

2006-2007 :: Chess Certificate**1. Mission Statement:**

The mission of the Chess in Education Certificate is to provide educators with practical examples of using chess in K-12 classrooms to teach critical thinking, mathematics, social skills, and reading. The Chess in Education Certificate provides educators with the skills needed to develop chess curricula that help students reach educational goals. These educators are prepared to improve the academic performance and develop the humanistic potential of their students by exposing them to chess. Educators are further enabled to propose, and pursue funding for, chess educational efforts at their institutions.

2. Objectives:**2.1 Demonstrate Knowledge:**

The student will be able to explain the rules of chess, apply basic strategies in playing chess, notate, and analyze a chess game.

2.1.1 Related General Education Outcome Item(s):

1. Communication; 2. Mathematics; 10. Foundational Knowledge in Discipline(s); 16. Independent Thought

2.1.2 Related Strategic Plan Item(s): VI-1 K-16 Education**2.1.3 Student Related Objective:** Yes - This is a student related objective.**2.2 Improve Curricular Process:**

The student writes lesson plans that combine chess and educational goals, teaches those plans, and reflects on what could be improved in this curricular process.

2.2.1 Related General Education Outcome Item(s): 1. Communication; 9. Social & Behavioral Science; 15. Research & Design; 18. Practicum**2.2.2 Related Strategic Plan Item(s):** VI-1 K-16 Education**2.2.3 Student Related Objective:** Yes - This is a student related objective.**2.3 Research and Develop:**

The student researches and develops a proposal for a chess program for members of a particular community institution (such as a school, library, recreation center, prison, retirement home, etc.).

2.3.1 Related General Education Outcome Item(s): 1. Communication; 12. Guided Research; 15. Research & Design**2.3.2 Related Strategic Plan Item(s):** VI-1 K-16 Education**2.3.3 Student Related Objective:** Yes - This is a student related objective.**3. Measures & Findings:****3.1 Complete Chess Game:**

Students in Chess I (ED 4358/5344) and Chess II (ED 4359/5345) play a chess game with their classmates. With the help of course materials such as Chess for Dummies and a Your First Lessons in Chess CD, students complete a chess game with an accurate score sheet and write a chess analysis that follows a rubric provided by the instructor.

3.1.1 Success Criteria: 80% accuracy on chess notation**3.1.2 Related Objective(s):** Demonstrate Knowledge**3.1.3 Results Related To Success Criteria:**

Students were 85% accurate on chess notation in their chess games for ED 4358 and ED 5344. ED 4359 and ED 5345 were not held due to lack of enrollment.

3.1.4 Achievement Level: Met**3.1.5 Further Action:** No**3.2 Complete Chess Game:**

Students in Chess I (ED 4358/5344) and Chess II (ED 4359/5345) play a chess game with their classmates. With the help of course materials such as Chess for Dummies and a Your First Lessons in Chess CD, students complete a chess game with an accurate score sheet and write a chess analysis that follows a rubric provided by the instructor. Data collected every semester.

3.2.1 Success Criteria:

80% of students analyze chess games using appropriate chess terms and principles. Game analysis shows awareness of principles and rules of chess (compare to analysis rubric).

3.2.2 Related Objective(s): Demonstrate Knowledge

3.2.3 Results Related To Success Criteria:

Students analyzed chess games using appropriate chess terms and principles in ED 4358 and ED 5344. ED 4359 and ED 5345 were not held due to lack of enrollment.

3.2.4 Numerical Results:

Of the 26 students enrolled in ED 4358 and ED 5344 in the spring of 2007, 21 turned in chess notation scoresheets and analysis that met the criteria.

3.2.5 Achievement Level: Met**3.2.6 Further Action:** No**3.3 Submit Lesson Plans:**

Students in Chess I submit lesson plans, based on models provided by the instructor and the course materials, for corrective feedback from the instructor. After modifying their plans based on this feedback, the students teach the plans. As they teach, they self-monitor to see if the plans met their goals and write a reflection about the curricular process.

3.3.1 Success Criteria:

The lesson plans, at the final draft stage, must be clear enough that another teacher could use them to meet educational goals in his or her classroom. (Steps of plans and goals must be clear; qualitative assessment). 80% of students will create final drafts that meet this goal.

