Enhancing Critical Thinking Skills Among Authoritarian Students

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This article focuses on assignments designed to enhance critical thinking skills for authoritarian personality types. This paper seeks to add to the literature by exploring instructional methods to overcome authoritarian traits that could inhibit the development of critical thinking skills. The article presents a strategy which can be employed to overcome authoritarian obstacles to critical thinking development through instructional design and the fostering of student engagement. The strategy elaborated herein resulted in increased application of critical thinking skills among authoritarian students. The article concludes with a call-to-action for greater exploration of the influence of nonrandom distribution of authoritarian personality characteristics on critical thinking across specific classes, disciplines, and institutions.

Teaching in the social sciences can be difficult as faculty must determine which of the copious social science constructs to teach, decide how to teach these constructs in a meaningful way, and at the same time delineate what students gain from participation in the academic process in terms of higher order thinking (Goldsmid & Wilson, 1980; Newman, 1996; Thompson, 2011). Moreover, numerous authors have illuminated the challenges associated with teaching and engaging students in the classroom on sociological constructs (Braa & Callero, 2006; Holtzman, 2005; Johnson, 2005; Pedersen, 2010). One approach to improving student outcomes has been to enhance the teaching skills of faculty in order to generate critical and reflective thinking skills among college students. Often this has resulted in calls for faculty to learn and implement inquiry-guided learning techniques which are presumed to improve student performance in terms of participation, understanding of course concepts, engagement, critical thinking, and reflective thinking (Atkinson & Hunt, 2008; Hunt & Touzel, 2009; Johnson, 2005; Mollborn & Hoekstra, 2010; Pedersen, 2010). More recently, rather than focusing on the characteristics of the instructor, researchers have been advocating a focus on individual student skill deficits as a primary inhibitor of critical thinking skill development (Geertsen, 2003). Others, such as the critical pedagogists, argue that what is necessary is a complete overhaul of the education process and curriculum (Braa & Callero, 2006; Kaufman, 2002). Critical pedagogy suggests that the best way to develop critical and reflective thinking is through curriculum that is oriented around activist approaches to teaching. To summarize, efforts employed to increase the development of critical thinking skills in social science classrooms take one of three primary forms: change the skills of the instructor, address the individual skill deficits of the students, or transform the curriculum into one based on critical pedagogy.

Often neglected in this literature has been a discussion of the impact of classroom level variables that could inhibit critical thinking skill development.

While the literature recognizes differences in students' personalities and learning styles, these variables are assumed to be somewhat randomly distributed within the classroom, among courses, and among institutions. Hence, the pedagogical literature focuses on the nature of the assignment necessary to develop higher-level thinking, often to the exclusion of other classroom factors (Atkinson, Wills, & McClure, 2008; Green & Klug, 1990; Massengill, 2011; Persell, 2004). Because the development of critical and reflective thinking among college students is a fundamental function of social science education, to further the knowledge in this area, the authors explore the challenges of teaching critical and reflective thinking to students that rank high on rightwing authoritarianism.

The Authoritarian Specter: A Barrier to the Development of Higher-Level Thinking

Authoritarianism, as defined by Mentor and Dorne (1998), "is an orientation [that favors] subjection to the control and hegemony of powerful social and legal institutions and is opposed to individual autonomy and normative diversity" (p. 77). Altemeyer (2006) and Stone, Lederer, and Christie (1993) noted the existence of three common themes in definitions of right-wing authoritarian (RWA) personality features. Right-wing authoritarians tend to be:

- high on conventionalism with strong adherence to the social conventions that are endorsed by society and its established leaders,
- submissive to authorities who are perceived to be established and legitimate in the society in which one lives, and
- aggressive toward targets perceived by legitimate authorities as threats.

To paraphrase, authoritarian personalities prefer the established order, follow official dictates, and are hostile to those perceived as a threat to the norm.

