

I ILLINOIS

CFRC | Children & Family Research Center

SCHOOL OF SOCIAL WORK



**Interim Report:
Program Evaluation of Mississippi's CAST Initiative**

**Theodore P. Cross, PhD
Yu-Ling Chiu, PhD**

With the assistance of Michael Braun, PhD and Heidi Meyer

October 2020

**Prepared for:
Children's Advocacy Centers of Mississippi™**

1010 W. Nevada, Suite 2080 | Urbana, IL 61801 | (217) 333-5837 | www.cfr Illinois.edu

Tables of Contents

Executive Summary.....	i
Chapter 1: Introduction to Mississippi’s CAST Initiative.....	1
Chapter 2: Methods.....	6
2.1 Implementation Study.....	6
2.2 Outcome Study.....	7
2.3 Sample.....	10
2.4 Data Analysis.....	10
Chapter 3: Instructors and Administrators’ Perspectives on the Implementation and Impact of CAST.....	12
3.1 Development of CAST.....	12
3.2 Implementation of CAST.....	15
3.3 Impact of CAST.....	21
3.4 The Future of CAST.....	25
3.5 Faculty Aspiring to Implement CAST.....	27
3.6 Summary of Implementation Evaluation.....	27
Chapter 4: Students’ Evaluation of CAST Courses and Programs.....	29
4.1 Students’ Evaluation of their CAST Courses.....	29
4.2 Students’ Interest in Working with Children and Families Affected by Child Maltreatment.....	30
4.3 Responses to Open-Ended Questions about their CAST course and program.....	30
4.3.1 CAST Course.....	30
4.3.2 CAST Program.....	34
4.4 Summary.....	36
Chapter 5: Comparing CAST and non-CAST Students on Outcomes.....	38
5.1 Comparison of CAST and non-CAST Students at the End of the Semester.....	39
5.2 Differences on Outcomes for Students Pursuing a CAST Certificate or Minor.....	42
5.3 Correlation of Number of CAST Courses Taken with Outcomes.....	45
5.4 Analysis of Differences in Outcomes from the Beginning to End of a CAST Course.....	45
5.5 Summary.....	46
Chapter 6: Discussion.....	48
6.1 Results on CAST Outcomes.....	48
6.2 Pre- and Post-Comparison on CAST Outcomes.....	49

6.3 Differences by Number of CAST Courses.....	51
6.4 CAST Certificates and Minors.....	51
6.5 Opportunities for Improvement	51
6.6 The Emotional Effect of CAST Courses.....	52
6.7 Implications of the Program Evaluation for the Future of the Mississippi CAST Initiative	53
References	54

Executive Summary

Chapter 1: Introduction to Mississippi's CAST Initiative

We as a society need commitment, knowledge and skill to deal with the substantial risk of child abuse and neglect and the enormous harm thousands of children suffer from it. Yet training on child abuse and neglect in higher education is meager. CAST is a national programmatic response to the deficit in education in child maltreatment (Vieth et al., 2019). Colleges and universities throughout the United States provide CAST courses and certificate or minor programs to educate undergraduate and graduate students about child maltreatment and help prepare many for careers in child-serving professions, especially child protection. Starting in 2014, Mississippi introduced a paradigm shift by creating the first statewide program to implement CAST in multiple schools throughout the state. This report presents the results of Mississippi's Child Advocacy Studies Training (CAST) initiative, a statewide effort to help undergraduate and graduate students learn about child maltreatment and develop the abilities to respond to child victims.

In 2014, Mississippi was the one state in the country to win an award from a private donor to develop a systemic response to improve education on child maltreatment. Assisted by this seed money, the Mississippi CAST partners invited all 38 institutions of higher learning to a discussion of implementing CAST programs at their school, and had an enthusiastic response. Mississippi and national CAST leaders partnered to supplement this with a "road show" outreach; they travelled to every public university and other schools to learn about their needs and promote the CAST idea. Over 100 representatives of 16 Mississippi schools, including every public university, attended training at a conference. They were introduced to the CAST idea and given curricula, syllabi, and other materials to help them implement CAST. Seven Mississippi colleges and universities offer CAST courses for the first time in the spring of 2016. More schools have added CAST courses every year since. CAST training has been provided yearly since 2015. Children's Advocacy Centers of Mississippi (CACM) has taken numerous actions to support and promote CAST, including online networking, webinars, and technical assistance on course development. CACM also helped develop an agreement allowing credit for the introductory CAST course to be transferred from two-year schools to four-year schools. One important enhancement is the participation of many CAST schools in Project FORECAST, a program that trains faculty to provide experiential learning using child protection simulations. A number of Mississippi schools now include FORECAST simulations as part of their CAST courses. In August 2019, CACM opened the Child Advocacy Training Institute (CATI), a training facility that includes three mock houses, a mock courtroom, a training room, a mock early childhood or elementary classroom, a mock medical exam room, a mock office or waiting room, two mock forensic interview rooms, two mock hotel rooms, and a mock dorm room. Both students and professionals receive simulation training at CATI. As of this writing, the CAST initiative is now approximately six years old. Most colleges and universities in Mississippi have had some involvement in CAST, and a number of schools regularly teach CAST courses every academic year. Hundreds of students in Mississippi have taken CAST courses.

Chapter 2: Methods

This is a mixed methods evaluation that includes both an implementation study using qualitative data and an outcome study using quantitative data.

Implementation Study. This part of the evaluation sought to explore the development of the CAST initiative in Mississippi and examine its implementation. Two methods were used for the implementation study: document review and key informant interviews. Evaluators reviewed a comprehensive set of documents that Children’s Advocacy Centers of Mississippi provided evaluators related to implementation of the CAST initiative. An interview with the Executive Director of Children’s Advocacy Centers of Mississippi aimed to capture the history of the development of the CAST initiative. Interviews (n=8) were also conducted with faculty who were teaching CAST courses and/or administrating CAST programs in Mississippi college and universities. We also interviewed faculty who had received CAST training but teach at schools that had not yet implemented CAST (n=4).

Outcome Study. The outcome study sought to assess the impact of CAST on students’ course experience, knowledge and abilities. It employed a quasi-experimental design comparing students who took a CAST course (or a course adapted from CAST) to a comparison group of students that had taken a non-CAST-course in a related field at a college or university that did not offer CAST courses. The CAST outcome measure was developed in the autumn of 2019. Our hypothesis was that CAST students would have a positive experience of the CAST course and would have greater knowledge and skills related to child maltreatment at the end of their course than non-CAST students have at the end of their course.

The CAST Student Outcome Survey had multiple sections: information on students in CAST (CAST students only), evaluation of their CAST Course and the CAST program (CAST students only), self-rating on knowledge and understanding regarding child maltreatment, interest in working with children and families, recognition of child maltreatment, child protection knowledge scale, and ability to identify elements of the investigation in a child sexual abuse case vignette.

The evaluators used standard inferential statistical methods in the outcome study. To compare CAST and non-CAST students, we conducted a multivariate analysis of variance on 10 outcome measures. Independent sample t-tests and multiple regression models (controlling for differences on race and type of school [community college vs. other]) compared CAST and non-CAST students on each outcome variable. Cohen’s d statistic was used to assess effect size. Analyses of variance looked at outcome differences across three groups: 1) students in CAST certificate or minor programs, 2) other CAST students, and 3) non-CAST students. Correlations between number of CAST courses taken and outcomes were calculated. To estimate change in outcomes over the course of semester CAST class, additional t-tests compared pre-test data on outcomes gathered at the beginning of the spring semester of 2020 to post-test data gathered at the end of the semester.

Chapter 3: Instructors and Administrators' Perspectives on the Implementation and Impact of CAST

This chapter explores the implementation of Mississippi's CAST initiative. The source of data is interviews with instructors and administrators in eight schools that have implemented CAST courses and four schools that aspired to offer CAST courses but had not yet implemented CAST at the time of the interview.

The development of CAST at a college or university typically depended on a champion who had attended a CAST training or engaged with CAST leaders on their visits to campus. Yet one person could not implement CAST by themselves. Most interviewees reported that their school administration and faculty supported the development of CAST, and in some schools the administration actually played a leadership role. Support from the school's administration and faculty facilitated the implementation of CAST courses, though champions also encountered some skepticism.

Multiple academic departments are involved in CAST within schools, though complications involved with having multiple departments need to be dealt with and some departments hang back, perhaps out of concern about the program's demands. Instructors needed knowledge and experience in the field as well as teaching ability; which meant that recruiting, monitoring, and maintaining CAST instructors requires considerable effort and involves some uncertainty. Though enrollment in CAST courses was small in some schools, in others it had grown substantially. Rising enrollment could make it challenging to do simulations and tended to introduce more students who were not committed to child-serving careers, who might have a different level of interest and different values than other CAST students. A number of CAST programs have strong partnerships with community organizations. These partnerships enrich the education of CAST students and sometimes engage community professionals in learning opportunities. Resource limitations, academic requirements, questions about prerequisites, and the challenges of doing online as well as in-person courses all influenced the implementation of CAST.

Interviewees consistently talked about the value of CAST for providing useful knowledge and experience for students seeking to work in children's services. They also noted students' enthusiasm for CAST. Two aspects of CAST that demanded attention were dealing with CAST students who do not seem suited to working with children and families, and responding to disclosures of CAST students who have had a history of victimization. Interviewees felt that simulations provided valuable experiential learning. Most interviewees anticipated that their CAST program would grow in different ways, including development of a certificate program or minor, increased connection with other academic departments or universities, and greater engagement with community professionals. The interviewees in schools that had not yet implemented CAST were enthusiastic about the program and working through the organizational steps needed to move toward implementation. One of the four has now implemented CAST at the time of this writing.

Chapter 4: Students' Evaluation of CAST Courses and Programs

In this chapter we present results from the outcome survey on CAST students' appraisal of the CAST course they had just taken and the CAST program as a whole. We also asked students about their interest in working with children and families affected by child maltreatment, a variable that is conceptually related to enthusiasm for CAST. Across two administrations (autumn and spring semesters, 2019-2020), 94 CAST students participated.

CAST courses received high average scores on each satisfaction question, indicating that most students had a high positive appraisal of their CAST course. Most students gave their CAST course the highest possible score on being helpful (very helpful=70.7%) but 12.2% of students rated their CAST course as very unhelpful. Almost 50% of CAST students reported an increased interest in working with children and families affected by child maltreatment after taking the course, 42.2% reported that their interest stayed the same, and 8.9% reported a decrease in interest in working with children and families affected by child maltreatment. For a subgroup of 19 students who completed both a pre-test and a post-test, their interest in working with children and families affected by child maltreatment increased at a statistical trend level, with a large effect size.

In the post-test CAST survey, we also asked several open-ended questions regarding participants' experience of the CAST course and program. On an open-ended question about the strengths of their CAST course, students mentioned their enhanced knowledge about child maltreatment and the opportunity to learn through simulations. When students were asked how their CAST course could be improved, a number of students suggested increasing simulations and other students suggested modifying simulations in some way. When asked what advice about the course they would offer, a number of students suggested preparing for discomfort in the class, but several paired that with a statement indicating that the value of the course outweighed the discomfort. The main strengths mentioned for CAST programs were enhanced understanding of child maltreatment and help with career choice and preparation. In response to open-ended questions, many students provided an endorsement of the CAST program in some form.

Chapter 5: Comparing CAST and non-CAST Students on Outcomes

To compare CAST and non-CAST students on outcomes, we pooled data from the fall and spring semesters of academic year 2019-2020 for a larger sample size with greater statistical power. Across a set of ten outcome measures measured at the end of the semester, CAST students differed significantly from non-CAST students in the direction of greater knowledge and skills. The results showed that the CAST and non-CAST group differed significantly on five individual outcomes once we controlled for race and program type. The CAST group rated their knowledge and understanding of child maltreatment significantly higher than the non-CAST group did, with a small to medium effect size. CAST students had significantly higher scores than non-CAST students on a child protection knowledge scale, on identifying evidence in sexual abuse cases and on identifying organizations likely to be involved in a child sexual abuse investigation. CAST participants were significantly less likely to suspect child maltreatment in a

vignette written to represent a situation that involved family conflict and distress but was unlikely to involve child maltreatment. In 20 out of 25 child protection knowledge questions, a higher percentage of CAST students than non-CAST students chose the correct answer; these advantages for CAST were statistically significant for 9 questions. Even though CAST students had a significant advantage on many questions, many questions nevertheless had a number of incorrect responses from CAST students. Indeed, on some items less than half of CAST students got the correct answer. Students pursuing a CAST minor or certificate had significantly greater child protection knowledge than both other CAST students and non-CAST students, though other differences between the schools that offer a minor or certificate and other schools may help explain this result. The number of CAST courses taken was modestly correlated with ability to identify organizations likely to be involved in a child sexual abuse investigation (at a trend level), and with students' accuracy on a vignette that required them to distinguish child maltreatment from family conflict.

In a repeated measures analysis of variance of 21 students, students' average self-rating of skills increased significantly over the course of a semester's CAST class. Also, CAST students increased in the number of organizations correctly identified as likely to be involved in a child sexual abuse investigation, at a statistical trend level. In a comparison of all pre-scores and post-scores, self-ratings on knowledge and understanding of child maltreatment were significantly higher at the end of the spring semester than at the beginning of the semester, with a large effect size. The CAST post-scores were also significantly better than the CAST pre-scores on two vignettes in which students made judgments about the likelihood of child maltreatment.

Chapter 6: Discussion

There are a number of useful "takeaways" from these preliminary results:

- CAST is firmly established and highly valued in a range of different colleges and universities in Mississippi;
- CAST implementation is expanding and enrollment is increasing;
- Multiple university departments are involving in implementing CAST;
- Partnerships between CAST programs and community agencies have been established and appear to be increasing;
- At the end of a semester CAST course, CAST students scored higher than non-CAST students on a range of outcomes measuring knowledge and skills for responding to child maltreatment;
- Students who are pursuing CAST certificates and minors and have taken more CAST courses have better knowledge and/or skills than other CAST students;
- CAST students' skills at the end of a CAST course are somewhat better than CAST students' skills at the beginning of the CAST course, although this has been difficult to assess given that the Covid-19 crisis hit universities in the middle of our spring semester data collection;

- CAST students have greater relevant knowledge and skills than non-CAST students even at the beginning of the semester; some part of the CAST advantage may be that CAST attracts students with more relevant knowledge and skills;
- CAST students interest in working with children and families affected by child maltreatment increased from the beginning to the end of their CAST course
- There is room for improvement, as only minorities of CAST students provided a correct answer on knowledge questions on such important topics as mandated reporting and commercial child sexual exploitation;
- Data from both students and faculty suggest that CAST courses can be emotionally demanding, but also that the rewards of the courses are worth the emotional challenges

These results corroborate and significantly extend previous research showing positive results for CAST. They show advantages on positive outcomes for CAST students versus non-CAST students, for CAST certificate and minor students compared to other CAST students, and for students who have taken more CAST courses. A comparison of pre-tests and post-tests suggests improvement in CAST course over the course of the semester, though the unusual nature of the spring semester 2019-2020 during the Covid-19 crisis might have moderated these changes and made this semester unrepresentative of typical CAST instruction.

Explanations for CAST students' advantage at the beginning of the semester include learning that takes place at the very beginning of the semester and learning in previous CAST courses but it also seems likely that CAST attracts student who already have more knowledge and skills related to child maltreatment than other students. While the results from the program evaluation provide considerable evidence for the value of the CAST initiative, they also suggest opportunities for improvement. Fairly substantial percentages of CAST students chose incorrect answers on many child protection knowledge questions. Children's Advocacy Centers of Mississippi and CAST schools may want to consider whether these results suggest steps to be taken to enhance CAST students' education.