3.3.2 Related Objective(s): Improve Curricular Process**3.3.3 Results Related To Success Criteria:**

Students' lesson plans were written at a level that another teacher could use those lesson plans.

3.3.4 Numerical Results:

One student who took ED 4358 in the fall of 2006, one student who took ED 4358 in the spring of 2007, and one student who took ED 5344 in the spring of 2007 will have their lesson plans published in my forthcoming book Science, Math, Checkmate: 32 chess activities for inquiry and problem solving.

3.3.5 Achievement Level: Met**3.3.6 Further Action:** No**3.4 Submit and Teach Lesson Plans:**

Students in Chess I submit lesson plans, based on models provided by the instructor and the course materials, for corrective feedback from the instructor. After modifying their plans based on this feedback, the students teach the plans. As they teach, they self-monitor to see if the plans met their goals and write a reflection about the curricular process. Data collected every semester.

3.4.1 Success Criteria:

Reflections must tell what happened during the teaching of each lesson plan, what went well, what went poorly, and what has been learned to be applied to future chess teaching. (Qualitative assessment). The criterion of success is whether the reflection states what went well, what did badly, and what should be improved in the student's future practice. Again, reflection about teaching is a educator's goal. 80% of students will write reflections that meet the stated criteria.

3.4.2 Related Objective(s): Improve Curricular Process**3.4.3 Results Related To Success Criteria:**

Students reflected in writing on how teaching their lesson plans went, and drew conclusions for how to teach future lessons.

3.4.4 Numerical Results:

21 of 26 students enrolled in ED 4358 and ED 5344 in the spring of 2007 turned in Reflections that met the criteria.

3.4.5 Achievement Level: Met**3.4.6 Further Action:** No**3.5 Research Paper:**

With assistance from the instructor and from course materials, students in Chess II write a paper, similar to a grant application, detailing how a chess program could be developed or enhanced for members of a community institution. The completed paper (similar to a grant application) specifies a chess curriculum relevant to members' developmental stage(s) and the needs of society. The students' papers follow the curricular principles developed by Ralph Tyler (The Tyler Rationale). Data collected every semester.

3.5.1 Success Criteria:

Discussion postings and paper section about developmental needs of learners. (Qualitative assessment based on published criteria.) 80% of students will meet criteria.

3.5.2 Related Objective(s): Research and Develop**3.5.3 Results Related To Success Criteria:**

Chess II (ED 4359 and ED 5345) was not able to be held in fall 2006 or spring 2007, so this outcome could not be assessed.

3.5.4 Achievement Level: Not Met**3.5.5 Further Action:** No**3.6 Research Paper:**

With assistance from the instructor and from course materials, students in Chess II write a paper, similar to a grant application, detailing how a chess program could be developed or enhanced for members of a community institution. The completed paper (similar to a grant application) specifies a chess curriculum relevant to members' developmental stage(s) and the needs of society. The students' papers follow the curricular principles developed by Ralph Tyler (The Tyler Rationale).

3.6.1 Success Criteria:

Discussion postings and paper section about needs of society. (Qualitative assessment based on published criteria.) The criterion of success is if 80% of students described societal needs.

3.6.2 Related Objective(s): Research and Develop**3.6.3 Results Related To Success Criteria:** Chess II (ED 4359 and ED 5345) was not held in fall 2006 or spring 2007, due to lack of enrollment. Therefore, the objectives were not met.**3.6.4 Achievement Level:** Not Met**3.6.5 Further Action:** No**3.7 Research Paper:**

With assistance from the instructor and from course materials, students in Chess II write a paper, similar to a grant application, detailing how a chess program could be developed or enhanced for members of a community institution. The completed paper (similar to a grant application) specifies a chess curriculum relevant to members' developmental stage(s) and the needs of society. The students' papers follow the curricular principles developed by Ralph Tyler (The Tyler Rationale).

3.7.1 Success Criteria:

Discussion postings and paper section about chess curricula. (Qualitative assessment based on published criteria.) The criterion of success is if curricula was clearly described in 80% of students' papers.