Right-wing authoritarianism has been linked to more punitive and prejudicial attitudes, values, and beliefs. For example, right-wing authoritarians are more likely to condemn and perceive as serious such acts as victimless crimes, shoplifting, and failing to follow police commands (Abrams & Della-Fave, 1976; Feather, 1996; Mentor & Dorne, 1998). McKee and Feather (2008) reported that right-wing authoritarians espouse greater support for the death penalty and endorse deterrence and incapacitation as sentencing goals. Because of their tendency to look for, condemn, reject and punish people who violate conventional behavior, authoritarians have exhibited a greater tendency to be prejudiced toward international students in the wake of September 11th and other groups they deem to be deviant (Charles-Toussaint & Crowson, 2010; Duckitt, 2006). A considerable body of literature links higher levels on right-wing authoritarian scales with support for a host of other restrictive enforcement practices, such as support for war (Cohrs & Moschner, 2002; McFarland, 2005) and the restriction of human rights and civil liberties (Altemeyer, 1996, 2006; McFarland & Mathews, 2005). Such attitudes may hinder the development of critical thinking skills in the classroom by inhibiting the students' ability to consider other worldviews and causing them to reject nontraditional pedagogy tools used by instructors.

To successfully implement a pedagogical tool designed to generate critical and reflective thinking, the learning barriers of individual students must also be addressed. Geertsen (2003) and French and Rhoder (1992) noted that the disposition of the student/thinker is as important as that of the teacher in developing call attention to critical thinking skills. Barriers to learning include students who are apathetic, who experience civic disengagement, and who struggle to accept the applicability of sociological constructs to real-world problems (Braa & Callero, 2006; Holtzman, 2005; Johnson, 2005; Pedersen, 2010). In contrast, according to Geertsen (2003), the three characteristics necessary to foster higher-level thinking were open-mindedness (i.e., respect for others' views), evidence-mindedness (i.e., withholding judgment until evidence is reviewed), and persistence-mindedness (i.e., willingness to explore all possibilities and change when necessary). Authoritarianism appears to be the antithesis to Geertsen's (2003) three antecedent higher-level thinking characteristics: open-mindedness, evidencemindedness, and persistence mindedness. Authoritarian students pose unique challenges for faculty in the classroom. The right-wing authoritarian student experiences high degrees of egocentrism and sociocentrism in thinking. A dominant goal of the

egocentric mind is to maintain its own viewpoint, while sociocentric thinking stresses that their group's way of thinking is best. This feature of right-wing authoritarian thinking is important.

Critical thinking is self-directed, self-disciplined, self-monitored, and self-corrective thinking. It presupposes assent to rigorous standards of excellence and mindful command of their use. It entails effective communication and problem-solving abilities, as well as a commitment to overcome our native egocentrism and sociocentrism. (The Critical Thinking Community, 2013, para. 2)

There is some evidence that criminal justice majors (i.e., students who plan to pursue criminal justice-related careers, and law enforcement personnel) have higher levels of authoritarianism than among other types of college students (Carlson & Sutton, 1975; Culbertson, 1975; Owen & Wagner, 2008). Skolnick (1994) reported that criminal justice majors with authoritarian personality characteristics were more suspicious and rigid, engaged in stereotyping, and were eager to punish. Brooks (1991) indicated that such students were more cautious and reticent, and engaged in fewer risk-taking behaviors such as speaking out in the classroom.

These findings should not be surprising given that literature from the early 1970s deemed authoritarianism a common, if not inherent, aspect of police officer working personalities (Muir, 1977; Niederhoffer, 1967, Skonick, 1966; Wilson, 1974). Bayley and Bittner (1984) suggested that these results may be a reflection of a law enforcement organizational selection bias that occurred in the 1960s and 1970s of recruits with masculine characteristics such as assertiveness. authoritarianism. and control. As criminologists, criminal justice administrators, and others called for the use of academic education as a means of reducing authoritarianism. The underlying assumption made was that better educated officers and criminal justice students would be more open-minded and perform their duties more effectively (Booker, 1980; Carter, Sapp, & Stephens, 1989; Fitzgerald, 1989; Guller, 1972; Roberg, 1978).