The current results suggest that the Mississippi CAST initiative is a promising program that deserves to be maintained and expanded. Mississippi CAST students show evidence of having knowledge and skills that could help them be more prepared to function effectively in child-serving careers. Positive results were obtained in multiple schools of different types, supporting a broad approach to CAST education that includes implementation in both two-year and four-year institutions.

These results suggest the value of future research focusing on the effects of specific CAST classes and the impact of CAST on different types of CAST students. We particularly need more data on change in CAST course over time. As more students graduate with CAST certificates and minors, it will be valuable to conduct follow-up studies to examine the impact of CAST on their career. The Mississippi results should inspire more study of CAST programs nationwide.

Chapter 1: Introduction to Mississippi's CAST Initiative

We as a society need commitment, knowledge and skill to deal with the substantial risk of child abuse and neglect and the enormous harm thousands of children suffer from it. Commitment, knowledge, and skill are critical because children's needs are often a low priority, and their victimization is usually hidden. They often cannot tell us that they are being hurt or they are too frightened or ashamed to speak up. We need people who see and work with children to recognize potential signs of maltreatment, know how to respond to it, and understand how to assist children's recovery from it. This report presents the results of Mississippi's Child Advocacy Studies Training (CAST) initiative, a statewide effort to help undergraduate and graduate students learn about child maltreatment and develop the abilities to respond to child victims.

Training on child abuse and neglect in higher education is meager (Vieth, et al., 2019). Few undergraduate or graduate courses are offered across the country. A 2006 study at Winona State University analyzed the web sites of 1,416 universities and colleges, and found that only 29% had any course work related to child maltreatment (Vieth, et al., 2019). These courses were typically in sociology or psychology departments, meaning that many professionals in social work, criminal justice, education and other fields had no opportunity to learn about child maltreatment within their program. None of the universities had a concentration or minor on child maltreatment. Education on trauma generally is also limited. Cook and colleagues (Cook, Simiola, Ellis, & Thompson, 2017) found that only one in five doctoral programs in psychology offers a course in trauma psychology as well as a practicum in working with a traumatized population.

CAST is a national programmatic response to the deficit in education in child maltreatment (Vieth et al., 2019). Colleges and universities throughout the United States provide CAST courses and certificate or minor programs to educate undergraduate and graduate students in child maltreatment and help prepare many for careers in child-serving professions. Vieth and colleagues (2019) describe the history of CAST. It originated as a program of the National Child Protection Training Center (NCPTC) at Winona State University in Minnesota. CAST was supported by funds from the federal Office of Juvenile Justice and Delinquency Prevention starting in Fiscal Year 2003. When federal funding ended, NCPTC joined the Gundersen Health System; later the private non-profit Zero Abuse Project inherited the staff and assumed the responsibilities of NCPTC. The Zero Abuse Project runs the Center for Child Advocacy Studies (C-CAST), which partners with colleges and universities throughout the United States that are providing CAST curricula. In less than two decades, 73 different CAST programs have been developed in colleges and universities in 20 different states.

Several studies have explored the effects of CAST. Knox, Pelletier, and Vieth (2013) and Pelletier and Knox (2017) studied first year medical students who took a Child Advocacy (CAST) elective and a comparison group of other first-year medical students. In pre- and post-tests, students were presented with vignettes depicting situations in medical settings involving the identification and report of child maltreatment. CAST students had a significantly greater increase in their ability to identify and report child maltreatment than comparison students, with large effects. Knox, Pelletier and Vieth (2014) studied 16 first-year medical students who

took a Child Advocacy elective course. On a pre- and post-test, students improved significantly (with a large effect size) in their self-report of their preparedness for a number of different actions: identifying signs of child maltreatment, reporting a case of suspected child maltreatment, reporting a case of suspected maltreatment even if they are not sure, and recommending or securing services for a maltreated child. Parker and colleagues (Parker, McMillan, Olson, Vieth, & Ruppel, 2019) compared CAST graduates and CAST seniors to child protection professionals on their response to vignettes presenting cases requiring a child maltreatment investigation. In response to a complex polyvictimization scenario, the CAST graduates did significantly better than child protection workers on identifying disciplines that respond to child maltreatment and in identifying psychological abuse. Osgood (2017) surveyed both current students and graduates of a CAST minor program, and found that the majority of respondents valued their CAST education. Some graduates had a negative experience because of the difficulties of fulfilling their minor requirements. These studies suggest the potential of CAST.

The History of Mississippi's CAST Initiative

Starting in 2014, Mississippi introduced a paradigm shift by creating the first statewide program to implement CAST in multiple schools throughout the state. Previously CAST developed one college or university at a time. We learned about the history of Mississippi's CAST initiative from several documents (e.g., Beam & Steckler Tye, 2016; Vieth et al., 2019), as well as an interview we conducted with the Executive Director of Children's Advocacy Centers of Mississippi (CACM), a founding partner in the CAST initiative (along with the Mississippi Department of Child Protection Services and the Mississippi Office of the Attorney General). Figure 2.1 presents a timeline for the development of Mississippi's CAST initiative.

In 2014, the early development of CAST inspired a private donor to challenge the child protection field to develop a systemic response to improve education on child maltreatment. Mississippi was the one state in the country to respond to this challenge and win an award. Assisted by this seed money, the Mississippi CAST partners invited all 38 institutions of higher learning to a discussion of implementing CAST programs at their school, and had an enthusiastic response. Mississippi and national CAST leaders partnered to supplement this with a "road show" outreach; they traveled to every public university and other schools to learn about their needs and promote the CAST idea. An important strategy was to identify a champion to lead implementation at each school. A factor that helped catalyze CAST development was vocal support from the state Community College Board and the Mississippi State Institutions of Higher Learning, which wrote to schools encouraging them to listen to the CAST experts and take them seriously. Over 100 representatives of 16 Mississippi schools, including every public university, attended training at a conference in which they were introduced to the CAST idea and given curricula, syllabi, and other materials (provided in part by C-CAST) to help them implement CAST. In 2016, seven Mississippi colleges and universities offer CAST courses for the first time in the spring and more schools have added CAST courses every year since.

CAST training has been provided yearly since 2015. CACM provided online networking, webinars, and technical assistance on course development. Some of the technical assistance involved helping schools update what they were teaching as best practice, and then "building it

up” to be a CAST course, and some of it involved helping schools market their CAST courses. Small grants from CACM to schools helped support CAST course development, by covering such costs as adjunct faculty or textbooks. CACM also met with college departments to help them develop their CAST courses.

Community colleges are able to implement the introductory CAST course (labelled CAST301 by C-CAST). Some have developed an agreement with a four-year school to accept this course as part of a CAST minor if a student moves on to the four-year school after completing community college. Four-year institutions can implement multiple courses. Schools have the option to implement CAST certificate programs and CAST minors. Students in a school with a certificate program earn one by taking three required CAST courses (Zero Abuse Project, n.d.). In a CAST minor program, students need to take the three required courses, a specified number of elective courses, and an internship or Capstone project, which has been defined as a “multifaceted assignment that serves as a culminating academic and intellectual experience for students.” (Great Schools Project, 2014). Three schools in Mississippi have implemented certificate programs and two have implemented a minor program. Some interviewees who have implemented CAST courses aspire to create a certificate or minor program, and this development was in process in their university’s administration.

CACM worked with schools and helped troubleshoot problems that arose. One professor of law, for example, initiated a CAST course that had limited enrollment at first. A CAST leader used her contacts to reach out and talk to students in social work and education, and that sparked interest leading to greater enrollment. CACM also connected schools with other similar schools, either locally or nationally, that had implemented CAST successfully, law school to law school, for example, or medical school to medical school. One important step was CACM success in helping develop an articulation agreement that allowed credit for the introductory CAST course (CAST301) to be transferred to four-year schools.

One important enhancement to Mississippi’s CAST initiative is the participation of many CAST schools in Project FORECAST, a program at the University of Missouri at St. Louis Children’s Advocacy Center funded by the federal Substance Abuse and Mental Health Services Administration (University of Missouri at St. Louis Children’s Advocacy Center, 2019). Trainers from Project FORECAST developed simulation training experiences tailored to CAST students’ needs, and traveled to Mississippi schools to teach faculty how to conduct simulations. A number of Mississippi schools now include FORECAST simulations as part of their CAST courses.

The partners in the CAST initiative saw the need for a training facility to promote simulation training, a key element of CAST education. They secured space scheduled for closure at the Mississippi State Hospital and in August 2019, opened the Child Advocacy Training Institute, a 10,000 square foot training facility that included three mock houses, a mock courtroom, a training room, a mock early childhood or elementary classroom, a mock medical exam room, a mock office or waiting room, two mock forensic interview rooms, two mock hotel rooms, and a mock dorm room. (Children’s Advocacy Centers of Mississippi, 2019). CAST students at multiple CAST schools receive training at the facility, which is also used to provide CAST-inspired trainings to law enforcement, child protection and other professionals.

As of this writing, the CAST initiative is now approximately six years old. Most colleges and universities in Mississippi have had some involvement in CAST, and a number of schools regularly teach CAST courses every academic year. Hundreds of students in Mississippi have taken CAST courses. In succeeding chapters in this report, we explore the process of implementation of CAST in Mississippi schools and examine its impact on students experience, knowledge and skills.

Figure 1.1 Timeline for the Development of Mississippi's CAST Initiative



Chapter 2: Methods

This is a mixed methods evaluation that includes both an implementation study using qualitative data and an outcome study using quantitative data.

2.1 Implementation Study

This part of the evaluation sought to explore the development of the CAST initiative in Mississippi and examine its implementation. Two methods were used for the implementation study: document review and key informant interviews.

Document Review. Evaluators reviewed a comprehensive set of documents that Children's Advocacy Centers of Mississippi provided evaluators related to implementation of the CAST initiative. Documents include memoranda, annual reports, PowerPoint presentations, proposals, brochures, press releases, and published articles about the CAST initiative (e.g., Beam & Steckler Tye, 2016; Vieth, et al., 2019)

Key Informant Interviews. The implementation study also employed interviews with the Executive Director of Children's Advocacy Centers of Mississippi and with faculty throughout the state. The primary faculty interviews (n=8) were conducted with faculty who were teaching CAST courses and/or administrating CAST programs in Mississippi college and universities. Two interviews included multiple CAST instructors from the CAST school that was the focus of the interview. One of those group interviews also included a director of a community children's services agency that had participated in that school's CAST program. We also interviewed faculty who received CAST training but teach at schools that had not yet implemented CAST (n=4). We hoped with this latter group to learn about obstacles of implementation and plans to overcome these obstacles and move forward.

The interview with the Executive Director of Children's Advocacy Centers of Mississippi aimed to capture the history of the development of the CAST initiative. The interviewee was asked to provide a verbal historical narrative of the program from its origins to the current day. Interviews with faculty members at CAST schools asked about the history of the CAST program at their institutions, the development of CAST courses at the school, and faculty members' appraisals of CAST and FORECAST (if they implemented it). Faculty who had attended the CAST training but not yet implemented CAST were asked about their school's reaction to CAST training, and about obstacles that may have impeded the development of CAST at the school.

Interviews were recorded and transcripts were made from these recordings. Information from the interview with the Executive Director was used directly in the description above in the recounting of the history of the development of the CAST initiative. We then used Braun and Clarke's (2006) thematic method to analyze the transcripts of the faculty interviews. The first author read the interview transcripts and created codes to identify themes in the transcript. Text from the interview was then assembled for each code, and evaluators then used this text to identify findings and report on them in the implementation evaluation component of this report.

2.2 Outcome Study

The outcome study sought to assess the impact of CAST on students' course experience, knowledge and abilities. It employed a quasi-experimental design comparing students who took a CAST course (or a course adapted from CAST) to a comparison group of students that had taken a non-CAST course in a related field at a college or university that did not offer CAST courses. In that way we were comparing students with involvement in CAST to comparable students who we could be reasonably sure had no exposure to CAST.

Evaluators obtained from CACM a list of instructors and administrators who had implemented CAST or a course adapted from CAST at their institution (the CAST list), and a list of instructors and administrators who had received CAST training but had not implemented CAST (the non-CAST list). A representative from CACM explained the evaluation to instructors on the CAST list through emails and through quarterly CAST network conference or Zoom calls. Evaluators also emailed and made telephone calls to both CAST and non-CAST instructors. CAST instructors were asked if evaluators could recruit students from their CAST classes to participate in the evaluation as part of the CAST group. Non-CAST instructors were asked if evaluators could recruit students from non-CAST classes to participate in the comparison group. Non-CAST classes included a variety of different classes in fields that match the fields of CAST students, for example, social work and criminal justice.

The evaluators developed two different versions of a CAST student outcome survey (see below)—one for CAST students and one for non-CAST students—and developed an online survey portal for students to use. The CAST and non-CAST versions of the survey differed only in that the CAST version included factual questions about CAST courses (e.g., which CAST they took) and about students' experiences in their CAST courses (non-CAST students' experience of their non-CAST course was outside the scope of this evaluation and we therefore did not ask questions about it). Pre-test and post-test versions of the survey were created that were identical in most respects.

The CAST outcome measure was developed in the autumn of 2019. Our hypothesis was that CAST students would have a positive experience of the CAST course and would have greater knowledge and skills related to child maltreatment at the end of their course than non-CAST students have at the end of their course.

Our hope was to administer the survey as a pre-test and post-test in the autumn semester of 2019-2020, but the survey was not ready at the beginning of the semester. We therefore first fielded the survey at the end of the 2019-2020 autumn semester (at or near the last class session of the semester) to capture students' experience, knowledge, and skills related to child maltreatment at the end of the course. We then administered the survey in the spring semester of academic year 2019-2020 as a pre-test (in the second week of classes) and post-test (at or near the last class session).

An email including recruiting information and the link to the survey was sent to instructors, who were asked to forward the link to students in their class. The survey was open for approximately two weeks. Students were offered a \$25 electronic Amazon ecode for participating in the survey.

CAST Student Outcome Survey. The CAST Student Outcome Survey had multiple sections, as described below.

Information on Students in CAST (CAST students only). CAST students were asked questions designed to gauge the nature and extent of their involvement in CAST. Questions were asked about which CAST course they were taking (e.g., CAST 301, CAST 401 etc.), how many CAST courses or other courses focusing on child maltreatment they had taken, whether they were enrolled in a CAST minor or CAST certificate program, whether they had participated in simulations, and what FORECAST simulations (if any) they had participated in.

Evaluation of their CAST Course (CAST students only) and the CAST program. CAST students were asked for their appraisal of the quality of their CAST course. Questions were asked about whether the concepts in the course were clear, whether the respondent had learned skills, received clear constructive feedback, had productive class discussions, and received guidance on becoming a competent professional. In addition, respondents were asked for an overall rating of the helpfulness of the course, the helpfulness of the simulations, and the likelihood that they would recommend the course. They were also asked open-ended text questions about their perceptions of the strengths of the course and how it could have been improved, and what advice they would give to another student who was considering this course. There were also several questions in which they were asked to rate the CAST program as a whole. Cronbach's α for all these items was .84, indicating that there was substantial internal consistency among the items.

