing communication structures. The minimum that teachers will expect is to receive professional development credit for the training. This credit must receive prior approval by the administration of the local school system. Some school systems require that teachers receive a stipend in addition to the continuing education credit. Adequate information should also be communicated regarding materials they can expect to receive and commitments expected beyond the training. If an after school program is one of the desired outcomes, then a minimum of two teachers per school attending the training is optimal. Having two teachers provides internal support as well as continuity if one of the teachers leaves the school.

The structure of the professional development impacts its success. Through extensive experience at designing professional development in the areas of math and science, Loucks-Horsley, et al, (2003) determined that effective training:

- Provides opportunities for teachers to build their content and pedagogical content knowledge and examine practice.
- Is research based and engages teachers as adult learners in the learning approaches they will use with their students.
- Provides opportunities for teachers to collaborate with colleagues and other experts to improve their practice (6, page 44).

A minimum of four consecutive half days of chess training is recommended so that adequate time can be given for the introduction and digestion of the material as well as the opportunity to complete assignments outside of the instructional period that reinforce the skills introduced. The audience must have sufficient experiences with the new subject matter to achieve enough competence and confidence by the end of the week to replicate the instruction in their own classroom.

The daily structure of the training addresses multiple needs of the teachers. The schedule factors in time for community building among the teachers and a personal connection with the professional development leader. Time is required to review previous knowledge and to introduce new material. Reinforcement activities are planned to help teachers grasp the chess concepts well enough to introduce them to others. In fact, if time is available, opportunities to actually teach someone else the material is recommended. Exit cards at the end of each day's session are one way for the leader to help teachers reflect on what they have learned and ask questions that should be addressed the next day. Soliciting feedback throughout the training is essential to avoid gaps in understanding and to create connections between the material and the teacher's classroom environment.

Since many, if not most, of the teachers who attend the training will have no background in chess, it is important for the leader to help overcome the intimidation most of them feel. Teachers are uncomfortable with the prospect of teaching a subject they have just learned and in possibly knowing less about chess than some of their students. Opportunities for praise and encouragement should be anticipated. In addition, relating stories of the successful introduction of chess by teachers as well as student success narratives can provide the needed inspiration to overcome fear in the face of learning what appears to be an incredibly complex and daunting game.

Instruction in the basics of chess is connected to classroom realities. Lessons should be constructed that can fit a twenty to thirty minute period. Chess information handouts already

prepared assist teachers in lesson preparation. The introduction of technology (chess playing engines, online tutorials, instructional DVDs, etc.) is recommended but the fact is that not all teachers have access to those resources. Modeling with a simple demonstration board and standard chessboards and pieces is effective in reassuring teachers that chess can be used in any classroom setting.

Connecting chess to instructional expectations is essential not only to demonstrate its value but also to help teachers relate the game to the standards to which they are held accountable. In recent years the Common Core Standards have been created and adopted by a majority of states to indicate what students should learn at a given grade level. Though Common Core Standards have inspired debate among educators and attracted media attention, they provide an open door to demonstrate the ability of chess instruction as a heuristic. For example, Philips and Wong (2010) reminded educators that “literacy skills cross subject-area boundaries but are not formally taught once students enter the middle grades...” Yet the Common Core Standards require “writing that calls on students to present and defend arguments” (10, page 40). Chess instruction that calls for students to orally defend their choices can reinforce these literacy skills.

Chess can also be used to address key connections to literacy strands such as reading informational text, writing, speaking and listening, and language acquisition. McLaughlin and Overturf (2013) pointed out that, “Although the Common Core State Standards do not explicitly address the teaching of reading comprehension strategies, we suggest many comprehension skill and strategy applications...” (7, page 51). These include self-questioning, visualizing, and evaluating. These are precisely the skills that chess players develop as they approach and solve chess problems and as they repeat this problem-solving methodology throughout a game of chess. The professional development should include activities that help teachers experience for themselves the application of these strategies.