Genesis of the Push to Reconsider Critical Thinking/Higher-Level Thinking Tactics

As members of a faculty comprised of sociology and criminal justice PhD's, the development of higher-level critical and reflective thinking was identified as a primary objective of the degree program. Higher-level thinking is defined as "a disciplined, systematic way of using the mind to confirm existing information or to search for new information using various degrees of abstraction" (Geertsen, 2003, p. 4). Following

Geertsen's model, a distinction between critical and reflective thinking was made. With regard to critical thinking, the goal of the degree program is to enable students to be more effective decision makersdecision makers who are capable of researching, critically judging evidence, and applying their knowledge to practice. At the same time, faculty would like to improve a student's ability to think reflectively. Reflective thinking refers to enhancing students' form linkages, recognize abilities to multidimensional nature of problems, solve problems, and extrapolate the known to the unknown. Consequently, a natural question to ask is what personality characteristic among students, in this case authoritarian personality, might hinder the development of critical and reflective thinking among students.

The Scope of Authoritarian Personality Types

The authors' institution is a coeducational, public state-supported school which has been in existence for more than 150 years and has a strong academic reputation. The institution provides a broad-based liberal arts education offering bachelor's degrees, master's degrees, and post graduate certificates. There are approximately 178 full-time, permanent faculty. Of the full-time, tenured/tenure-track faculty, 65% are tenured and 94% hold terminal degrees. The institution has an enrollment between 2,100 and 2,500 undergraduates from 45 states and 12 foreign countries. The combined average SAT score for first-time, fulltime freshmen is 1089. The average high-school GPA for first-time, full-time freshmen is 3.48. The institution is divided into five academic schools: Business, Education, Engineering, Humanities and Social Sciences, and Science, and Mathematics, and offers 21 majors and 14 minor areas of academic concentration. Social sciences are a required part of the curriculum for graduating students.

The data for this paper comes from a questionnaire administered to two criminal justice classes in 2009. Data was collected from 64 students enrolled in criminal justice courses. The questionnaire was comprised of quantitative measures to assess criminal justice students' characteristics, attitudes, and rightwing authoritarianism. There was limited gender and race/ethnicity diversity among the students. The students enrolled in the classes were typically white males majoring in political science or criminal justice and were from the U.S. South. The students on average were 20-years-old at the time the data was collected. Approximately one-third of the students were sophomores, juniors, and seniors. The students were evenly split in terms of having a relationship with the military (49% military affiliated and 47% non-military affiliated).

(2006)22-item Altemeyer's right-wing authoritarian scale was used to assess the level of authoritarianism among the student population. The RWA authoritarian instrument is a valid and reliable assessment of authoritarian personality. Chronbach's alphas of over .88 and .97 for Altemeyer's RWA scale have been demonstrated with American and Canadian samples (Altemeyer, 1981). Acceptable levels and reliability have been confirmed across other cultures such as Australia, Ghana, and South Africa (Altemeyer, 1988; Feather, 1993; Hunsberger, Owusu, & Duck, 1999). The lowest possible score on this scale is 20 and the highest score possible is 180. The midpoint of the scale is 100. In our sample of 64 students, the average score was 108 and the median was 109. These scores indicate that the students enrolled in the criminal justice courses were high in the area of right-wing authoritarianism.

Thus, the problem was that faculty was teaching sociological and criminological constructs at an institution that has been characterized by others as traditionalist and to a student body described as intellectually conservative and authoritarian. The evidence indicated that classes contained a higher than average distribution of authoritarian personality types. This created a unique educational challenge as to what to do when not just some students, but the whole classroom, ranks high on the right-wing authoritarian personality scale. The danger in a pedagogical sense was that given the authoritarian personality traits of submissiveness and conventionality, these students would be far more comfortable than the typical student with authoritarian classroom management and a lecturebased format, a teaching style which serves more as an inhibitor to the development of critical and reflective thinking skills. This student personality type would most likely prefer right- and wrong-type questions found in the first two levels of the revised Bloom's Taxonomy of remembering and understanding, rather than open-ended, solutions-based assignments. Perhaps a way to promote cognitive growth among authoritarian personality disposed classrooms is that instead of reinforcing authoritarian traits, employ classroom and homework exercises that feature the mid-levels (i.e., applying and analyzing) or the upper-levels (i.e., evaluating and creating) of Bloom's Taxonomy.