Self-Rating on Knowledge and Understanding. Students were also asked to rate themselves on 15 relevant skills that were important for CAST students to learn, as identified in CAST program documents (e.g., Gundersen National Child Protection Training Center, n.d.), using a scale employed in Osgood's (2017) previous research on CAST. The text on each skill presented an affirmative statement of what a student could do, for example, "I know how to identify possible instances of child maltreatment". Students rated how true each skill statement was of them, from 1—never true to 5—almost always true. The following skills were listed: 1) knowing how to identify possible instances of child maltreatment; 2) knowing their own role in responding to child maltreatment; 3) being able to advocate for children; 4) knowing how to respond to survivors of child maltreatment; 5) having an understanding of global child advocacy issues; 6) understanding the history of child maltreatment and child advocacy in the United States; 7) understanding the interpersonal dynamics of violence and abuse; 8) understanding the short-term impact of child maltreatment; 9) understanding the long-term impact of child maltreatment; 10) understanding factors that help maltreated children be resilient; 11) understanding the process of disclosure of child abuse; 12) understanding how a multidisciplinary team responds to child maltreatment; 13) understanding what kind of evidence can corroborate a true disclosure of child maltreatment; 14) understanding how to work with non-offending caregivers of the child; and 15) understanding cultural and developmental factors affecting work related

to child maltreatment. The Cronbach's α for these was .95, representing substantial internal consistency.

Interest in Working with Children and Families. Students were asked to rate their interest in working with children and families affected by child maltreatment and the same interest *before* taking the course, on a scale from 1-very not interested to 5-very interested.

Recognition of Child Maltreatment. The student outcome survey also used a measure adapted from Donohue, Alvarez, and Schubert's (2015) research, which included vignettes designed to assess students' abilities to recognize child maltreatment. Each vignette presented students with information from a hypothetical case that might or might not indicate possible maltreatment. For each vignette, students rated how likely they were to suspect child maltreatment, on a scale from 1-highly unlikely to 7-highly likely. Five of Donohue et al.'s (2015) vignettes were used and a sixth vignette dealing with a cultural issue was written for this study (based on information from Fontes, 2005). Two vignettes represented cases in which a knowledgeable reporter would be likely to suspect maltreatment. Four represented cases in which a knowledgeable reporter would be likely to believe there was an alternative explanation for the case facts other than maltreatment (e.g., the effects of poverty rather than child neglect). Cronbach's α was calculated to assess internal consistency across the six vignettes. Cronbach's $\alpha = .48$, indicating limited consistency among six vignettes. Because Cronbach's α was small, we analyzed the vignettes separately rather than calculating a score across vignettes.

Child Protection Knowledge Scale. Evaluators created a multi-item scale measuring students' child protection knowledge. The scale included a number of true-false and multiple choice questions assessing knowledge relevant to the knowledge goals of the CAST program, as documented in CAST literature (see Gundersen National Child Protection Training Center, n.d.). Among the topics covered by the Child Protection Knowledge Scale were mandated reporting of child maltreatment, child out-of-home placement, perpetrators of child abuse, medical evidence of abuse, commercial child sexual exploitation, the effects of child maltreatment, disclosure of child maltreatment, foster care, Children's Advocacy Centers, investigation of child maltreatment, and factors promoting resilience of victims of child abuse. The scale was designed to distinguish CAST students from non-CAST students, but also to distinguish more advanced CAST students from less advanced CAST students. For the latter reason, some of the items were written to be difficult for less advanced CAST students.

The evaluators took steps to enhance the reliability and validity of the outcome survey. They created the first version of the measure with an excess of items. Five experts on CAST (including two from Children's Advocacy Centers of Mississippi) reviewed the content of the outcome survey and reported to evaluators their judgment on the extent to which: a) items would distinguish between CAST students and non-CAST students, and b) items would distinguish between less experienced and more experienced CAST students. Pilot versions of the test were pilot tested with volunteer undergraduate and

graduate students. Items were included in the final scale if CAST experts felt that the item would distinguish between CAST and non-CAST students and between less and more experienced students, and if the items demonstrated adequate variability among students who piloted the measure.

The Cronbach's α for this scale was .59. This modest degree of internal consistency is probably a result of the diversity of questions on the scale asking about a wide range of topics related to child maltreatment. Although internal consistency was modest, in our judgment it was sufficient in order to compute and use an average score across items.

Responses in a child sexual abuse case. Two tasks were adapted from Parker et al.'s (2019) study of CAST students. These tasks assessed CAST students application of their knowledge to a case scenario. Participants read a brief vignette of a child sexual abuse disclosure and were asked to identify five types of evidence a criminal investigator should be looking for and seven different organizations likely to become involved in the investigation. To score responses to these two questions, the two authors read every response and scored each participant according to criteria stated by Parker et al. (2019). A final consensus score for each participant was determined in a meeting between the two researchers. We calculated our interrater reliability using the averages intraclass correlation coefficient. For the evidence variable, the averages intraclass correlation coefficient was 0.86, representing a high level of interrater reliability. For the organizations variable, the averages intraclass coefficient was .97, representing a very high level of interrater reliability.

2.3 Sample

Table 2.1 displays information on the samples of survey respondents included in the interim report. One participant completed both the 2019 fall post survey and the 2020 spring pre-survey; 21 participants completed both the 2020 spring pre- and post-surveys. Altogether, students from nine different CAST schools and two different comparison schools participated. Table 2.1 also shows the diverse array of student majors represented in both the CAST and non-CAST groups. The most common majors across three semesters were social work ($n=74$), followed by psychology ($N=41$) and nursing ($N=33$).

2.4 Data Analysis

The evaluators used standard inferential statistical methods. To compare CAST and non-CAST students, we conducted a multivariate analysis of variance on 10 outcome measures. Independent sample t-tests were then used to compare CAST and non-CAST students on each individual outcome variable. Multiple regression was also used to compare the CAST and non-CAST groups while controlling for potentially confounding variables. Effect sizes for the differences between CAST and non-CAST students were calculated using Cohen's d statistic (see Cohen, 1992). To assess whether the CAST vs. non-CAST differences applied to both community colleges and four year schools/graduate schools, we conducted a two-way analysis of variance with simple effects analyses comparing CAST and non-CAST students within the community college subgroups and within the four year school/graduate school subgroups. We also used analysis of variance to compare three groups: 1) students in CAST certificate or minor

programs, 2) other CAST students, and 3) non-CAST students. Correlations between number of CAST courses taken and outcome scores were calculated.

Additional analyses compared pre-test data and post-test data in the spring semester of 2020. A matched samples t-test was conducted for students taking both the pre-test and post-test. The number of students who completed both pre-test and post-test was small, and a number of students completed either the pre-test or post-test, but not both. Therefore, we also employed a method that computes a Student t-test on all the pre-test and post-test data, while taking into account the dependency of scores among students who completed both the pre-test and post-test (see Derrick, Toher, & White, 2017).

Table 2.1 Samples for the CAST Outcome Survey

Survey	Dates	Participants	CAST Majors	Non-CAST Majors
2019 Fall Semester: Post-survey	December 3-20, 2019	Total=81 CAST=54 Non-CAST=27	Arts or Humanities Biological or Life Sciences Criminal Justice Education	Arts or Humanities Biological or Life Sciences Criminal Justice Education
2020 Spring Semester: Pre-survey	January 27-February 11, 2020	Total=108 CAST=103 Non-CAST=5	Engineering Health Care or Health Sciences Law	Health Care or Health Sciences Law Medicine
2020 Spring Semester: Post-Survey	April 20-May 22, 2020	Total=110 CAST=40 Non-CAST=70	Medicine Nursing Other Social Science Psychology Social Work Theology or Religion Other Undecided	Nursing Other Social Science Physical Sciences Psychology Social Work Other Undecided

Chapter 3: Instructors and Administrators' Perspectives on the Implementation and Impact of CAST

This chapter explores the implementation of Mississippi's CAST initiative. The source of data is interviews with instructors and administrators in eight schools that have implemented CAST courses and four schools that aspired to offer CAST courses but had not yet implemented CAST at the time of the interview (one of the schools has since inaugurated CAST classes, starting in the summer of 2020). As noted in the Methods chapter, two of the CAST interviews included multiple CAST instructors and one of those two also included the director of a community children's services agency that had participated in a university CAST program. The chapter starts by examining key elements of developing a CAST program, reviews components of CAST implementation, continues by discussing the impact and future of CAST, and ends with a discussion of moving forward with CAST in schools that have not yet implemented it.

3.1 Development of CAST

Champions for CAST. The development of CAST typically began with one person on the faculty or in the administration who had attended a CAST training or engaged with CAST leaders on their visits to campus. That person became a champion for the program and worked to engage others.

One interviewee described how important it was to have a champion for CAST on campus to sustain the initiative to implement the program.

To me, the biggest part is having that champion to do it... Because it's definitely over and above... what's in the contract and what [s in] the teaching schedule. And when you're trying to think about teaching and scholarship and service and all these other things that you have to do for tenure track, in particular, asking somebody to do this over and above, you've really gotta find somebody that has a heart for it, and that wants to continue it.

Yet one person could not do it alone:

It was much easier for me to start making some movement on this once I had a couple other colleagues in the school who had also been trained. But, you know, when it all falls on one individual to make it happen, that can be really challenging, and it's a lot harder to make that a priority for the entire department if there's only one person advocating for it, or working toward that, as opposed to, you know, several people who are advocating and working toward it.

Support from Administration and Other Faculty. Support from the school's administration and other faculty is needed to develop CAST courses, add them to the curriculum, and help build engagement in the program. Most interviewees reported that their school administration supported the development of CAST, and in some schools the administration actually played a leadership role.

This came from the top, and not just the current president but the previous one... the AVPAA [Associate Vice Provost for Academic Affairs] was the one who brought Victor Vieth [a national CAST leader] here. But it was also more recently from the provost,

because the former department chair sent me an e-mail last year and said, "Are you still working on CAST?" and I said, "Yeah." "Well, the provost wants to know what kind of interdisciplinary programs we have in the works."

Our associate dean of academics...was a PhD-level psychologist who had worked in the educational system for years, and specifically with children in the public school system. And so she had a huge wealth of knowledge and...personal background in the same area. And so I think she really had a heart for it as well. And so she was very, very interested, and actually immediately said anything that we needed to do to try to get it implemented, she would support.

Our administration...encouraged us to attend the first training to begin with.

But obstacles within higher education could also slow down the implementation of CAST. One interviewee encountered resistance that they attributed to a lack of understanding, but the interviewee was able to overcome this obstacle.

Mississippi community colleges are not reimbursed for a class unless it's approved by the chief academic officers. And so I had to work with the universities to get the documentation I need from them to show that it will transfer and that they'll [four year schools] accept it.... There was some push back in some of those meetings. And I think it was just not understanding. But we got it worked out, got it approved and had everything ready to go.

Interviewees generally described faculty as supportive of CAST. Several schools already had courses in their curriculum pre-CAST that fit well with CAST and could be adapted to be part of a CAST program, as the one interviewee explained:

We have a class in family studies...That's been offered here probably since like 2008. And I thought that would be perfect...CAST is very accepting of that, because they want you to integrate stuff into what's already there. So that course was already in existence. All I had to do was add some CAST-related content in there...a lot of the trauma stuff and the ACEs we already talk about, so it was a very good fit for that.

Yet CAST champions could face skepticism from university colleagues. One interviewee described colleagues who felt that starting CAST would create unnecessary duplication with another university's CAST program. This interviewee said, "There's a hesitancy to take on additional coursework and add work to our already over-extended teaching load if there are other institutions that are doing that work." Such skepticism made this CAST champion feel "like I was walking in cement." Our interviewee argued that duplication was actually valuable to make CAST available to students across the state. Having additional colleagues attend the CAST training the next year "definitely helped to start moving the process forward."

Multiple Departments Involvement with CAST. CAST programs are based in one department in a school, but CAST is multidisciplinary and CAST programs seek to involve other departments. Interviewees generally described a positive response from other academic departments. One interviewee said, "They really are very welcoming to everything, and they all find it very interesting." In several schools, multiple academic departments offer CAST courses. Even when

courses are not spread across departments, different departments have been referring students to CAST courses (the different majors involved is presented in the CAST outcome survey chapter). Involvement of multiple departments made CAST multidisciplinary and added expertise in relevant topics. Public policy, forensics, and alcohol and drug use were specific areas of expertise from other departments that were mentioned as adding value to CAST.

One interviewee envisioned that having multiple departments more involved could lessen the burden on any one:

If I can get through this, and I have it where I want, then now we're going to be able to pull in...someone from the psychology department. We're going to be able to pull in nursing. We're going to be able to pull in early ed[ucation] and work together, and then essentially I would like to have it where we are able to sort of take turns, either teaching it or doing sections of it, in order to incorporate all aspects of CAST.

But collaboration across multiple programs could introduce both administrative and interpersonal challenges.

If we're wanting our students to get the certificate but a course isn't being offered, and that's supposed to be offered in another department... some of those challenges... are worth just consideration

...getting multiple departments on board [is challenging]...We are not in the same college as [name of department], so it's not just multiple departments working together, but it's cross-college collaboration. But also just struggles, interpersonal challenges at times...the more people you're working with, and not everybody necessarily having a shared timeline or completing things in a timely fashion...each department or...school has its own priorities.

Some academic departments have held back; interviewees thought that their hesitation was due to anticipation of the demand that CAST courses and students would make on their program:

We talked to all of them, and everybody except for [name of department]—one of the groups that we think really should be participating—they said they didn't wanna have anything to do with it. I guess they didn't want other people in their [name of department] courses, is what the problem was.

We have tried to connect with a couple different folks over in that department, and, you know, one of them had a couple conversations...and he was interested in it, but it was very much..."I'm not going to take anything extra on, so if I can't get another course covered, then I'm not going to take on a new course"...I mean, it really came back to that teaching load issue.

We have tried numerous times to get the [two departments] folks on board with this, and they just really haven't seemed to be very interested in it, which has been very surprising to us, because it seems like their student population, this is incredibly relevant for.

3.2 Implementation of CAST

Instructors. Instructors in CAST courses need to have a range of experience and skills. In schools participating in Project FORECAST, they must have the leadership and interpersonal skills to lead students in simulations as well as being capable classroom teachers. CAST instructors must also have real-world experience, to help students learn how to apply the knowledge about child abuse and neglect students are learning in classes and simulations. As one interviewee said:

The trick... is finding the person to teach it. We've gotta have some practice experience to teach that course. You can't just have somebody come in and read a book and wing it.

In a number of schools, existing instructors were able to offer CAST courses, sometimes by adapting related courses they were already teaching. Some schools have reached out to community agencies to help find instructors and engage working, child-serving professionals:

...One of the [state child maltreatment response organization] main administrative offices [is] here in [city]. So, we usually take referrals from that center as far as adjunct instructors. But we have, the majority of them [who teach the CAST classes here] work in child welfare. For example, the professor, the instructor that's teaching now is a licensed practitioner. She's a child therapist in [name of city]. We've had other state child welfare workers. We have people from the actual [state child maltreatment response organization] teach here.

But recruiting, monitoring, and maintaining CAST instructors requires considerable effort and involves some uncertainty, as one administrator explained:

I don't have as much control over what happens once the semester gets going. Since we don't know all of these instructors, and it changes every semester, it's a lot to keep track of... they could very well tell me, "Okay, great idea," and then it gets down to the semester and I don't have an evaluative piece that says they actually covered it...And...sometimes these courses aren't offered, or faculty leave the university, or somebody new comes in and they adopt a course, and that requires us to constantly reintroduce CAST to all of these people, and it's just, it's a lot. That's just a lot.

Enrollment. Enrollment varied across schools. One community college had an enrollment of one or two students in their CAST course; the interviewee from that school attributed this to the course being an elective in a school in which students are in a hurry to complete their required courses. Other schools had substantial enrollment from the start:

One thing that was really good was that once the course was offered we had no problems with getting students to register for the courses. They were very interested in the courses.

Some schools had increasing enrollment over time:

We've...had an enormous response to our CAST courses. So, the first time that we taught the Global Child Advocacy course, I believe we had 27. We listed it for, I believe, 25, and we had a couple extra who wanted in. This past spring when we taught it, we had 45.