3.7.2 Related Objective(s): Improve Curricular Process; Research and Develop**3.7.3 Results Related To Success Criteria:**

Chess II (ED 4359 and ED 5345) was not held in fall 2006 or spring 2007, because of low student enrollment. Therefore, the objective was not met.

3.7.4 Achievement Level: Not Met**3.7.5 Further Action:** No**5. Closing the Loop:****5.1 Students will continue to be required to demonstrate knowledge of chess by playing a chess game.:**

Students will continue to be required to demonstrate knowledge of chess by playing a chess game.

5.1.1 Related Objective(s): Demonstrate Knowledge**5.1.2 Related Measure(s):** Complete Chess Game; Complete Chess Game**5.1.3 Responsible Person:** Alexey Root**5.1.4 Target Date:** 2007-2008 Academic Year**5.1.5 Priority:** Low Priority**5.2 Continue curriculum creation:**

Students will continue to be required to write lesson plans that meet chess and educational goals, to teach those plans, and to reflect on how the teaching went.

5.2.1 Related Objective(s): Improve Curricular Process**5.2.2 Related Measure(s):** Submit Lesson Plans; Submit and Teach Lesson Plans**5.2.3 Responsible Person:** Alexey Root**5.2.4 Target Date:** 2007-2008 Academic Year

5.2.5 Priority: Low Priority**5.3 Continue research and development.:**

Students will research the needs of institutions and develop chess educational programs to meet those needs.

5.3.1 Related Objective(s): Research and Develop**5.3.2 Related Measure(s):** Research Paper; Research Paper; Research Paper**5.3.3 Responsible Person:** Alexey Root**5.3.4 Target Date:** 2007-2008 Academic Year**5.3.5 Priority:** Low Priority**6. Analysis:****6.1 Program/Unit Strengths:****6.1.1 Objectives/Outcomes Exceeded or Met:** Students will demonstrate knowledge of chess by playing a chess game.

Note: Students demonstrated this knowledge by playing a classmate a game of chess, recording that game, and analyzing that game.

6.3 Program/Unit Strengths:**6.3.1 Objectives/Outcomes Exceeded or Met:** Students will write lesson plans that meet chess and educational goals, to teach those plans, and to reflect on how the teaching went. Note: Students met this objective by writing and teaching lesson plans, and reflecting on how the teaching of those plans went.**6.3.2 Other Strengths:**

Three plans written by students in 2006-2007 will be included in my new book Science, Math, Checkmate: 32 chess activities for inquiry and problem solving (Libraries Unlimited, estimated publication date spring 2008).

6.6 Program / Unit Weaknesses:**6.6.1 Objectives / Outcomes Partially or Not Met:**

Students will research the needs of institutions and develop chess educational programs to meet those needs. Note: This objective was not met because the class teaching this objective had insufficient enrollment in 2006-2007 and was not held.

7. Report:**7.1 Executive Summary:**

The Chess in Education Certificate reflects the increasing interest in the U.S. in using chess as an educational tool. For example, "the Maryland State Department of Education will provide grant funding up to \$200,000 to support Chess in Maryland Schools. The funding was made available through a budget appropriation in the Governor's supplemental budget during the 2006 General Assembly. Any local school system or individual school, community-based organization, or not-for-profit organization that has a desire to offer chess instruction to students in Maryland schools is eligible to apply for one of the estimated 20 grants to support an existing or new chess program. The chess programs can occur before or after school, during the instructional day, or during the summer." (source: <http://somd.com/news/headlines/2007/5164.shtml>). Here in Texas, the Brownsville Independent School District (BISD) includes chess in many of its schools as part of the Department of Advanced Academic Services. According to <http://www.bisd.us/daas/chess/2k7/oct/coaches.xls> there are chess coaches at 32 BISD elementary schools, 10 middle schools, and 9 high schools. With the interest of school districts, principals, teachers, parents, and students in chess in education comes a need for educators versed in writing curricula that connects chess to educational goals and who are capable of developing or maintaining chess programs at institutions. The chess in education certificate is designed to meet this need.