Engaging Authoritarian Classrooms

Engaging right-wing authoritarian students in the classroom is no simple task. Right-wing students have been trained to and prefer to be docile, to not question, to be told what to think and why to think. Such students resist and often are fearful of new learning techniques (Bednar, Wells, & Peterson, 1989; Bolton, 2003). Such reticence is especially prevalent among criminal justice

majors with authoritarian personalities who view speaking out, give-and-take gestures of friendliness from faculty, and open discussion with suspicion and consternation (Brooks, 1991; Skolnick, 1994). For these majors "spontaneous initiative, curiosity, and trust in themselves, by and large, may have been drummed out of them, and they may have learned to view education as purely instrumental—a means to an end rather than an end in itself" (Morrison, 2008, Challenges of Democratic Education section, para. 3). Because of their egocentric and sociocentric thinking patterns, their preference for traditional modes of instruction and reticence, right-wing authoritarian classrooms require activities and assignments that compel students to come out of their comfort zone in the classroom and into the community.

Critical and Reflective Thinking Assignment in an Introduction to Corrections Class

The research literature discussed above revealed that right-wing authoritarians hold more punitive views and have a more difficult time embracing critical and reflective thinking exercises. With this in mind, the first author assessed students' perceptions of support for rehabilitation as a goal for prison on the first day of a corrections class. When asked whether rehabilitation should be a goal for prisons in the United States, 95% of the students that replied espoused views that prison should serve a deterrent and incapacitation function. This result was consistent with views that the first author had heard in correctional classes since 2008. Thus, the goal was to develop a corrections assignment that would spur our authoritarian students to legitimately consider rehabilitation as a correctional option in a real world setting.

The Corrections Assignment

The purpose of this assignment was to provide a problem-based learning exercise that would afford an opportunity for authoritarian students to take a systematic approach to skillfully evaluate correctional evidence and then apply the evidence for an optimal rehabilitative solution for a specific offender population. Thompson (2011), Shah (2010), and Winch (2006) all identified problem-based approaches as having potential to impact the critical thinking process. According to Thompson (2011), "effective questioning is one of the most useful strategies that teachers can use to promote critical thinking. Good questions are those that guide thinking and encourage students to interpret, analyze, synthesize, critique, and reflect" (p. 4). The task encouraged active engagement by providing the real world task of designing a prison for a specific population of offenders and considering the complexity

of the structural, functional, and political environment in which prisons exists (Mandernach, 2006; Thompson, 2011).

In essence the assignment engaged students in a formal and an informal process designed to enable students to apply dimensions of critical and reflective thinking such as problem-solving, interpreting, analyzing, synthesizing, critiquing and reflecting. In order to particularly engage the authoritarian students, the following corrections assignment was given to two sections of an Introduction to Corrections class. Students were randomly placed into groups of four at the beginning of the semester and were told that each group would be responsible for thoroughly researching and creating a rehabilitative design for a minimum, medium, or maximum security correctional facility. For each level of security prison, the assignment read:

The state needs to build a new (minimum, medium, or maximum) security prison because of overcrowding. Your group task is to design this new facility, including the physical layout of the building(s), types of inmates that will be housed in the facility, plans for living space for the prisoners, and a description of the daily routine. You must also incorporate effective rehabilitation programs into the models you develop. Keep in mind the following objectives: safety, security, constitutional standards, and rehabilitative goals of the prison.

The full assignment with instructions is provided in Appendix A. Groups were not told that they had to include specific programs but were required to research what works to rehabilitate offenders based on the security level and prison population characteristics. The project required groups to use at least 10 sources, post their presentation slides in CitLearn, and to bring in a model of the design for their prison.

Preparation

In order to successfully implement this assignment, several steps were required. First, students were required to read relevant sections in an Introduction to Corrections text on the following topics: goals of corrections, research evidence supporting purposes and goals of incarceration, prison design, and architecture, and two books depicting inmate first-hand accounts of prison life. In this case, students were asked to read Victor Hassine's (2010) Life Without Parole and Erin George's (2009) A Woman Doing Life. Additional course material covered prison design and architecture. Mid-semester students were taken on a prison tour of a minimum security pre-release center and a medium security prison in order to help set the context for their

prison design and to provide a more personal opportunity to explore prison life.