Another school anticipated greater enrollment as the CAST program became more established:

I anticipate that those [enrollment] numbers are going to continue to grow pretty substantially as we get the courses offered on kind of a regular rotation, and after they've been around longer.

Caps limited enrollment in at least one school:

The cap for the [one CAST class] has always been set at 15. I think [another CAST class] is 30, I'd have to look. And the [a third CAST class], I'm not sure but I'm guessing probably around 20, because they do use the mock courtroom, and I think it relates to how many can fit in there.

A large enrollment can create its challenges. One is limits in the number of qualified instructors, as two professors explained:

Our students, the number of students that we have in our classes have continued to increase, but we haven't gotten additional faculty or instructors to help kind of balance that load.

The more the word gets out about CAST, the more people we have wanting to take the courses, and there's only a limited number of people teaching the required courses. So we can't just open up the floodgates. But there's been a tremendous amount of interest in it.

Larger enrollment also makes it more difficult to do simulations.

I don't know how to implement a problem-based learning simulation with 45 students in the classroom.

We have a simulation house...We work with our local child advocacy center, and we can run simulations through that house. But when I have 26 people in class, that makes it nearly impossible.

Increasing enrollment could also change the nature of the students taking CAST courses. With larger enrollments, the percentage of students aiming to translate CAST learning into career behavior could decrease. One interviewee explained the following:

We noticed some significant differences from the first year we taught it to the second year we taught it, and had a lot of conversations about how much increasing the class size contributed to that. I think also the first year it was really those students who were very, very interested in this topic who were in the course, whereas the second year that we taught it, we opened it up a little bit more broadly, and so we had a lot of students who weren't necessarily interested in child maltreatment who were just taking it to fill an elective...I think that also changed the dynamics of the class.

Instructors noted a values issue that arises with more casual CAST students who do not necessarily plan a child-serving career, or with CAST students who come from different disciplines:

In the global child advocacy issue course, we talk about corporal punishment, and how, you know, it's a risk factor for physical abuse. And in the South, corporal punishment is very widely accepted...it is really hard to push against and help students recognize... what research says about corporal punishment...one day, as we were talking about that in class, we had some students in the back of the room...made comments of "oh, well, no, you know, ain't nobody going to tell me I can't whoop my kid." ...So, I think that's some of the ways that we have seen it really change the dynamics of the class is just students who are taking it to take it and don't really have...aren't really taking an opportunity to entertain and think about this content from or with an open mind. Spending time addressing some of those kind of comments in class, which we did not have to deal with the first time that we taught that course, I think sometimes distracts from the content that we're really hoping the students are going to walk away with or away from... students who aren't necessarily interested in the content, and have that has maybe hindered our ability to be able to approach the class in the way that we would like to.

The criminal justice students in particular really spark a lot of conversation, because the ethics and agendas and their course lessons are so far different from social work, or actually anybody else's...the communication part has really been interesting... We had a criminal justice student that was going to interview a family member, doing one of the simulations for that Project FORECAST... the other students were like, "Hey, you can't just go in and talk to people like that. You're not gonna get any information. You're gonna really shut 'em down." So he learned a lot, and then they had to learn, too, from his perspective.

Partnership with Community Organizations. A number of CAST programs have strong partnerships with community organizations. This helps CAST meet the goals of providing exposure to multiple disciplines and preparing students for the real world of children's services. Partnerships benefited from faculty members' prior connections with community organizations. These partnerships could even benefit online courses—one instructor described how she had recruited a community professional colleague to do an online presentation in her course.

Some instructors have included a community service component as a requirement of their CAST classes:

We reached out to...the child advocacy center here, and we really quickly developed a partnership with them to use them...as a resource for us, and hopefully us for them as well...to be able to get all of our students who were gonna be taking that fourth-year elective over to [the Children's Advocacy Center] to spend time there, where they could really have a first-hand experience, where they could see forensic interviews, where they could interact with these children and their families, where they could see the investigation process, where they could be a part of the multidisciplinary team, and all of that. The other thing that we did was, here in our state there's only one forensic pediatrician...we reached out to [him]...We wanted to make sure that our students...were able to...spend some time with him, and really learn what a forensic medical exam looked like...[He] was really great, and very, very supportive, and worked

with us to be able to get all of our fourth-year students on the elective up there with him to spend some time with him.

The same school collaborated with community organizations on a proposal to implement Project FORECAST:

So together all of us put in an application for Project FORECAST, and really made it like a ...team. So it was representatives from both [one university] and [another university] social work, criminal justice, the medical school in those universities, and then also [a Children's Advocacy Center] and [a children's mental health provider agency]. And so we were able to get that grant, be awarded position as a team on the grant...And so instead of competing against them, we decided to give them a call and see if we could partner with them to really work together to build a strong application...We went from doing just a one-hour lecture to providing the one-hour lecture but in a multidisciplinary way, and then following it with problem-based learning simulation that our entire Project FORECAST team came and did.

They followed up by arranging for different types of practice experiences for their students at the Children's Advocacy Center:

And so we reached out to [name of Children's Advocacy Center] and said, "Hey, you're taking our fourth-year students for a four-week elective. How about letting us send you two medical students every week to do a two-hour observation?" and they were immediately on board with us on that. And so we followed that first-year lecture and problem-based learning simulation experience up with the opportunity for all of our first-year students to sign up and go spend two hours over at [name of Children's Advocacy Center], where they could actually watch a forensic interview, or they could actually sit down and sit alongside a victim's advocate, family advocate, and see how they worked, actually be able to sit in on a multidisciplinary team meeting to really see in practice the things that they had just heard about in lecture and seen simulated. And so we really grew it that way. We ended up finding out after the fact that some of them are calling [the Children's Advocacy Center] and asking if they could just come over and volunteer, just so that they could get more experience than their two-hour observation.

Several schools have students doing internships in child-serving organizations such as child protection agencies and Children's Advocacy Centers as part of their major, not as part of CAST *per se*. They have found that the CAST experience enriches students' experience of their internship.

They're actually working with children and they find the experience as another layer to what they see when they go into their internship. To an extent, I mean more so, more information and more knowledge than they would have gotten in just sitting in one of our social work classes.

One professor talked about their impression that these community placements would have a positive impact on employment.

This summer, two interns at [a local Children's Advocacy Center]...completed or [had] at least taken coursework in the trauma-informed child advocacy certificate. We...had a couple other student interns in [a different location] where they found different child advocacy organizations...I think that's going to help to start building more of that connection with employers who are specifically looking for professionals who have background and training in child advocacy.

Partnerships with community organizations also spawned initiatives to provide the CAST learning experience to professionals currently working in child-serving agencies. One interviewee who participated as an allied community professional in a group interview described how the CAST program faculty recruited their early childhood professionals as part of the program:

I...work with the Head Start and early Head Start programs... We service 907 children. And we have six programs across [name of county]. ...And we deal with sometimes child abuse, and we deal with cases from time to time, and that was something that we jumped to when [faculty member] called and she reached back out to me. I was like "Yes, yes. Wow, we want to be a part of it." And I immediately met with...one of my staff persons...and she was like, "Yes. Wow. I'm onboard. What do I need to do?" And so [faculty member] and her team put together a training that we attended on the [university] campus. We have over 37 resource workers, and [name of agency administrator] brought them to the training, over half of them to the training. And they all bought into it: "Wow, this is exciting. This is new to us. We want to be a part of it." And that's why today we ... want to be a part of it. And that's why right now we're here, and we're here to support the progress she's made, and we're here to support the CAST program.

Community partnerships were still a work in progress. One instructor had creative ideas for partnering with community organizations, but time constraints meant that she had not yet been able to implement them:

I have not yet [done any collaboration with employers in relation to the CAST program]. My goal, at some point this semester, was to do sort of do a community informational training. We have an Early Childhood program that's here on campus. And so, they had reached out to me and wanted me to do an informational session...And then if I was able to get enough interest in it, then I would potentially do a simulation with them, maybe over a, you know, a four-week period we could do a module each week or something like that. I've been in contact with some of the detectives that are here in [name of county]..., the connections are there. I just haven't connected the dots.

Factors Affecting the Implementation of CAST. Interviewees discussed a number of factors that influenced the development of CAST at their schools. One factor is simply having the resources for faculty to participate in CAST training, as one interviewee explained:

We don't really have large travel budgets here and it's very hard for us to do a lot with very few resources. ...You have to make sure that if you're going to train and go to meetings and conferences that you have the resources that you need. And so, I think that

was one of the limitations that I saw, in terms of not being able to fully participate in a lot of the activities to the extent that I wanted to.

CAST is offered in a context in which students need to meet requirements to obtain a degree. If they are community college students and hope to move on to a four-year school, they need to pay attention to what is needed to make that transition successfully. Classes they want might have enrollment caps that prevent some students from taking them. Students are constantly aware of the time and money their education requires.

One school found a way for CAST to fill a hole in their curriculum and to help students with requirements:

One of the reasons we started off with the global course is because we felt that met kind of a gap in our existing [name of department] curricula. We didn't have a course that really explicitly looked at development and particularly child development, but really development across the lifespan from a global or cultural perspective. And so, we felt like the global child advocacy course would help us kind of fill that gap. We have used several of the CAST courses as substitutes, ... often there are courses that are offered in other departments that our students struggle to be able to get into. And so, we have informally incorporated them into those curricula to kind of fill and act as a substitute for other required courses.

A CAST minor provides richness, rigor and extra credentialing to students but also requires effort and attention to implement:

The additional 12 hours [for the minor] come from a multitude of disciplines. They have to be from at least two different disciplines that are not shared with the student's major or other minor requirements. So we were trying to make it truly interdisciplinary. We do not have the courses specifically within social work do to a full CAST minor, so we have to look elsewhere throughout the university...we have a variety of courses...the biggest problem is once it's gone through academic council, if somebody has dropped a course, or they have changed the syllabi, then that messes up our minor. And for us to make a change to the minor requirements, we have to go back through academic council, back through university council, and it's just a really big deal.

One of the other challenges that we found...is if we don't get our students involved in this minor from the very beginning of the time they enter the social work program, they won't have time to finish it. So a lot of the students heard about it, but they were in their last two semesters, and that didn't give them enough time. So now we're just really starting to see the cycle of people who are hearing about it when they do have enough time to finish the minor upon graduation.

Schools had to decide whether to have prerequisites for CAST courses, and they varied on what they required. Some had no prerequisites or had eliminated a previously established prerequisite. In other schools, student needed first to do an overall introductory course in the department hosting CAST. One school did not yet have one, but planned to make a course providing foundational knowledge on traumatic stress a prerequisite. In another school, the

prerequisite was within the CAST sequence: students were required to take the introductory CAST301 class before taking more advanced CAST classes.

Some CAST classes are offered online. One challenge in online courses is the absence of any straightforward way to do simulations. One instructor told us about her wish to include a simulation in some form into the online course.

I feel like my online class is not going to get the same—at this point—out of, obviously, the simulations. But I'm wanting to sort of come up with a way to incorporate Hailey [one of the simulations] into it next semester.

3.3 Impact of CAST

We asked interviewees to describe the impact of CAST on students. They consistently talked about the value of CAST for providing useful knowledge and experience for students seeking to work in children's services:

I feel like the students are getting a very solid interdisciplinary perspective on what it's like working in the field of child advocacy, child maltreatment. So that part I'm confident in.

I've been kind of overwhelmed at the interest in it...this is something that they're going to be able to look back on and say that there was something that they really were able to use out of this class.

This is something that [students are] going to be able to look back on and say that there was something that they really were able to use out of this class.

They know they're going into a career where they're gonna see children. And I think a lot of them have learned that there's a lot that they don't know... And they really wanna get a better handle on what to do if a case like that come their way. Because they realize now that it's out there, and they wanna be able to handle it in a competent way.

The field instructors, the people who are taking our students and internship, they're finding that the students are coming prepared to engage with and possibly participate in some problem solving or crisis management with children. Even as they're under supervision they're still able to come in and be able to participate in something that's going on.

I think they're more confident in their approach to topics about children period.

Last year a lot of students took the perspectives class, and some of them had had some of the other ones, like they'd had the global health one and the legal one. And those students, when they got into the [name of CAST course], seemed a little bit better, in terms of having better attitude and sort of more understanding of what trauma does, because they'd heard about trauma-informed practice and the 12 core concepts and all that multiple times by that point.

I'm thinking of one student in particular who's a pre-med student... she wants to be a pediatrician. She really has a passion for being able to work with children who have experienced maltreatment. And so, going through these courses she feels like this has

really very well equipped her with knowledge and skills that she will use as a professional, in particular the...simulation where it's an emergency room simulation, and she actually played the doctor in that simulation. And she just, she raves about that experience and how valuable it was for her learning experience to prepare her for her professional role and duties.

Interviewees also talked about how CAST excited and motivated students.

Whenever the [student] takes it for the year, they come back so excited about it and tell all of their friends how it was the greatest thing that they've done.

[Some] students...have taken the courses because they seemed interesting, or they'd heard positive things about them, and really weren't planning on going into work related to child advocacy and preventing child maltreatment, and [it] just really ignited a passion in them, and that is now...what they're pursuing.

I think they're just as excited because they got some real-time information.

Faculty also anticipated a benefit for students' employment prospects, as one interviewee discussed:

We just got that approved the end of the spring semester, and were able to issue our first certificate at the end of this summer. And so, I anticipate that now that we have that in place, we've really been pushing that among our students that this is a way to set yourself apart on the job market by having this certificate that demonstrates you have been prepared to work with children and families who've experienced maltreatment and other kinds of adverse childhood experiences.

But another professor thought a positive impact of CAST on students' employment at child protective services had yet to develop:

CPS is the biggest employer that we've been working with, and trying to get [CAST education] implemented within their system as something special, as something they look for and could recruit for—[it has been] slow, slow, slow. CPS here in Mississippi has been under federal oversight for quite some time, and they've undergone some transitions at the top. So they have bigger fires than thinking about the CAST minor.

Part of the positive impact of CAST is to overcome misconceptions:

When I'm talking with students, and you realize it's like...everything they know came out of a television show or a Lifetime movie...There isn't a semester that goes by that some student doesn't say, "Oh, I saw such-and-such on a movie, and this is what happened." That's not what happens in real life...They don't understand about child responses to maltreatment...having those modules really helps them...figure out what they don't know.

I don't think people realize that it's all as bad as it really is. I mean you just don't believe that people can do things like that to kids when you're not involved with it. [CAST students will] know what they're getting into before they invest a lot of time getting a degree.

One challenge has been dealing with situations in which students in CAST classes do not seem suited to working with children and families. Finding this out in a CAST course rather than on the job is a benefit of CAST. But it can be difficult if faculty see a need to steer a student who does not realize they are unqualified away from a child-serving career.

We have seen students... go through and complete a class or two and realize this is not the work for me, which we actually think is really good.

I said I want you to hear all of these awful things, and I want it to have an effect on you now, because you need to figure out now if this is what you want to do, because if you can't sit through this class, then you are not going to need to...you do not need to go into social work, because what's going to happen is you're going to go out there and you're going to get burnt out after two years, and you're going to want to quit, and then you're going to go find something else, and I don't want that.

I don't think people realize that it's all as bad as it really is. I mean you just don't believe that people can do things like that to kids when you're not involved with it. [The advantage of developing that knowledge is to] know what they're getting into before they invest a lot of time getting a degree but they won't enjoy working with.

We're looking for changes in attitude and like, "When are we gonna put the brakes on that?" Like to say, "Maybe you should think about something else." Like if a student repeatedly says, for example, "Oh, that mother's the worst mother in the world because she let her kid get abused, and how could any mother do that?" And you're looking at a woman who was abused herself, and they're not putting those pieces together, and they're blaming the mother who's also been traumatized. If they keep doing stuff like that, that may be a sign they don't need to be thinking about that as a career.