The first course in the sequence is Chess I. The course is offered as ED 4358 for undergraduate credit and ED 5344 for graduate credit. Students in these courses have successfully written lesson plans and taught these lesson plans to students. Some of their curricula has been published, including several students' lesson plans in the instructor's 2006 book Children and Chess: A Guide for Educators. Those students were in past semesters of ED 4358/5344. However, one fall 2006 student and two students from spring 2007 have already had their lesson plans accepted by the instructor to appear in a forthcoming (Libraries Unlimited, spring 2008) book Science, Math, Checkmate: 32 chess activities for inquiry and problem solving. Student evaluations for ED 4358/5344 are collected by UT TeleCampus and are available from Dr. Larry Redlinger's office. Those evaluations have been positive.

There are some concerns regarding the Chess in Education Certificate courses, such as low enrollment and little participation and input from other faculty, staff, and administrators. For spring 2007, there are 26 students in ED 4358 and ED 5344, plus 2 independent study students. Chess II (ED 4359/5345) was not taught in spring 2006, in fall 2006, or in spring 2007. As of fall 2006, I (Alexey Root) am the program head for the chess certificate program. I am currently also the only faculty member teaching these courses. I have rewritten the curriculum

content of the courses based on my own knowledge of chess (former U.S. Women's Chess Champion) and curriculum (former public school teacher and Ph.D. in curriculum from UCLA). I also consulted prior versions of Chess II (originally written by Dr. Tim Redman and taught until fall 2005 by Dr. Gerry Dullea). The UTD SACS personnel have been reviewing the courses. UT TeleCampus also conducts a thorough review of each course before it is launched in the Blackboard online platform. After courses are launched, they are taught completely online through a laptop from my home in Denton. Interaction with UTD administrators during the academic year has been minimal; I don't have regularly scheduled meetings. Registration for students is offered through Michele Dunavin, Green Hall. Not much is done to inform advisors about the existence of the chess online courses.

7.2 Top 3 Program/Unit Accomplishments: Funding for the UTD Chess in Education Certificate was initially provided by the UT TeleCampus with additional funds from UTD. There has been national recognition of Dr. Alexey Root, currently the instructor for ED 4358 and ED 5344. In the fall of 2006 Dr. Root was cited as a national expert on chess in education in the magazine *Mothering*, see *Chess is Child's Play*, November-December issue, online version at http://www.mothering.com/articles/growing_child/education/chess.html. Additionally, her book *Children and Chess: A Guide for Educators* (2006, Teacher Ideas Press) is selling well to public libraries, school libraries, educators, and parents. She has a contract for a second book with the same publisher; manuscript due in June of 2007. Dr. Root will take over the teaching of ED 4359 and ED 5345 in the fall of 2007. (Previously ED 4359 and ED 5345 were taught by Dr. Tim Redman in 2001 and 2002, and by Dr. Gerry Dullea 2002-2006).

7.3 Research Activities or Publications:

- Root, A. (2006, March 6). Chess educator of the year: Erik Anderson of AF4C. *Chess Chronicle*, 15, 24-26.
- Root, A. (2006). *Children and chess: A guide for educators*. Westport, CT: Teacher Ideas Press.
- Root, A. (2006, April). Each one, reach one: Chess promotion at any age. *Chess Life for Kids*, 1, 1, 1-2.
- Root, A. (2006, July-August). Chess Viking day. *Texas Knights*, 20.
- Root, A. (2006, August). Day in the life of a chess camper. *Chess Life for Kids*, 1, 3, 16-17.
- Root, A. (2006, October). The paperboy and the chess master. *Chess Life*, 27.
- Root, A. (2006, November). Chess in education is changing lives. *Chess Life*, 44-45.
- Root, A. (2006, December). GM chess mom. *Chess Life*, 44-45.
- Root, A. (2006). Chess crying: Children's preparation and tournament structure. In T. Redman (Ed.), *Chess and education: Selected essays from the Koltanowski conference* (pp. 179-193). Dallas: University of Texas at Dallas Chess Program.