Assessment of Critical Thinking—Grading of the Assignment

All of the final correctional models presented by the students showed a change in perspective from a purely incarcerative facility designed to punish to a correctional facility with a rehabilitative focus. Students, who at the outset of the course held opinions not supportive of rehabilitation, designed model prisons without fences, with enhanced programmatic services, and often included descriptions of a more developed reentry process which was not required. Some groups provided futuristic rehabilitative prison models based on their conception of how current technology could be used to design facilities and aid rehabilitative efforts using 3-D computer models. Other students provided design models that depicted the removal of fences, and figures showing inmates participating in GED programs, receiving counseling, training dogs for the disabled, etc.

A two-pronged approach was utilized to assess critical thinking skills. As detailed in Appendix A, each group was required to do a 20-minute presentation on their prison design. After each presentation, peer evaluations were completed by each non-presenting student in attendance on the day of the presentation. As part of the peer evaluation process, each group was required to respond to class challenges to the model presented. The challenge portion of this process lasted approximately 15 minutes. At the end of the 15 minute questioning period, each student was asked to rate the group presentation on a scale from 1-10. The peer evaluation assessment form is provided in Appendix B. As can be seen on the peer evaluation form, classmates assigned a grade based on the demonstration of the following critical thinking skills: knowledge of research and data on the population selected; application and analysis of this knowledge in the creative design of the model; the ability of the group to use evidence to make decisions about the prison design; and the ability of the group to synthesize information and respond appropriately to challenges using evidence.

The standard for assessing critical thinking skills employed for each group by the instructor was based on the critical thinking rubric created by Facione and Facione (1994). Each presentation was evaluated using Facione and Facione's (1994) Holistic Critical Thinking Scoring Rubric depicted in Appendix C. The top scoring groups did the following: consistently justified the selection of every aspect of the prison design; analyzed and evaluated alternative models which could be used with their prison population; discussed the pros and cons of the model presented; used research to

incorporate new, creative elements in the model presented; effectively responded to challenges during the peer evaluation portion of the presentation by using evidence collected from scholarly sources; and designed an excellent prison model which was visually appealing and consistent with the facts as gathered by the group. The lowest performing groups evidenced a pattern behavior whereby they consistently failed to justify aspects of the model using evidence, defended their model despite classmate challenges to integrity and evidence (i.e., did not accept any criticism), did not utilize knowledge of the population selected to guide the prison model developed, and as a group were unreceptive to challenges based on evidence.

Enhancing Critical Thinking Skills

A major concern at this point is whether the assignment enhanced critical thinking skills for the authoritarian oriented students. Critical thinking requires a systematic approach that affords students an opportunity to skillfully evaluate information and reach the most favorable solution to a problem based on the known research (Shah, 2010; Thompson, 2011). The assignment presented asked the students to use critical thinking skills to solve the problem of what and how to implement evidence-based practices for a specific prison population. If as Geertsen (2003) asserted that the characteristics necessary to foster high level thinking requires respect for others' views, withholding judgment until evidence is reviewed, and a willingness to explore all possibilities and change when necessary. This assignment was designed to foster the development of and practice of skills in all of these areas. The utilization of skills that require respect of others views was demonstrated in the group project by necessitating at the outset that each group reach consensus on each element of prison design. Moreover, the peer-evaluation process also called for each group to be challenged by classmates on their prison design. Students were told to use evidence from the semester to identify gaps and challenges for each presentation. A review of the research evidence of the prison population selected and an obligation to incorporate evidencebased practices in the final model presented also necessitated that groups withhold judgment related to all design aspects until evidence could be collected and reviewed. Additionally, it was essential during the peer evaluation phase that groups adjust their perspective and respond to challenges to assertions, if classmates presented evidence that refuted the inclusion of any component presented. Thus, while the assignment was a good example of an exercise designed to engage the students in application, analysis, evaluation and creativity, it also incorporated aspects of Geertsen's (2003) antecedents needed to foster higher-level

thinking: open-mindedness; evidence-mindedness; and persistence-mindedness.