Sometimes students in CAST courses disclosed their personal history of victimization, and faculty had to be prepared for that.

I have them take the ACE [Adverse Childhood Experiences] survey at the beginning of the semester, and then I collect all that data...a lot of those students scored very high on that ACE survey, like 6, 7s, on up there. And so these same students feel like they've already dealt with their stuff, and then they get in the class, and we're talking about sexual molestation or physical abuse or neglect, and it all comes right back to them... And so this is their opportunity to say, "Okay, if I'm gonna work in this field, I gotta work on my own stuff." And they'll say, "I didn't know that this was still bothering me. I didn't know this would still be hard to talk about." "Okay, well, this is a good time for you to work that out before you get into the field and you have a real family." So that's another good part of the course.

A faculty member talking about student disclosures noted that students' personal histories did not dissuade them from going forward professionally in children's services.

Even with the two disclosures, I mean, as heartbreaking as that was, but both of them want to do social work simply because of their personal experiences.

Impact of Project FORECAST Simulations. We asked about the effect of Project FORECAST in CAST courses, and several instructors talked positively about the impact of simulations.

So there's some really good, meaty topics to talk about through those simulations. I've loved using them. They're just so...They inform the rest of my semester. I take all of the learning issues, and that's what informs the modules later on... And then I'm able to bring it back in. "Do you remember when we did this during the simulation?"

I think [students participating in FORECAST] get it in a way that they wouldn't just by reading it, or even doing a case study or something like that, because they're responding in the moment that it's happening.

[Discussing the effect of beginning FORECAST simulations] it's like up to this point, it's just been information after information. You know, we've done the [FORECAST twelve] core concepts. We've done activities with each of the core concepts, and we've talked about tiers. And so, now, essentially, they're able to begin that process of understanding the way in which all of those things are connected with the cases. And so, as far as the students becoming more vocal and participation, the past two weeks [of simulations] have been so much more, because they're able to actually use all the information that they've learned up until this point and apply it to a case.

When you start adding these active pieces, like you get to go to simulation lab, or simulation center and actually see some role play and some other things going on, that's a more kinesthetic learning type thing. And they're able to really experience it at that point. To kind of reinforce what they're learning.

And then the students playing the part, too, they feel the frustration of what it's like dealing with professionals that don't really know what they're doing...it's really interesting watching them process everything that's happening...I got rid of the final project and had 'em do a second simulation instead for their final grade. So they had to really think about what they were doing, and why, in coming up with some rationale for why they were making those decisions and based on what they had learned during the semester... And it worked out really, really well. I enjoyed that process. And you could see how much they had grown. They felt more confident in their actions. And even though they weren't aware of what the simulation was going to be, they were still able to either implement their knowledge of sexual abuse or physical abuse, mandated reporting, signs and symptoms, talking to other disciplines.

We really feel like the simulations are what makes the biggest difference to the CAST courses. The content is important, but I think the opportunity for students to gain that experiential learning opportunity within the context of a classroom... we have these internships, but I don't know that students are often well-prepared going into the internships. I think there needs to be kind of a baby step between traditional coursework and interning. And so, I really see the simulations as a way for us to give the students some of that same experiential learning, those same experiential learning opportunities, but under the guidance and facilitation of instructors at the university to help clarify misconceptions...And I think particularly the problem-based learning piece of it that

forces students to slow down and not jump straight to what they think is happening. That forces them to really identify those facts, and then come up with hunches and hypotheses that are realistic given the fact that we have... Sometimes we have students that want to go off on this wild goose chase...And so, allowing them to engage in that process so that they see how they can slow themselves down and not just jump to conclusions that aren't necessarily true...The simulations have been incredibly helpful in students recognizing, "oh, I really thought the dad did it, and now I realize that was a bias, and that he wasn't, and there wasn't enough data or evidence to me to think that he was."

3.4 The Future of CAST

CAST programs evolve over time. They can grow in various ways. Schools can start with an individual CAST course, then develop more courses, and then build a certificate or minor program. Partnerships with other departments and with community organizations can develop over the course of years. We asked interviewees to describe their plans for their CAST program going forward.

Several interviewees talked about adding individual "pieces" to their CAST program: new faculty members trained, new courses and simulations added, or other learning options. One school was thinking of recruiting faculty from other schools to help provide more CAST instruction. The quotations below show other examples of specific options faculty were considering:

Maybe the university courses could be online.

So we've been looking at opportunities to add additional simulations into the second year as well as into the third year. There are already existing courses in place where I think they would fit nicely. Unfortunately we're not the course directors for those courses.

We have so many students that transfer to Ole Miss and Delta State and Mississippi State, and all, you know, because of where we're located. I do think that with the [community] college...the more that the universities are offering the upper level courses, the more likely we are to offer, ...the introduction, ...301 and maybe even 401, and them be able to transfer it and it carry over there so they can get their minor.

Several interviewees wanted to increase connections with other departments and universities:

Definitely Criminal Justice, Psychology, Education, and Nursing [departments interested in offering CAST courses]...My hope is that with the One Loud Voice conference, I'm going to be able to take one or two people with me from here so they ...experience [it]...eventually get them through the training of it.

The other thing that we're trying to do is even take it beyond the walls of the medical school. Here at our own university we have a college of health sciences, which includes a nursing school, a pharmacy school, a physical therapy school, health information management. We also have a huge school of education here. We have a huge psychology program here. And so we've been talking about opportunities and ways to

take and involve some of them in what we're doing, and some interprofessional-type activities... We've also reached out to the school of public health and things like that, and told them at any point in time we are more than happy and available to come and bring it to them.

One faculty member was active in recruiting another school to participate in FORECAST:

I met that family medicine program director up at the Child Advocacy Training Institute, I took her along with me and let her see that...She oversees our third-year simulation activities as well as helps with our second-year ones, too. And so I let her see all of that, and go through all of the Project FORECAST simulations and all of that. And I think she definitely was sold on the idea and was very supportive of seeing what she could do to try to help build some of those in.

I reached out to the program director of [name of program], and I knew that she was somebody who would be interested as long as I could get her to sit down and listen and look and see what was going on...I knew that she would have a heart for it if she just could hear the message. And so I invited her to come up and meet me at the Child Advocacy Training Institute, and took one of the trainers up there to meet with her. And we were able to not only show her the whole facility, but talk to her about Project FORECAST and go over the simulations that are available through it. And not only did she buy in, it was like, "How soon can I get my residents up here? They need to be up here...They need to be doing this all the time. This is gonna be something that they're gonna need to do every year, and we're gonna do it over and over until they really get it."

Several interviewees who did not yet have CAST certificate or minor programs were considering developing them:

Eventually maybe moving towards a minor would be good. I know one thing that might fit in really well, 'cause I know Indiana, University of Pennsylvania has the double-A CAAST [Child and Adult Advocacy Studies]. And at this point that might fit in really well, 'cause like I said, my area is woman abuse.

I would like to see this curriculum actually in a higher-level degree, like in a master's degree in a social work, a master's or higher.

One direction for the future of CAST programs is to offer more to community professionals. Faculty from one school wanted to invest more in training Head Start staff they had started to work with. Another interviewee talked about the following idea:

We would love to be able to put together a certificate through extension that would be targeting existing professionals....We would really love to figure out a way that we can formalize and do a certificate that's not credit based, like it is for our students, but that will still, you know, cover the same kinds of content for existing professionals.

Well, this is the only class but I'd like for us to have enough interest that we could get some of our community people involved. For them to maybe give a little bit of a salary increase for somebody who takes the CAST sequence, not military, police, first

responders, medical, whatever we can get people to buy into we'd like to have them. And we would start and then they could take their second and third class with another, with the university.

3.5 Faculty Aspiring to Implement CAST

We conducted interviews with four instructors that had received CAST training but who taught in schools that had not implemented CAST. Since our interviews (in the autumn of 2019), one of the four schools has begun offering CAST classes (in the summer of 2020). We asked these faculty members about their interest in CAST and about their assessment of the process of implementation of CAST in their schools. All of these interviewees were enthusiastic about CAST and hoped to implement the program in the school. They had encountered a variety of obstacles to implementation.

In one school, the interviewee had just learned about CAST in the beginning of 2019, less than a year before the interview. The faculty were excited and the university administration supported CAST; indeed, the interviewee reported “the president of the university asked me to spearhead the efforts”. The interviewee felt that the process went slowly, but at the time of the interview two CAST courses had been approved and were scheduled to be taught in the summer 2020, subject to the approval of the academic council, which our interviewee anticipated. At the time of this writing, these courses are currently being taught.

In another school, the relevant leadership was not responsive to CAST at the time the interviewee had received the CAST training, for reasons that were difficult to determine. The leadership had since changed. Our interviewee was working with the new leadership to try to implement CAST, and felt encouraged. Another limiting factor was the relevant department’s new initiative to increase online instruction, which limited the time available to take another new project.

An interviewee in another school “got all positive reactions” from faculty about CAST, but was working on some practical challenges in implementing it. They had a limited number of social work majors and most of their classes are online, and they needed to figure out how to adapt CAST to an online format. A change in university administration slowed the process of implementing CAST. An interviewee at a fourth school was also occupied with the question of how to implement CAST when most of their courses were online, and had been delayed in implementing CAST by other work demands.

3.6 Summary of Implementation Evaluation

The development of CAST at a college or university typically depended on a champion who had attended a CAST training or engaged with CAST leaders on their visits to campus. Yet one person could not implement CAST by themselves. Support from the school’s administration and faculty often facilitated the implementation of CAST courses, though champions also encountered some skepticism. Multiple academic departments are involved in CAST within schools, though complications involved with having multiple departments need to be dealt with and some departments hang back, perhaps out of concern about the program’s demands. Instructors needed knowledge and experience in the field as well as teaching, which meant that recruiting, monitoring, and maintaining CAST instructors requires considerable effort and

involves some uncertainty. Though enrollment in CAST courses was small in some schools, in others it had grown substantially. Rising enrollment could make it challenging to do simulations and tended to introduce more students who were not committed to child-serving careers, who might have a different level of interest and different values than other CAST students. A number of CAST programs have strong partnerships with community organizations, that could enrich the education of CAST students and/or community professionals who in some programs were engaged with CAST. Resource limitations, academic requirements, questions about prerequisites, and the challenges of doing online as well as in-person courses all influenced the implementation of CAST.

Interviewees consistently talked about the value of CAST for providing useful knowledge and experience for students seeking to work in children's services, and they also noted students' enthusiasm for CAST. Two aspects of CAST that demanded attention was dealing with CAST students who do not seem suited to working with children and families and responding to disclosures of CAST students who have had a history of victimization. Interviewees felt that simulations provided valuable experiential learning.

Most interviewees anticipated that their CAST program would grow in different ways, including development of a certificate program or minor, increased connection with other academic departments or universities, and greater engagement with community professionals. The interviewees in schools that had not yet implemented CAST were enthusiastic about the program and working through the organizational steps needed to move toward implementation. One of the four has now implemented CAST at the time of this writing.

Chapter 4: Students' Evaluation of CAST Courses and Programs

In this chapter we present results on CAST students' appraisals of the CAST course they had just taken and the CAST program as a whole. We also asked students about their interest in working with children and families affected by child maltreatment, a variable that is conceptually related to enthusiasm for CAST. We pooled data for this analysis from two administrations of the CAST Outcome Survey, one conducted at the end of the autumn semester 2019-2020 (post-test) and one at the end of the spring semester 2019-2020 (post-test). Across the two administrations, 94 CAST students participated. In one analysis we also used pre-test data from the beginning of the spring semester 2019-2020.

4.1 Students' Evaluation of their CAST Courses

Students in CAST courses were asked a series of questions about their satisfaction with the CAST course. Table 4.1 presents these questions and the average scores for each across students.

Table 4.1 Mean scores on CAST Course Satisfaction Questions

	N	Mean	sd
How often were concepts in the course clear? ^a	83	4.39	0.73
How often did you learn skills in the course? ^a	83	4.43	0.78
How often did you receive clear constructive feedback in the course ^a	84	4.33	0.97
How often did you have productive class discussion in the class? ^a	84	4.49	0.91
How often did you receive guidance on becoming a competent professional? ^a	84	4.31	0.96
How helpful was the course? ^b	82	4.29	1.35
How helpful were the simulations in the course this semester? ^{b,c}	66	4.20	1.27
How likely are you to recommend this course to other students? ^d	84	4.31	1.24
Average score across questions	84	4.34	0.74

Note. ^a On a scale from 1=never to 5=always, ^b on a scale from 1=very unhelpful to 5=very helpful, ^c missing=29.8% because some CAST students did not experience simulations, ^d on a scale from 1=very unlikely to 5=very likely.

CAST courses received high average scores on each question, indicating that most students had a high positive appraisal of their CAST course. The standard deviations indicate that some questions had greater variability in students' answers than other questions. Most students gave their CAST course the highest possible score on being helpful (very helpful=70.7%) but 12.2% of students rated their CAST course as very unhelpful. Similarly, most students who experienced simulations gave the simulations the highest possible score on being helpful (very helpful = 59.1%) but 10.6% of students rated their simulations as very unhelpful. More than two-thirds of CAST students (67.9%) reported that they were very likely to recommend the course to other students, but 8.3% were very unlikely to recommend the course to other students.

4.2 Students' Interest in Working with Children and Families Affected by Child Maltreatment

We asked CAST students to rate their interest in working with children and families affected by child maltreatment, on a scale from 1=very uninterested to 5=very interested. We asked them both to rate their interest at the time that they were completing the survey, after they took the CAST course, and to rate, retrospectively, their interest before they took the course. A large majority of CAST students (76.7%) reported that they were interested to very interested in working with children and families at the end of the course; 41.1% reported being very interested. A smaller majority reported that they had been interested to very interested before taking the course, 55.6%; 20% reported having been very interested before taking the course. Thus, the percentage of students who reported being very interested after the course was twice that of the percentage of students who reported that they had been very interested before taking the course. The average interest score on the 5-point scale after the course (4.0) was significantly higher than the average score students rated retrospectively for their interest before the course (3.6), $t(89)=5.02$, $p < .001$. Altogether, 48.8% of CAST students reported an increased interest in working with children and families affected by child maltreatment after taking the course, 42.2% reported that their interest stayed the same, and 8.9% reported a decrease in interest in working with children and families affected by child maltreatment. We also had a small number of students ($n=19$) who answered the interest question both in a pre-test at the beginning of the Spring semester and a post-test at the end of the semester. Their interest score increased from an average of 3.32 to an average of 3.74. This increase was a statistical trend, $t(19)=1.93$, $p=.069$, with a large effect size, Cohen's $d=1.30$.

4.3 Responses to Open-Ended Questions about their CAST course and program

In the post-test CAST survey, we also asked several open-ended questions regarding participants' experience of the CAST course and program. We asked about the strengths of the CAST course and program, how to improve both the course and program, and what advice respondents had for future CAST students. This section identifies themes that emerged in these comments, both for the CAST course they took and the CAST program as a whole.

4.3.1 CAST Course

Strengths. The first open-ended question asked, *What are the strengths of the course?* Out of 71 CAST participants who answered this question, all but one had positive comments. The most common strengths mentioned related to the value of learning about child maltreatment ($n=27$, 38%).

The strengths of this course was mainly understanding why and how children endure these types of traumatic events.

The strengths of the course was learning how to recognize child abuse and maltreatment, along with knowing your responsibilities to report it.

I truly enjoyed learning how to properly identify and report abuse. I also learned that there are different types of abuse and that it is not always physical like one may think.

It gives you skills in recognizing the signs and symptoms of child maltreatment, and teaches you about the resources available to help children and families in these situations.