7.4 Instructional/Training Activities (presented or received): Students who have taken Dr. Root's ED 4358 and ED 5344 courses have gone on to accomplish important achievements in the field of chess in education. Dr. Root keeps in touch with her students after they take Chess I, and in each of the cases below advised the students on their projects:

- 1) Fall 2005 ED 5344 student Jody Braswell was awarded a grant, in November 2006, for the amount of \$3,399.23 from the Education Foundation. Jody presented at a workshop organized by Dr. Root (March 17, 2007 Texas Chess Association Chess in Education workshop, see <http://www.swchess.com/sce/tourney/tsc2007/cied.htm>).
- 2) Spring 2006 ED 5344 student Robert Jackson wrote a grant that was funded by the Best Foundation for the full amount requested (\$998.98) in the late spring of 2006.
- 3) Fall 2005 ED 4358 student Leah Dagher was hired by the Houston ISD as full-time teacher of chess in the fall of 2006, at Briarmeadow Charter School. She has written a unit for grades 5-8 called *The Science of Chess*, which she presented at a workshop organized by Dr. Root (March 17, 2007 Texas Chess Association Chess in Education workshop, see <http://www.swchess.com/sce/tourney/tsc2007/cied.htm>).
- 4) Fall 2005 ED 5344 student John Buky earned accreditation as a full-time SES (Supplemental Educational Services) provider for the state of IL, which received a recommendation letter for John from Alexey Root. John is using chess to teach math to students in need of tutoring. John also succeeded Dr. Root as co-chair of the United States Chess in Education committee. He has developed a Web site for that committee, with initial advice from Dr. Root, see http://www.thechessacademy.org/USCF_Chess_Education_Committee.htm.

7.5 Public Service:

- Root, A. (2006, May). May 11th: Top Volunteer award from the Denton Independent School District. May 19th: Career Day speaker, Evers Elementary. May 27th: News report coverage of Root's volunteer chess teaching with Denton ISD by DTV Newsbreak (Denton cable access TV).
- Root, A. (2006, July 15). Chess exhibition and book signing at the 1st annual Dallas International Book Fair.
- Root, A. Co-chair (with Dr. Tim Redman) of the United States Chess in Education committee (2005-2006). Root organized the annual meeting for the committee, and also put on a workshop that attracted 37 paid participants see *Chess in Education workshop*, August 7-8, 2006, http://www.thechessacademy.org/USCF_Chess_Education_Committee.htm.
- Root, A. Organizer of the Texas Chess Association's Chess in Education workshop, held March 17, 2007. Web site is <http://www.swchess.com/sce/tourney/tsc2007/cied.htm>.

7.6 Other External Activities:

Dr. Root has submitted an abstract for a paper presentation to the Chess in the Schools and Communities International Conference, to be held August 30-September 1, 2007 at the University of Aberdeen, Scotland. Web site is <http://www.scottishjuniorchess.co.uk/cisccon/cisccon.html>.

7.7 Contributions to UTD:

The vision of the UTD Strategic Plan is "To be one of the nation's best public research universities and one of the great universities of the world." The Chess in Education Certificate has brought attention to the University of Texas at Dallas from around the world and around the country. UTD is one of two institutions designated by the World Chess Federation (FIDE) to offer chess in education curricula. The other institution is Moscow State University (Russia). The students who take the Chess in Education certificate are mostly from Texas (75%), but the other 25% are from all over the United States. UTD has a national reputation as a leader in chess, in part because of its winning chess team but also because of the innovative courses offered in this Chess in Education Certificate. No similar certificate program is offered in the U.S., and the UTD certificate courses have been profiled in the media including an article in the Chronicle of Higher Education.

7.8 Top 3 Program / Unit Challenges:

The major challenge faced by the Chess in Education Certificate is enrollment. Because the courses in the certificate sequence (ED 4358 and ED 5344 and ED 4359 and ED 5345) are not required courses for any program, they are often overlooked as choices by potential students. Advisors at UT-Dallas often don't think to mention these elective courses to their advisees.

7.9 Detailed Resources Needed to Improve and Fulfill Mission: The main resources needed to deal with enrollment issue are as follows: 1) a designation of the courses as required courses for education majors or 2) better publicity of the courses within UTD (by advisors) and outside of UT-Dallas (through marketing to educators) or 3) funds and help to have a "chess fair" or reception of some kind for advisors to teach them about the Chess in Education certificate program so that advisors will recommend these courses to students.