Individual Student Impact

At the conclusion of the project, students were asked to post to an anonymous discussion board a reflection statement about whether this project impacted their views about rehabilitation and incarceration. To assess the impact of the corrections assignment, this section discusses the findings from the anonymous discussion board post, an open-ended question that was asked of the students at the conclusion of the assignment, and a review of student responses on the end-of-the-semester course evaluations. First, a discussion board thread was created where students were asked to voluntarily comment on whether their attitudes towards prison had changed as a result of the project. Second, students were asked to qualitatively evaluate the corrections assignment via an open-ended critique of the assignment. A review of the end-of-thesemester course evaluations where students were able to write additional comments about the instructor, the assignments, and their perceptions of the course in general was conducted.

The anonymous discussion posts supported the conclusion that student thinking about corrections was impacted by the assignment. More than half of the students posting a discussion statement reported that their attitudes toward prisons were somehow changed by the assignment. Moreover, another third indicated that they were concerned about the way prisons are designed today. It should be noted that one should not conclude from this data that the changes all reflected a greater desire for rehabilitation as a goal for prisons.

Data from an anonymous and voluntary openended question given to students at the conclusion of the corrections assignment is discussed here. Students were asked to provide an anonymous and voluntary critique of the project. It was requested that they discuss their favorite and least favorite components, and make suggestions for improving the assignment. The answers to the open-ended question provided support that the corrections project stimulated critical thinking and reflective thinking skills. One student wrote, "I never imagined that it was possible to design a prison to rehabilitate until this project." This statement supports the possibility that some students perhaps became more open-minded to rehabilitative potential than they had been at the start of the class. Another student wrote, "The project made me realize that rehabilitation could work if we put money into prisons." Other students wrote, "It made prison real for me and I now think locking people up like animals is not a good thing" and "I liked the experience of seeing a real prison and then designing what I think might work to rehabilitate."

Finally, the end-of-the-semester course evaluations were examined to assess whether students might write less favorable reviews as part of the official course evaluation process. Several students made specific comments about the corrections project. One student reported that the corrections project was very informative about prison life. Another reported liking the various methods used to check learning. The primary criticism found in this data was a concern that the project required too much of the students' time to complete.

Limitations

Study

Generalizability is a limitation of this study. First, the institution in which this project was implemented has an inherent probability of having students high on right-wing authoritarianism within its ranks because the college is located in the South, has an extensive military tradition, and is predominantly male. Second, the fact that the project was implemented with criminal justice majors also indicates an increased probability of having students who receive high scores on right wing authoritarianism. Lastly, some might find the use of a convenience sample problematic. Such limitations do not inherently negate the value of this paper; rather they lend credence to our call for greater attention to the need to assess whether there are nonrandom distributions of personality characteristics in certain courses and institutions that impact the level and type of learning that takes place in higher education.

Instructional

Instructors who are interested in incorporating this assignment into their class should heed the following challenges. First, the assignment requires a semester-long commitment to implement. When this project was conceived, it was understood that it would require at least three to four weeks at the beginning of the semester to allow students to read relevant course material.

The incorporation of prison tours as part of the course presents its own unique challenges. For example, the instructor will need to contact minimum, medium, and/or maximum security institutions to determine if prison tours are possible and review statewide requirements and rules. Another unexpected challenge was the arrangements for traveling to the prisons. In our case, because the department did not have funds to pay for the rental of a university vehicle, the students were required to provide their own transportation to the facilities. On several occasions,

students missed their ride to the prison and other arrangements had to be made.

A final logistical problem was related to the directions for the models of prisons displayed for the class to review. Instructors should be very specific about the criteria for models. For this assignment, the following types of prison models were submitted for consideration: a popsicle stick prison, a computergenerated architectural model, and one group attempted to submit a prison model based on the game Prison Tycoon. If you prefer high-tech models from students, you will need to clearly specify this in the instructions.

Conclusion

The study seeks to contribute to the literature by focusing on a personality construct that has received limited attention. The article explores whether authoritarianism as a learner-centered personality variable should be included as part of discussions on critical thinking pedagogy. The article at outset identified authoritarianism as a variable in the literature that could inhibit the process of developing critical thinkers among college student populations. Evidence was then presented which supported the existence of a non-random distribution of authoritarian personalities not just within criminal justice courses, but also among academic institutions. When and where there is an overabundance of authoritarian personalities in the classrooms, instructors need to (1) recognize the existence of the authoritarian dynamic, (2) engage the students through instructional design to overcome obstacles that inhibit critical thinking, and (3) foster critical thinking skills by assignments highlighting intellectual growth.