It teaches very clearly about professional and non-professional mandated reporting. It also helps you to understand the processes and problems that may be involved in the agencies that deal with child maltreatment. It also teaches you about some of the laws regarding the issue of child maltreatment.

Several participants made comments that personalized their learning about child maltreatment.

This course shows the truth about child abuse and neglect without sugarcoating anything. This makes it a more eye-opening experience that helps me understand the importance of taking a course like this.

It provided me with information and tools on child abuse and neglect that I will take with me wherever I go in life.

This course opened my eyes to how child advocacy is all around me and how my day-to-day actions affect it. The global child advocacy course has shown me many topics for future research and exposed to me aspects of cultures and countries. It also led to lots of interesting class discussions about topics that taught me more about myself.

The second most commonly mentioned strength was the experience of simulations (n=21, 30%). The participants valued their experiential learning and its connection to practice in the field.

The simulations were extremely helpful because we were able to apply our learned knowledge to "real situations."

The simulations help students get the full picture; brings about awareness of child abuse; focuses on real life situations that happen every day.

The courses deal with real life situations, give hands-on experience, and allow you to better understand how trauma affects individuals and how to best help them.

It teaches you real life situations that you would actually see in the field. The simulations were very intense and helpful.

Individual students mentioned a range of other strengths, but no other category of strengths emerged across multiple students. Other strengths that were mentioned included having professionals from the field as guest speakers, in-class discussions, subject-related videos or examples, keeping students open-minded, and broadening students' views of the society or the world.

How CAST Could be Improved. The second open-ended question asked "How could the CAST course you took be improved?" Out of 65 responses, twelve (18%) reported no need for improvement. When there were suggested improvements, most related to simulations (n=27, 41%). In just over half of these comments (n=14), students stated that they wanted more simulations. In other comments, students suggested specific changes related to simulations:

The lectures could be more fitted to the simulations.

Have the simulations related to the lectures discussed at the same moment.

We often felt like we needed more information from the simulation before we could make any decisions and move on to the next step.

Focus more on specific case scenarios or simulations with the criteria within simulations.

I think the simulations could be slowed down, so that we are able to take smaller steps.

I think the expectations and procedures of the simulations could be more thoroughly explained prior to participating in the simulations.

Have the simulations be from beginning to end of the entire process. Not just one part of the process.

I think the simulation could have given more constructive criticism. Oftentimes we questioned whether we were doing the right thing and never really got feedback on the correct way to carry out the situation.

I would have liked to have more stimulating activities in Global Child Advocacy.

The post-simulation evaluations were very lengthy and repetitive.

Two respondents felt that the course should have more content on child maltreatment:

I think the course could be improved by going more in depth in maltreatment and abuse. Looking at specific statistics that are relevant to the state in which the student resides. I feel as if it would bring more of an urgency to the awareness.

This course could be improved by displaying more cases and learning the processes of these cases.

Two students wanted more closure on the case they learned about in the class.

I really wanted more closure on the cases but I know that it couldn't be helped and sometimes there is no conclusion to the case.

I would like to have found out more information about the how the simulations ended.

Other individual suggestions were as follows:

The course could focus more on the policies that are set in the area where the course is being taught.

Maybe more time for individuals to speak about their jobs.

Making topics not so uncomfortable.

Although the instructor is clearly knowledgeable and is eager to teach this subject, we did not receive feedback outside of the class which was an even bigger problem when we switched to online. Sometimes the class discussions felt as if they were going in circles. It would be improved if the time in class felt more productive.

I can't think of a good way. Maybe how the case studies were spaced out.

There is so much valuable material, and there just was not enough time to properly process all of it. Possibly a two-part course would help with that.

Making the classes shorter and more often.

Maybe some more class team assignments.

I think more interaction would be nice. Keep the students engaged.

Maybe actually going to a child advocacy center.

Monthly seminars. The best way to learn something is to get a hands on experience or hear it from someone who is constantly involved.

Advertising this course more, and showing it applies to anyone in any field of study, are the only things I can think of. This course could help more than just students going into this field by spreading awareness.

Advice. We asked CAST students to write down “What advice would you give to another student who is considering this CAST course?” Out of 71 responses, over a quarter of responses (n=20, 28%) provided an endorsement of the course, such as:

You definitely get out of this course what you put into it. If helping children that have experienced abuse or neglect is something that you are passionate about and you are willing to work hard and go the extra mile in terms of researching and seeking out knowledge, you will enjoy this class.

Take this course! It is worth it in so many ways. I think everyone should have the opportunity to take a course like this to ensure we do our part in preventing child maltreatment.

Totally recommend it! It is a wonderful learning experience for anybody looking into working with children and or families.

Definitely take it. It is a great class and the information is extremely useful no matter your major.

This is a great class and a great way to learn what advocacy is around the world.

A number of respondents (n=21, 30%) suggested that future students prepare for experiencing discomfort in class. Several of them paired that advice with a statement that the value of the course made it worth it to tolerate the discomfort:

Prepare yourself mentally for understanding that trauma is not a light topic.

It's an emotional rollercoaster. But it was one of the best classes I have ever taken in my college career.

Sometimes it makes you want to reconsider because of the things you see but it's all worth it.

Don't lose your faith in people. Going through the material, it can be a little disheartening to realize this stuff really happens and how much falls through the cracks. But there are still good people and children are resilient.

Do not hesitate to take this class, but be prepared for the intensity of the subject material. Take it seriously, and share the knowledge you gain with family and friends who might not have an opportunity to take such a class.

Be very open-minded when taking this course, put your feelings in your pocket and remember the main reason your interviewing each person for the safety of someone but don't let your feelings over take the reality task.

It will be hard sometimes, and a lot of the things we talk about are harder to hear, but building a good relationship with your peers and your instructor will help you all be able to share the weight of this topic... Hearing that others are feeling the same things I was made it easier to take in the experience at its fullest.

Twenty two responses (31%) provided classwork-related advice, such as:

Do some prior research on the individuals speaking and their jobs

Watch the provided videos! There is a lot of good information in them.

Pay attention in class, read the assigned chapters, and try to soak up all the material. There is so much information; given it can be overwhelming, but all of it is important. By the end of the semester, you can see how connected everything is.

I would tell the other student that they should complete the discussions and give good input.

To participate in the class discussions & just to pay attention because it is a good course.

4.3.2 CAST Program

The same three questions were asked about the CAST program as a whole to those CAST students who participated in a CAST program. Twenty-eight of 91 CAST participants responded to these questions.

Strengths of the CAST Program. The main CAST program strength mentioned concerns the enhanced understanding of child protection students received (n=12, 43%).

A strength is the information can be used throughout life, not just in a career. You can use the information to help a child in any situation.

Real life situations/occurrences brings about awareness of child abuse gives students knowledge of what to do in situations where child abuse may be present.

Multidisciplinary, there is a need for child advocacy information.

The knowledge it provides to us whether through the lessons itself or simulations.

Several students mentioned that enhanced knowledge from CAST helps with career choice or preparation.

It teaches how children may be affected by trauma in many different settings such as on a global/national level and at a local level. It gives a look into the many careers that play a role in making sure children have an advocate for situations they can't help.

Being able to gain knowledge about both the background/technical information related to child maltreatment and career options.

Teaching how to become a child advocate.

The CAST program is unique, and unlike other certificates or minors available. I think it makes me a stronger applicant for graduate school and the workforce, and is giving me hands-on experience in a field that I was previously unfamiliar with. I also think it is preparing professionals for a field that needs them, and where they can make a positive difference.

Other strengths mentioned were related to the program design or qualities of the professors (n=10, 36%):

They [the courses] all correlate and go hand-in-hand with information.

I like how the classes all kind of go together and continue to strengthen your knowledge of trauma and advocacy. They do not feel like you are learning the same thing over and over. They are very real-world classes and I believe they can be applicable to most everyone in many majors.

The courses are strongly based in theory as well as research. The exercises and simulations are helpful in understanding the information and demonstrate the importance of applying the information.

The professors are trained professionals in the field.

How to Improve the CAST Program. Seven respondents (25%) gave an endorsement in response to this question, such as “I think it is great the way it is.” Eight respondents (29%) had specific design suggestions for improving the CAST program:

More options for classes, for example classes that touch more on different areas of child advocacy.

The CAST program could focus more on the policies of the area where the course is being taught.

I think it could use more classes. I would love it if we had more than 4 courses in our program because they were some of the most interesting classes I took.

Offer them in more terms.

A related theme was to have more practice opportunities, including simulations (n=6, 21%):

I think that all the courses could have simulations.

There could be more simulations.

I wish we were able to work with people in the community to put our knowledge into practice.

I wish there were more classes offered at my university, and volunteer opportunities made more available/known to us.

More activities to apply our knowledge.

Two respondents mentioned how to promote the program:

Be advertised to more students, make a clear list of approved courses available.

I believe this program could be promoted better, and the course requirements could be explained better.

Advice about the CAST Program. In response to the question about what advice the student would give to others about the program, most of the respondents provided an endorsement (n=18, 64%).

Take them. This program is beneficial to many majors.

Joining this program will be a huge addition to your portfolio to set you a part in your future career. This program will help you gain so much knowledge as a person when working with children and their families from all parts of the world.

I would tell them to definitely finish the program and take all of the classes no matter if they plan to work in a CAC or not because what you learn is relevant to life.

The CAST program is incredible and teaches information that can and should be used in everyday life.

I would recommend taking enough classes to get the certification. The classes are worth it if you are truly interested in the subject.

I would recommend the program and I think it is an enhancement to any major, especially if you will work with children in any capacity.

If they are wanting to go into a career that works with children, I would definitely recommend the CAST program. Anyone that is passionate about helping children and wants to work hard will get a lot out of the program.

Other advice about the program was classwork related (n=8, 29%):

I would advise them to really engage in the program and courses to fully get the CAST experience to enhance their learning experience.

Listen, read, learn all that you can. Find a way to compartmentalize the information and use your knowledge to help others.

Take one each semester. Never take 2 at once.

This program is based on how much you put into it. The more work you put into it and more you try to learn, the more successful you will be when completing it.

I would tell them to research the CPS process to learn some knowledge prior to the course.

4.4 Summary

Overall, the vast majority of CAST students reported a positive experience, although a small percentage of students were dissatisfied. CAST students reported an increase on average in their interest in working with children and families affected by child maltreatment. On an open-

ended question about the strengths of their CAST course, students mentioned their enhanced knowledge about child maltreatment and the opportunity to learn through simulations. Most suggestions about improvement concerned simulations, either increasing them or modifying them in some way. When asked what advice about the course they would offer, a number of students suggested preparing for discomfort in the class, but often paired that with a statement indicating that the value of the course outweighed the discomfort. The main strengths mentioned for CAST programs were enhanced understanding of child maltreatment and help with career choice and preparation. In response to the open-ended questions, many students provided an endorsement of the CAST program in some form.

Chapter 5: Comparing CAST and non-CAST Students on Outcomes

We have used the CAST Student Outcome Survey to collect data at three time points for this report: the end of the autumn semester 2019-2020 (post-test), the beginning of the spring semester 2019-2020 (pre-test), and the end of the spring-semester 2019-2020 (post-test). Our first set of analyses pooled the post-test data from both semesters to compare CAST and non-CAST students on outcomes. Pooling data from both semesters provides us a larger sample size with greater statistical power.

The combined sample post-semester included surveys from December 2019 (n= 81, 42.2%) and April 2020 (n=110, 57.6%), totaling 191 participants. Table 5.1 shows the characteristics of the sample. The sample was about evenly divided between CAST and non-CAST students. The average age in this sample was 21.2 years old (SD=6.25). The majority of the sample were female. African American students slightly outnumbered White students. Few students were of Hispanic origin. CAST students were significantly more likely to be White than non-CAST students. About half of the schools represented were community colleges and just over half of the sample were community college students. CAST students were significantly more likely to be enrolled in four-year universities or graduate schools, while non-CAST students were significantly more likely to be enrolled in community college. Slightly more than half of the CAST students took CAST 301, the introductory CAST course.

Table 5.1 Characteristics of the Pooled Post-Test Survey Sample (N=191)

	All		Non-CAST		CAST	
	N	%	N	%	N	%
Survey Cohort						
December 2019	81	42.4%	27	27.8%	54	57.4%
April 2020	110	57.6%	70	72.2%	40	42.6%
CAST						
No	97	50.8%	-	-	-	-
Yes	94	49.2%	-	-	-	-
Age Mean (SD)						
	21.8	(6.25)	21.2	(5.29)	22.3	(7.13)
missing	19	9.9%	8	8.2%	11	11.7%
Gender						
Female	146	76.4%	71	73.2%	75	79.8%
Male	29	15.2%	17	17.5%	12	12.8%
missing	16	8.4%	9	9.3%	7	7.4%
Race ^a						
African American	92	48.2%	61	62.9%	31	33.0%
White	77	40.3%	24	24.7%	53	56.4%
missing	13	6.8%	7	7.2%	6	6.4%

Table 5.1 (Continued)

	All		Non-CAST		CAST	
	N	%	N	%	N	%
Hispanic origin	6	3.1%	0	0.0%	6	6.4%
missing	20	20.5%	13	13.4%	7	7.4%
Educational program enrolled ^b						
Community college	102	53.4%	58	59.8%	44	46.8%
University	63	33.0%	26	26.8%	37	39.4%
Law School	6	3.1%	2	2.1%	4	4.3%
Other	3	1.6%	2	2.1%	1	1.1%
missing	17	8.9%	9	9.3%	8	8.5%
Major in Social Work	56	29.3%	26	29.2%	30	36.1%
missing	19	9.9%	8	8.2%	11	11.7%
Taking CAST 301	49	25.7%	-	-	49	52.1%
Taking CAST 302	15	7.9%	-	-	14	14.9%
Taking CAST 401	13	6.8%	-	-	13	13.8%
			-	-		
Participated in Sims	45	25.7%	-	-	45	47.9%
CAST program						
CAST Certificate	19	9.9%	-	-	-	-
CAST Minor	9	4.7%	-	-	-	-
Other CAST	66	34.6%				
Non-CAST	97	50.8%	-	-	-	-

Note. ^a The CAST and non-CAST groups differ significantly by race, $\chi^2(1)=20.70$, $p<.001$. ^b The CAST and non-CAST groups differ significantly by education program; in a comparison of community college vs. all other education programs, $\chi^2(1)=3.90$, $p<.048$.

5.1 Comparison of CAST and non-CAST Students at the End of the Semester

We conducted a multivariate analysis of variance to compare CAST students and non-CAST students at the end of the semester on the set of 10 outcome measures shown in Table 5.2. Across this set of outcome measures, CAST students differed significantly from non-CAST students in the direction of greater knowledge and skills, Wilks' $\lambda=.567$, $F(10,116)=8.84$, $p<.001$.

Then we calculated independent sample t-tests to assess whether CAST and non-CAST students differed significantly on individual outcomes. The outcomes tested were: 1) participants' average scores on a multi-item self-rating measure of knowledge and understanding of child maltreatment (skills self-rating), 2) participant's score on the project-developed measure of knowledge of child protection (child protection knowledge), 3) participants' score on a measure

of their ability to identify up to five potential sources of evidence in a child sexual abuse vignette (sexual abuse evidence) , 4) participants' score on a measure of students' ability to identify up to seven types of organizations likely to be involved in a child sexual abuse vignette (sexual abuse organizations), 5) six vignettes asking students to rate how likely they were to suspect child maltreatment in different situations (see Table 5.2). In addition to the t-tests, Cohen's *d* statistic was calculated as a measure of effect size for the difference between groups. Cohen's (1992) convention is that a $d=.20$ is a small effect size, $d=.50$ is a medium effect size, and $d=.80$ is a large effect size.