The connection between chess and mathematics has been observed in various settings even outside of education. Tegmark (2013) contemplated the mathematical nature of the universe and concludes with the Immortal Game in chess and the fact that, “Chess involves abstract entities (different chess pieces, different squares on the board) and relations among them” (11, page 47). Within educational circles, the following Common Core Standards (2014) for mathematical practice provide another opportunity to demonstrate the value of chess as a vehicle of instruction:

- Practice 1: Make sense of problems and persevere in solving them.

- Practice 2: Reason abstractly and quantitatively.
- Practice 3: Construct viable arguments and critique the reasoning of others.
- Practice 4: Model with mathematics.
- Practice 6: Attend to precision.
- Practice 7: Look for and make use of structure (1, page 1).

Incorporating activities that illustrate these standards can assist teachers of any grade level to relate chess to their existing lesson plans.

As teachers are led to analyze even basic chess positions throughout the professional development, they see the literacy and math skills inherent in the game. In addition, the process of position analysis provides evidence of the critical thinking that occurs. Hong and Bart (2007) observed the following:

Chess playing is a strategy game that requires higher order cognitive skills. The acquisition of higher order cognitive skills plays a major role in enabling students to better establish and attain goals, identify potential responses when making decisions, and achieve self-regulated learning (Wehmeyer, Palmer, Agran, Mithaug, & Martin, 2000). As a result, investigators have examined the usefulness of chess playing to develop higher order cognitive skills (Horgan, 1987; Horgan & Morgan, 1990). Higher order cognitive skills such as analysis, evaluation, and logical thinking are prevalent in the game of chess (Grossen, 1991) (5, page 89).

Pointing out higher order thinking questions throughout the chess training reminds teachers of the application of this type of analysis to all subject areas. Emphasis should be given to the prevalence of these higher order questions and teachers should be asked to make specific curriculum connections and share them with the entire group.

The professional development schedule should include an introduction of the supporting chess infrastructure. Provide information about local chess clubs, chess coaches, and tournaments as well as the national and international chess organizations. Having representatives from the local chess community attend the training can build an important bridge between the two groups. Knowledge of the larger chess community encourages teachers to confidently initiate the game at school and then partner with that community to provide additional chess experiences. Student

chess activities outside the classroom help to create a culture of critical thinking. In addition, creating this infrastructure of chess activities that includes parental involvement can contribute to student attendance. Such collaborative efforts are welcomed by educators. Epstein and Sheldon (2001) note, “Developing productive school-family-community connections has become one of the most commonly embraced policy initiatives in schools and school districts” (3, page 309). Chess study and play along with tournament participation reinforce chess skills and the literacy, math, and higher order thinking skills essential to academic success. In the process, the chess community and parents become important partners in education.

Offering a classroom set of chess sets, chess clocks, and a demonstration board to professional development participants can be an incentive to attract teachers to the training. In some cases, the provision of these materials is tied to a commitment by the teacher to use chess in the classroom and to initiate an after school chess program. Depending on the source of the funding for the training event, requirements may exist to provide student data and other information as part of the program accountability. In any case, following up the training with additional correspondence offers greater chances for successful implementation of the training received by teachers. This ongoing relationship can be achieved by phone, through a dedicated website, social media, or emails. Maintaining teacher enthusiasm and confidence insures a greater prospect of success and sets the stage for additional professional development events.

The Alabama State Department of Education (DOE) is in the early stages of implementing a multi-year pilot project to introduce chess in the public schools. This effort combines the resources of the state DOE as well as the Alabama Chess Federation. Current planning includes the creation of the teacher curriculum as well as the structuring of professional development for participating teachers. All of the factors mentioned above continue to be instrumental in the formation of this initiative and it is hoped that the successful completion of the pilot program will serve as a model for other states.

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Summary

Creating and structuring chess professional development for teachers are key strategies for imbedding chess within the education community. Opportunities to present chess to decision makers at local, state, and national conferences allow the proposition of chess as a teaching tool to enter the mainstream of education conversations. Training teachers to use chess in the classroom requires adequate time, sufficient resources, and appropriate scheduling. The structure of the professional development must be adapted to educator needs and connect chess to curriculum standards. Bringing together teachers, parents, and community leaders within a framework of scholastic and extracurricular activities enhances the success of the professional development as well as the entire chess initiative.