Several researchers have stressed that the enhancement of critical thinking skills needs to be holistic (i.e., it cannot be adequately attended to by individual subjects, courses or faculty but instead needs to be a combined effort with departments, schools and colleges; Halpern, 1998; Jones, 2004; Pithers & Soden, 2000: Thompson, 2011). While the assignment discussed within this paper is specific to the discipline of criminal justice, the critical thinking skills within the assignment can be applied across disciplines. Students across all disciplines have the potential to reap critical thinking benefits from assignments that ask them to problem-solve (Thompson, 2011; Valter & Akerlind, 2010); conduct independent research (Valter & Akerlind, 2010); use higher-level thinking skills related to analysis, synthesis, critique, evaluation and reflection (Alex-Assensoh, 2008; Cavdar & Doe, 2012; Elder & Paul. 2008): engage them in ways that are hands-on and minds-on (Thompson 2011; Wiggins & McTighe, 2005); and practice the utilization of higher-level thinking skills (Elder & Paul, 2008). Such assignments

are of particular importance when classes or institutions have higher than average distributions of authoritarian students.

This paper should be viewed as a call-to-research-action. Very few articles explored whether the development of critical thinking skills could be hampered as a result of having a nonrandom distribution of certain personality characteristics within a particular course, discipline or institution. Prior literature focused on personality characteristics of individual students across various disciplines but did not take the step of asking how those distributions might impact the classroom environment and development of higher-level critical thinking skills. Thus, there remains a significant amount of work to be done in this area.

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Appendix A The Critical Thinking Assignment

A. The state needs to build a new (minimum, medium, or maximum) security prison because of overcrowding. Your group task is to design this new facility, including the physical layout of the building(s), types of inmates that will be housed in the facility, plans for living space for the prisoners, and a description of the daily routine. You must also incorporate effective rehabilitation programs into the models you develop. Even our toughest prisons provide some level of programming. Keep in mind the following objectives: safety, security, constitutional standards, and goals of the prison.

At the end of the semester each group will do a 20-minute presentation on the prison designed and must provide a model for their prison. Your classmates will critique your selections as part of a peer-evaluation process. Students will have 15 minutes at the end of each presentation to assess how well each group did in designing their prison.

B. To complete the group project, each group must:

- 1. Decide what type of prison to design. The first task of each group is to determine whether your group will design a minimum, medium, or maximum security prison. Consensus on the type of prison to be designed must be reached. Each group will need to submit a one page summary that details how the group decided on whether to design a minimum, medium, or maximum security prison. You must include in your document specific reference to material from the readings in this course about institutional populations and a justification for why your group did not select the other two types of institutions. Each group will need to select a back-up prison design as only two groups will be allowed to select each security level.
- 2. Once you have selected the security level of the prison to be designed, you must describe the population that will be housed in your prison. This is your choice. Consensus must be reached. This requires additional scholarly research and analysis of prison populations. Each group must be very specific about the types of inmates that will be housed in the facility (e.g. types of crimes committed, background, gender, race, ethnicity, criminal history, social history, etc.). Your selection of inmates for the institution must be justified using data from scholarly sources. Remember: Your group must be prepared to be questioned about your selection by your classmates at the end of your presentation.
- 3. Review the literature on the purpose of prison. What will be the purpose of your prison- punish, rehabilitate, deter, warehouse. Your selection must be justified using scholarly sources. For this section of the project, your group must review at least four scholarly sources relevant to the purpose of prison. Each group should provide a one page summary of the decision on the purpose or purposes selected or ruled out for your prison. This section must include a discussion of pros and cons of each purpose of prison.