Because the CAST and non-CAST groups differed significantly on race (black and white) and on type of college program (community college and other), we calculated ordinary least squares multiple regression models comparing CAST and non-CAST on outcomes while controlling for race and type of college program. Table 5.2 presents the adjusted mean differences between CAST and non-CAST from these multiple regressions and the results of the t-tests assessing the statistical significance of each adjusted mean difference. These last results represents a comparison of CAST and non-CAST students that removes the effect of differences in race and in type of college program. When the adjusted mean difference is statistically significant, we also present the Cohen's *d* for the difference in raw group means.

The results showed that the CAST and non-CAST group differed significantly on five outcomes once we controlled for race and program type. The CAST group rated their knowledge and understanding of child maltreatment significantly higher than the non-CAST group did, with a small to medium effect size. The CAST group also performed significantly better on three scales. CAST students had significantly higher scores on the child protection knowledge scale, on identifying evidence in a sexual abuse case and on identifying organizations likely to be involved in a child sexual abuse investigation as compared to non-CAST students. Child protection knowledge and identifying evidence had medium effect sizes, which Cohen (1992, p. 156) has described as "an effect likely to be visible to the naked eye of a careful observer". Identifying organizations had a very large effect size, which represents an obvious and striking difference.

We conducted a two-way analysis of variance with simple effects analyses to see if the significant differences on the five outcomes applied within the community college subgroup and the four year school/graduate school subgroup. Community college CAST students had a statistically significant advantage over community college non-CAST students on four outcomes, and an advantage at the statistical trend level ($p=.059$) on a fifth outcome (identifying evidence in sexual abuse cases). Likewise four year school/graduate school CAST students had a statistically significant advantage over four year school non-CAST students on four outcomes, and an advantage at the statistical trend level ($p=.051$) on identifying evidence in a sexual abuse case.

CAST participants were significantly **less** likely to suspect child maltreatment in Vignette 2, which was written to represent a situation that involved family conflict and distress but was unlikely to involve child maltreatment. Thus CAST students were exercising greater discretion. The CAST advantage on Vignette 2 had a fairly large effect size.

Table 5.2 Comparison between non-CAST and CAST Students on Ten Outcomes

	Non-CAST			CAST			t ^a	Adjusted mean difference	t ^b	Cohen's d
	N	Mean	sd	N	Mean	sd				
Skills Self-Rating Mean	97	3.86	0.84	90	4.13	0.66	-2.46*	-0.30	2.44*	0.36
Child Protection Knowledge	97	11.57	3.05	94	13.83	4.58	-4.00***	-1.84	3.97***	0.58
Sexual Abuse: Evidences	63	0.32	0.53	77	0.64	0.78	-2.87**	-0.35	2.71**	0.48
Sexual Abuse: Organizations	58	2.00	1.46	73	3.71	1.60	-6.38***	-1.51	4.93***	1.12
Vignette 1 ^c	95	6.09	1.35	89	6.02	1.12	0.40	0.15	0.75	-
Vignette 2 ^d	95	4.79	1.62	89	3.54	1.61	5.25***	0.96	3.67***	-0.77
Vignette 3 ^c	95	5.75	1.30	90	5.72	1.27	0.13	0.07	0.34	-
Vignette 4 ^d	94	4.56	1.71	90	4.21	1.69	1.41	0.35	1.25	-
Vignette 5 ^d	94	3.82	1.92	90	3.21	1.88	2.17*	0.40	1.26	-
Vignette 6 ^d	94	4.53	1.97	88	3.69	1.87	2.95**	0.37	1.18	-

Note. Guidelines on magnitudes of Cohen's d (Cohen, 1992): Small = .02; Medium = 0.5; Large = 0.8, ^a from independent sample t-test, ^b from multiple regression analysis controlling for race (black vs. white) and type of school (community college vs. other), ^c Higher score indicates better judgment about suspicion of child maltreatment, ^d Lower score indicates better judgment about suspicion of child maltreatment, *p <.05; **p <.01; ***p <.001

Comparison on Individual Child Protection Knowledge Items. We compared CAST and non-CAST students on their ability to provide the correct answer on each item in the Child Protection Knowledge Scale. This gives us a sense of the specific areas of knowledge in which CAST students have an advantage over non-CAST students. It also suggests areas in which CAST students' knowledge could be improved. Table 5.3 shows the results for each item; each item is identified by the topic that it addressed. In 20 out of 25 questions, a higher percentage of CAST students than non-CAST students chose the correct answer. These advantages for CAST were statistically significant for 9 questions. Often the differences were dramatic. For example, CAST students were almost six times more likely than non-CAST students to choose the correct answer for the first question about mandated reporting and almost twice as likely to choose the correct answer on the last mandated reporting question. CAST students were more than twice as likely to answer correctly questions on commercial child sexual exploitation and child placement and permanency. Even though CAST students had a significant advantage on many

questions, many questions had a number of incorrect responses from CAST students. Indeed, on some items less than half of CAST students got the correct answer.

Table 5.3 Percentage Correct on Individual Child Protection Knowledge Questions for CAST and non-CAST Students

Topic	CAST	Non-CAST
Child placement***	68.4%	39.8%
Perpetrators	73.7%	68.8%
Mandated reporting***	30.3%	5.4%
Forensic medical examination	22.5%	12.9%
Commercial child sexual exploitation**	44.7%	21.5%
Perpetrators	67.1%	54.9%
Effects of child maltreatment	84.2%	74.2%
Resilience of child victims	90.8%	93.5%
Mandated reporting**	89.5%	67.7%
Disclosure of abuse	44.6%	35.2%
Disclosure of abuse**	27.0%	46.2%
Disclosure of abuse	50.0%	47.3%
Disclosure of abuse	56.8%	62.6%
Multidisciplinary teams	55.3%	46.2%
Child placement and permanency**	28.9%	10.8%
Mandated reporting**	80.3%	60.2%
Mandated reporting***	57.9%	30.1%
Effects of child maltreatment	68.9%	56.0%
Effects of child maltreatment	67.6%	67.0%
Effects of child maltreatment*	74.3%	59.3%
Effects of child maltreatment**	86.5%	68.1%
Effects of child maltreatment	59.5%	56.0%
Children's Advocacy Centers**	56.6%	32.3%
Child maltreatment investigation	5.0%	14.0%
Resilience of child victims***	82.9%	55.9%

Note. *p < .05, **p<.01, ***p<.001.

5.2 Differences on Outcomes for Students Pursuing a CAST Certificate or Minor

Some schools offer students the opportunity to earn a CAST certificate or minor. Earning a certificate or minor is a significant achievement that involves taking multiple CAST courses, and for a minor, completing a capstone project. Students pursuing a CAST certificate or minor are likely to have more CAST experience and more motivation to learn knowledge and skills related to responding to child maltreatment. Some of the impact of CAST is likely to arise from engaging students in a CAST certificate or minor program. To try to assess whether students enrolled in CAST programs had an advantage, we conducted analyses of variance comparing the following three groups on outcomes: CAST students pursuing a CAST certificate or minor, CAST

students not pursuing a CAST certificate or minor, and non-CAST students. Table 5.4 presents the results.

Students pursuing a CAST minor or certificate had significantly greater child protection knowledge than both other CAST students and non-CAST students. They also had a better grasp of what organizations were likely to be involved in a child sexual abuse investigation than the other two groups. They also had better judgment than the other groups about the likelihood of child maltreatment in Vignette 5, which depicted a family affected by financial hardship. On other outcomes, they differed significantly from the non-CAST group, but not from other CAST students: their identification of what evidence to pursue in a child sexual abuse investigation, and their appraisal of the likelihood of child maltreatment in a vignette that involved cultural differences.

The limitation of these analyses is that only some schools offer a CAST certificate or minor, so differences by CAST certificate or minor cannot be separated from differences by school. We therefore compared outcomes scores for students in a subsample within schools that had both CAST certificate and minor students and other CAST students. The number of cases and the distribution of cases in each group across schools did not allow us to conduct statistical tests for this comparison. Nevertheless, we found that the CAST certificate and minor students tended to have better scores on child protection knowledge, on knowing the organizations involved in a child sexual abuse investigation and on Vignette 5, than their other CAST classmates from the same school.

Table 5.4 One-way ANOVA Comparison of the Outcomes by CAST Certificate/Minor Program

	N	Mean	Cohen's d (CAST only)	df	MS	F	Post Hoc Tests
Self-Rating (Mean)			0.12	2	1.77	3.06*	
Non CAST	97	3.86					
Other CAST	63	4.11					
CAST Cert/Minor	27	4.18					
Child Protection Knowledge			0.59	2	190.37	13.20***	Cert/Minor > CAST; CAST > non CAST
Non CAST	97	11.57					
Other CAST	66	13.05					
CAST Cert/Minor	28	15.68					
Sexual Abuse: Evidences			0.13	2	1.85	4.01*	CAST > non CAST
Non CAST	63	0.32					
Other CAST	53	0.60					
CAST Cert/Minor	24	0.71					

Sexual Abuse: Organizations			0.57	2	53.27	23.01***	Cert/Minor > CAST; CAST > non CAST
Non CAST	58	2.00					
Other CAST	50	3.44					
CAST							
Cert/Minor	23	4.30					
Vignette 1^a			-	2	0.12	0.08	
Non CAST	95	6.09					
Other CAST	62	6.02					
CAST							
Cert/Minor	27	6.04					
Vignette 2^b			0.08	2	36.07	13.78***	Cert/Minor < non CAST CAST < non CAST
Non CAST	95	4.79					
Other CAST	62	3.50					
CAST							
Cert/Minor	27	3.63					
Vignette 3^a			-	2	0.55	0.33	
Non CAST	95	5.75					
Other CAST	63	5.65					
CAST							
Cert/Minor	27	5.89					
Vignette 4^b			-	2	4.43	1.53	
Non CAST	94	4.56					
Other CAST	63	4.33					
CAST							
Cert/Minor	27	3.93					
Vignette 5^b			-0.59	2	18.77	5.32*	Cert/Minor < CAST; Cert/Minor < non CAST
Non CAST	94	3.82					
Other CAST	63	3.52					
CAST							
Cert/Minor	27	2.48					
Vignette 6^b			-0.14	2	16.68	4.50*	Cert/Minor < non CAST CAST < non CAST
Non CAST	94	4.53					
Other CAST	62	3.77					
CAST							
Cert/Minor	26	3.50					

Note. "CAST Cert/Minor" and "Cert/Minor" refer to students who are pursuing a CAST certificate or minor. Guidelines on magnitudes of Cohen's d (Cohen, 1992): Small = .02; Medium = 0.5; Large = 0.8, ^aHigher score indicates better judgment about suspicion of child maltreatment, ^bLower score indicates better judgment about suspicion of child maltreatment, *p < .05; **p < .01; ***p < .001

5.3 Correlation of Number of CAST Courses Taken with Outcomes

We asked CAST students how many CAST courses or courses focused on child maltreatment that they had taken (some students take courses on child maltreatment that have been developed as a result of the CAST initiative but are not named CAST courses). We examined the relationship between the number of CAST or related courses students in CAST schools had taken and students' scores on outcomes. At a statistical trend level, students who had taken more CAST courses tended to identify correctly more organizations that were likely to be involved in a child sexual abuse investigation vignette ($r=.23$, $p=.058$). Students who had taken more CAST courses were also more likely to provide a more accurate score in response to Vignette 2, which required students to differentiate family conflict from child maltreatment ($r=.247$, $p=.025$). Number of CAST courses taken was not significantly related to any other outcome.

5.4 Analysis of Differences in Outcomes from the Beginning to End of a CAST Course

We conducted an additional analysis to estimate the change in students' knowledge and skills from the beginning to the end of a CAST course. In the spring semester of academic year 2019-2020, we collected data from students in CAST courses at the beginning of the semester (February 2020=pre-test) and at the end of the semester (April 2020=post-test). The unusual nature of this particular semester needs to be noted. In February 2020, students were on campus and attending class as usual. In March 2020, the COVID-19 virus had hit the United States. By April 2020, when the country was still very much in the throes of the virus, classes had shifted suddenly to being taught online and students were at home. This semester was not fortuitous for assessing learning.

The sample included 103 CAST students who completed the pre-test and 40 CAST students who completed the post-test. We had hoped to conduct a matched sample t-test with adequate statistical power that would measure the change from pre-test to post-test within students. However, only 21 CAST students completed both the pre-test and post-test, limiting statistical power for the matched sample t-test. When we conducted repeated measures analyses of variance with these 21 students, we found that students' average self-rating of skills increased significantly from 3.5 ($sd=.91$) to 4.2 ($sd=.51$), $t(18)=2.62$, $p=.017$. This represents an increase in relevant skills from being "sometimes" to "often" true, to being "often true", with a large effect size, Cohen's $d=1.23$. At a statistical trend level, the number of organizations that students correctly identified as likely to be involved in a child sexual abuse investigation increased from an average of 3.6 ($sd=1.15$) to an average of 4.2 ($sd=1.22$), $t(15)=1.91$, $p=.076$, with a large effect size, Cohen's $d=1.31$. Changes on other outcomes were not statistically significant.

To use all the pre- and post-test data we collected, regardless of whether students completed both pre-test and post-test, we employed the method described by Derrick, Toher, and White (2017) that computed partially overlapping samples t-tests. Table 5.5 shows the results for these t-tests together with the Cohen's d for each comparison. The analyses indicated significant differences between the beginning and end of a CAST course on three outcomes. The participants rated their knowledge and understanding of child maltreatment significantly higher at the end of the spring semester than at the beginning of the semester, with a large effect size. The CAST post-scores were also significantly better than the CAST pre-scores on

Vignettes 2 and 3. Vignette 2 involves differentiating family conflict from child maltreatment. Vignette 3 involves identifying neglect. Although the rest of outcomes did not show statistically significant difference, the differences between pre- and post-surveys were mostly in the direction of improvement.

Table 5.5 Outcome Comparison between Pre- and Post-Surveys, Spring 2020

	Pre 2020 (n=103)			Post 2020 (n=40)			<i>t</i>	Cohen's <i>d</i> [^]
	N	Mean	sd	N	Mean	sd		
Self-Rating (Mean)	102	3.48	0.90	38	4.21	0.55	-5.33***	0.96
Child Protection Knowledge	103	13.96	3.58	40	14.13	4.83	-0.19	0.04
Sexual Abuse: Evidences	87	0.56	0.73	36	0.69	0.82	-0.83	0.17
Sexual Abuse: Organizations	85	2.99	1.52	34	3.41	1.79	-1.28	0.26
Vignette 1 ^c	102	6.07	1.07	38	6.32	0.93	-1.35	0.25
Vignette 2 ^d	102	4.24	1.59	37	3.35	1.78	2.71**	-0.52
Vignette 3 ^c	102	5.55	1.29	38	6.03	1.08	-2.23*	0.40
Vignette 4 ^d	102	4.61	1.71	38	4.39	1.60	0.73	-0.13
Vignette 5 ^d	102	3.34	2.01	38	3.34	2.08	0.00	0.00
Vignette 6 ^d	102	3.89	1.87	37	3.35	1.99	1.51	-0.28

Note. Guidelines on magnitudes of Cohen's *d* (Cohen, 1992): Small = .02; Medium = 0.5; Large = 0.8, ^c Higher score indicates better judgment about suspicion of child maltreatment, ^d Lower score indicates better judgment about suspicion of child maltreatment, **p* <.05; ***p* <.01; ****p* <.001

5.5 Summary

Across a set of ten outcome measures measured at the end of the semester, CAST students differed significantly from non-CAST students in the direction of greater knowledge and skills. The results showed that the CAST and non-CAST group differed significantly on five individual outcomes once we controlled for race and program type. The CAST group rated their knowledge and understanding of child maltreatment significantly higher than the non-CAST group did, with a small to medium effect size. CAST students had significantly higher scores on the child protection knowledge scale, on identifying evidence in sexual abuse cases and on identifying organizations likely to be involved in a child sexual abuse investigation as compared to non-CAST students. CAST participants were significantly less likely to suspect child maltreatment in a vignette written to represent a situation that involved family conflict and distress but was unlikely to involve child maltreatment. In 20 out of 25 questions, a higher percentage of CAST students than non-CAST students chose the correct answer, and these advantages for CAST were statistically significant for 9 questions. Even though CAST students had a significant advantage on many questions, many questions nevertheless had a number of

incorrect responses from CAST students. Indeed, on some items less than half of CAST students got the correct answer. Students pursuing a CAST minor or certificate had significantly greater child protection knowledge than both other CAST students and non-CAST students, though differences in what schools offer a minor or certificate may help explain this difference. The number of CAST courses taken was positively correlated with ability to identify organizations likely to be involved in a child sexual abuse investigation (at a trend level), and with their accuracy on a vignette that required students to differentiate family conflict from child maltreatment.