 Remember: Your group must be prepared to be questioned about your selection by your classmates at the end of your presentation.
- 4. Context of prison to be designed. What will your prison look like? Given the population you identified what will be the rated capacity for the institution? Will this prison be located in an urban or rural area? How much land will be needed? What will be the physical layout of your group's prison? What will the prison cells look like? How many staff members will be required? This portion of the group project will require that you go beyond what has been presented in the readings for this class. Each group should engage in a review of prison architecture, design, and review the historical problems associated with various prison design models. As part of your presentation, your group must discuss why your prison context represents the best fit for the inmate population and purpose(s) of prison chosen. The context described should also go beyond what currently exists in the real world among state prisons. How does your prison context expand upon what we know? Feel free to be creative. Once you have pulled set the context for your prison, consider ways that the context might be critiqued by members of the class. Remember: Your group must be prepared to be questioned about your selection by your classmates at the end of your presentation.
- 5. Context for the inmates-programs. In this class, we have discussed the literature on effective rehabilitation programs. Given the population of your institution and the prison design, what types of prison programs will be offered in the institution? Why will those programs be offered? What literature supports your selection? What do state prisons currently provide in terms of programming for the inmates housed in your institution? Be sure to review scholarly literature on the programs selected. Each group should think about the types of programs that you decided not to incorporate in your plan. Be prepared to justify exclusion.

Remember: Your group must be prepared to be questioned about your selection by your classmates at the end of your presentation.

- 6. Create a visual depiction of your prison. In the past students have built models, designed models using computer software, provided video, etc.
- 7. A futurist perspective: What will be the societal impact of the prison designed by your group? Remember: Your group must be prepared to be questioned about your selection by your classmates at the end of your presentation.

C. Presentation Requirements

- a. The presentation must be 20 minutes in length.
- b. Groups are required to use at least 10 scholarly sources. Does not include textbook.
- c. Groups should be prepared for at least 15 minutes of responding to classmates critiques as part of a peer-evaluation process.
- d. Groups are required to turn in
 - 1. One page summary of discussion of security level of prison with a reference page.
 - 2. One page justification of population selected for prison with a reference page.
 - 3. Provide an annotated bibliography.
 - 4. Provide an outline of presentation.
 - 5. Power Point Presentation slides. Groups are required to post your presentation slides on the class CitLearn page two class periods before your presentation date.
 - 6. Model of prison.

Appendix B Peer Evaluation of Prison Design and Critical Thinking

TOPIC:	
Name of Presenters:	
Rate this group's presentation on a 1-10 scale.	

Each class member grades the presentation out of a possible 10pts

Consider the following factors:
Clarity of Presentation
Knowledge of prison research
Use of research to guide prison design
Creative use of information in design of prison
Justification for prison design
Understanding of prison context
Assessment of model depicted
Response to classmate challenges of prison design
Overall Success

Please write your justification for the presentation grade you assigned.

Appendix C Critical Thinking Rubric—Holistic Critical Thinking Scoring Rubric

4 Consistently does all or almost all of the following:

Accurately interprets evidence, statements, graphics, questions, etc.

Identifies the salient arguments (reasons and claims) pro and con.

Thoughtfully analyzes and evaluates major alternative points of view.

Draws warranted, judicious, non-fallacious conclusions.

Justifies key results and procedures, explains assumptions and reasons.

Fair-mindedly follows where evidence and reasons lead.

3 Does most or many of the following:

Accurately interprets evidence, statements, graphics, questions, etc.

Identifies relevant arguments (reasons and claims) pro and con.

Offers analyses and evaluations of obvious alternative points of view.

Justifies some results or procedures, explains reasons.

Fair mindedly follows where evidence and reasons lead.

2 Does most or many of the following:

Misinterprets evidence, statements, graphics, questions, etc.

Fails to identify strong, relevant counter-arguments.

Ignores or superficially evaluates obvious alternative points of view.

Justifies few results or procedures, seldom explains reasons.

Regardless of the evidence or reasons maintains or defends views based on self-interest or preconceptions.

1 Consistently does all or almost all of the following:

Offers biased interpretations of evidence, statements, graphics, questions, information, or the points of view of others.

Fails to identify or hastily dismisses strong, relevant counter-arguments.

Ignores or superficially evaluates obvious alternative points of view.

Argues using fallacious or irrelevant reasons, and unwarranted claims.

Regardless of the evidence or reasons, maintains or defends views based on self-interest or preconceptions.

Exhibits close-mindedness or hostility to reason.

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