In matched sample t-tests of 21 students, students' average self-rating of skills increased significantly, and the number of organizations that students correctly identified as likely to be involved in a child sexual abuse investigation increased, at a statistical trend level. In a comparison of all pre-scores and post-scores, the participants rated their knowledge and understanding of child maltreatment significantly higher at the end of the spring semester than at the beginning of the semester, with a large effect size. The CAST post-scores were also significantly better than the CAST pre-scores on two vignettes in which students made judgments about the likelihood of child maltreatment.

Chapter 6: Discussion

There are a number of useful “takeaways” from these preliminary results:

- CAST is firmly established and highly valued in a range of different colleges and universities in Mississippi
- CAST implementation is expanding and enrollment is increasing
- Multiple university departments are involved in implementing CAST
- Partnerships between CAST programs and community agencies have been established and appear to be increasing
- At the end of a semester CAST course, CAST students scored higher than non-CAST students on a range of outcomes measuring knowledge and skills for responding to child maltreatment
- Students who are pursuing CAST certificates and minors and have taken more CAST courses have better knowledge and/or skills than other CAST students
- CAST students’ skills at the end of a CAST course were modestly better than CAST students’ skills at the beginning of the CAST course, although this has been difficult to assess given that the Covid-19 crisis hit universities in the middle of our spring semester data collection
- CAST students have greater relevant knowledge and skills than non-CAST students even at the beginning of the semester; some part of the CAST advantage may be that CAST attracts students with more relevant knowledge and skills
- CAST students’ interest in working with children and families affected by child maltreatment increased from the beginning to the end of their CAST course
- There is room for improvement, as only minorities of CAST students provided a correct answer on knowledge questions on such important topics as mandated reporting and commercial child sexual exploitation

The preliminary evidence from this evaluation suggests that CAST is a program that is enduring and valued by university administrations, faculty and students in a range of different colleges and universities in Mississippi. A number of CAST schools report enthusiastic support and even leadership on CAST from their school’s administration, and other faculty are generally described as supportive of CAST. In several schools, CAST enrollment has increased dramatically following initial implementation. CAST faculty are enthusiastic about their CAST classes and its positive impact on students. Many CAST programs are providing highly-valued experiential learning through simulations of client encounters related to child maltreatment. Multiple departments within a school are teaching CAST courses and/or sending their students to enroll, and students with at least 17 different majors are taking CAST courses. A number of CAST program have developed community partnerships that offer student practice experience in child-serving agencies and some are providing instruction and/or experiential learning for child-service professionals in their community.

6.1 Results on CAST Outcomes

Preliminary results from the CAST Outcome Survey showed that CAST students value their CAST courses, and report increased skills after taking a CAST course. CAST students also had a

significant advantage over comparison students on a set of 10 CAST outcomes. Contrasted with comparable students in schools that lacked CAST, CAST students had greater child protection knowledge, and demonstrated better judgment in recognizing child maltreatment in response to several realistic vignettes about child abuse and neglect. In addition, in response to a vignette depicting a child sexual abuse investigation, CAST students were more able than comparison students to identify what evidence to seek and what professional disciplines were likely to be involved.

These results corroborate and significantly extend previous research such as Knox, Pelletier and Vieth (2014), Pelletier and Knox (2017), and Parker et al. (2019) showing positive results for CAST. The results were obtained from a CAST sample that was more diverse in its CAST experience than in previous CAST studies. Our CAST students included both community college and university undergraduates and a few graduate students. It included CAST certificate and minor students and CAST students who had only taken one CAST class and perhaps would not take another. Some had taken several CAST courses and some were taking their first. Thus this is a more general CAST sample than in Knox et al. (2014) and Pelletier and Knox (2017) which focused on medical students, and Parker et al., (2019), which included college seniors in and recent graduates of a CAST program. The positive results may provide the best evidence to date of the knowledge and skills of a broad array of CAST students. The CAST advantage was maintained when comparisons were made within community colleges and within four-year and graduate schools; thus the CAST advantage appears to apply to wo-year schools as well as more advanced programs of higher education.

6.2 Pre- and Post-Comparison on CAST Outcomes

A pre- and post-comparison in the spring semester pf 2019-2020 examined differences over the course of a semester's CAST class. This comparison showed that students rated their skills more highly at the end of the semester compared to the beginning, and students' judgments at the end of the semester were better on average in two out of six scenarios testing their recognition of potential child maltreatment. These two scenarios represented important situations. One involved differentiating family conflict from actual abuse, and the other involved recognizing neglect that was putting a child at substantial risk. The superiority of the post-semester scores on these scenarios echoes Pelletier and Knox's (2017) findings that medical students taking a CAST course improved in their ability to recognize child maltreatment. Twenty-one students who completed both the pre- and post-measure also improved in their ability to identify the organizations involved in a child sexual abuse investigation, at a statistical trend level.

On other measures, however, CAST students' scores in the beginning of the semester did not differ from scores at the end of the semester. Overall these results may seem like modest improvements, though definitely in the right direction. Readers should bear in mind, however, how atypical the spring of 2020 was. The Covid-19 crisis hit the nation beginning in March 2020. Pre-test scores were collected in February 2020, when CAST students were present in the classroom and doing simulations in person. Post-test scores were collected in April 2020, when students had left campus and were taking CAST courses online from home, and lacked any opportunity to participate in simulations. Pre-post comparisons conducted during this crisis,

which disrupted, frightened and confused students, faculty and the entire nation, are not necessarily representative of the impact of CAST courses in any normal semester. Despite all this, the CAST students' scores at the end of the semester were better on several meaningful variables

It is also possible that the measurement procedure in this study limited the amount of change we could detect in any given CAST course. We used an omnibus measurement procedure that attempted to measure a wide range of outcomes related to CAST. But any individual CAST class will instruct students on only a "slice" of the total array of knowledge and skills that the CAST initiative hopes to impart to students. This could have limited the effect size for the pre-and post-comparison. Another limitation is that the students who provided the pre-scores were a somewhat different group than the students who provided the post-scores, and the distribution of students by school was different too, so differences between the types of students who took the pre-survey and post-survey may account for some of the pre-post differences or lack thereof.

It should be noted that CAST students' pre-scores on outcomes from February 2020 were higher than comparison students' post-scores from April 2020. In other words, CAST students knew more about child maltreatment and demonstrated better judgment about it than comparison students even before they had taken their CAST course in the spring semester. We see several possible reasons why CAST students may score better even before they completed the CAST course. First, taking previous CAST courses may have contributed to CAST students' greater knowledge and skills than comparison students even before they had taken their CAST course this past spring. However, this is unlikely to be a major explanation for the pre-score difference, since we found only modest relationships for only two outcomes between the number of CAST courses taken and outcome score (see below). Another possible explanation for the early difference between CAST and non-CAST is student learning in the very beginning of their spring CAST course. Our pre-test occurred early in the semester but not before students stepped into the classroom, so they may have gained important knowledge even in the first week of class, before they completed the pretest. Another possible explanation is that students taking CAST classes may have already gained critical knowledge about child maltreatment on their own. They may have learned a great deal from their personal experience; work experience; reading; documentaries; conversations with peers, teachers, and professionals; and other sources. Part of the CAST effect may be to attract students who already understand child maltreatment better than their peers. This suggests an important impact of developing CAST programs—they provide an opportunity to bring together and foster young people who have a commitment and interest in the well-being of children and deserve support and mentoring as they prepare for child-serving careers.

This is an interim report after the first year of a two-year project. We plan to collect more student data in both semesters of academic year 2020-2021. We hope that these semesters are relatively normal and the data we collect will be more representative of typical CAST instruction. As of this writing (August 2020), Covid-19 is still raging throughout the nation. As a result, instruction in Mississippi colleges and universities will be provided online in the autumn of 2020. To some extent, this has become an evaluation of CAST under Covid, and the results should be assessed accordingly.

6.3 Differences by Number of CAST Courses

We examined the relationship between the number of CAST courses students took and outcomes, anticipating that more exposure to CAST would lead to greater knowledge and skills. However, we found only a modest relationship for two outcomes, though it was in the expected direction. These results were somewhat puzzling. We relied on students to self-report the number of CAST courses, and perhaps their report was not reliable. The question asking about this was worded as follows: **How many Child Advocacy Studies (CAST) or other courses focused on child abuse and neglect have you taken (include any you are taking now)?** We included the phrase “other courses focused on child abuse and neglect” because CAST courses are not always labelled with the name “CAST”, and because some of what we are labelling CAST courses do focus on child maltreatment and are influenced by CAST, but are not identical to the CAST courses developed for the Center for CAST at the Zero Abuse Project. It is possible that students interpreted “course focused on child abuse and neglect” more loosely than we intended and counted courses that would meet not our definition of CAST courses. Another possibility is that our outcome measures may have not been sensitive to the particular gains in knowledge and skills students acquire from taking multiple CAST courses. It is possible that more advanced CAST courses provide knowledge and skills not adequately tapped by our outcome measure.

6.4 CAST Certificates and Minors

We compared students who were pursuing a CAST certificate or minor with CAST students not enrolled in such a program. CAST students in these programs had significantly greater child protection knowledge than other CAST students, were better able than other CAST students to identify the organizations likely to be involved in a child sexual abuse investigation, and made better judgments than other CAST students about child maltreatment in a vignette related to financial hardship. Better outcomes for certificate and minor students could reflect an impact of greater involvement in the CAST program. Conversely, those students who are more capable, invested, and experienced in learning about child maltreatment may be the students who choose to pursue a certificate or minor. We need to be careful in interpreting these comparisons, however, because some schools offered the certificate or minor option and some did not. Any differences we might attribute to the effect of being in a certificate or minor program could instead reflect differences in the schools or student bodies. We do see somewhat higher scores for certificate and minor students than other CAST students from the same school, but the data are too sparse for us to draw conclusions. We anticipate being able to assess differences for students pursuing certificates and minors more thoroughly in the second year of the evaluation.

6.5 Opportunities for Improvement

While the results from the program evaluation provide considerable evidence for the value of the CAST initiative, they also suggest opportunities for improvement. CAST students had significantly higher scores on the Child Protection Knowledge Scale than non-CAST students, but fairly substantial percentages of CAST students nevertheless chose incorrect answers on many questions. It may be worthwhile for Children’s Advocacy Centers of Mississippi and CAST schools to consider the results of the CAST Outcome Survey and consider whether these results

suggests steps to be taken to enhance CAST students' education. Because some of the errors CAST students made are very specific and circumscribed, they might be addressed relatively easily. Consider two multiple choice questions on mandated reporting. One asks students to identify who is a mandated reporter in Mississippi (the state is a universal mandated reporting state so any person having reasonable cause to suspect child maltreatment is a mandated reporter); 19.7% of CAST students answered this incorrectly. The other question asks students whether child maltreatment reports in Mississippi are confidential (they are); 42.1% of CAST students answered this incorrectly. It may be possible to improve scores like these with fairly modest adjustments to CAST education.

We recommend more inquiry and discussion regarding the goal of developing child protection knowledge. This is an important goal of the CAST movement nationally that could have an impact on child protection practice, but there are several challenges to achieving it. The CAST movement is decentralized, and the primary engine of its development is the initiative of individual schools. Some suggested curricula and materials are available but cannot be mandatory given each school's autonomy. Textbooks are available, but no textbook exactly matches the content outlined for CAST. Unlike other professional groups, CAST has no standard examination connected to licensing or graduate school admission. CAST leaders in Mississippi and nationally may want to consider what knowledge gaps exist that need to be addressed, and what steps if any should be taken to address these gaps. Actions to bolster knowledge among CAST students might include the development of email alerts to faculty on specific topics, specific lesson plans or online materials for instructors to use with students, interactive training programs on specific topics such as mandated reporting or commercial child sexual exploitation, or YouTube videos providing instruction on different topics.

6.6 The Emotional Effect of CAST Courses

CAST courses inform students about family violence, victimization and trauma. CAST exposes students to disturbing elements of human experience that many non-CAST students are shielded from. Some students may have personal trauma that their CAST experience re-awakens. In their open-ended comments, many CAST students mentioned the emotional challenges of CAST. Interestingly, no student advised avoiding the course because of its emotional demands. Instead, they talked about the emotional challenges as an aspect of the course to be prepared for and experience. Many students made sure to mention the rewards of the course in the same response. Several of the CAST instructors who were interviewed similarly mentioned the emotional impact of CAST and the need to be prepared for the possibility that CAST may have a triggering effect. CAST instructors mentioned multiple students who had disclosed their own history of victimization in the course of taking the CAST class. Like students, instructors felt that there could be a positive outcome of the emotional challenges of CAST. Indeed, they pointed to instances in which disclosures of personal trauma led to CAST students receiving help that they needed. Further research could examine in more detail how CAST instructors prepare for the emotional impact of their courses on students and could systematically study faculty and students' responses to emotional distress and disclosure.

6.7 Implications of the Program Evaluation for the Future of the Mississippi CAST Initiative

The current results suggest that the Mississippi CAST initiative is a promising program that deserves to be maintained and expanded. Mississippi CAST students show evidence of having knowledge and skills that could help them be more prepared to function effectively in child-serving careers. Positive results were obtained in multiple schools of different types, supporting a broad approach to CAST education that includes implementation in both two-year and four-year institutions.

These results suggests the value of future research focusing on the effects of specific CAST classes and the impact of CAST on different types of CAST students. We particularly need more data on change in CAST course over time. As graduates of CAST certificate and minor programs begin to accumulate, it will be valuable to conduct follow-up studies to examine the impact of CAST on their career. The Mississippi results should inspire more study of CAST programs nationwide.

References

- Beam, S., & Steckler Tye, K. (2016, October 31). Child Abuse & Neglect in Mississippi: Beginning the Conversation. *Journal of the Mississippi State Medical Association*, 57(11), 363-366.
- Braun, V. & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology*, 77-101.
- Children's Advocacy Centers of Mississippi. (2019 August). *Mississippi leads the nation -Child Advocacy Training Institute opens*. [Press release]. Pearl, MS: Author.
- Cohen, J. (1992). A power primer. *Psychological Bulletin*, 112, 155-159.
- Cook, J. M., Simiola, V., Ellis, A. E., & Thompson, R. (2017). Training in trauma psychology: A national survey of doctoral graduate programs. *Training and Education in Professional Psychology*, 11, 108-114.
- Derrick, B. T., Tohera, D. & White, P. (2017). How to compare the means of two samples that include paired observations and independent observations: A companion to Derrick, Russ, Toher and White. *Quantitative Methods in Psychology*, 13, 120-126.
- Donohue, B., Alvarez, K. M., & Schubert, K. N. (2015). An evidence-supported approach to reporting child maltreatment. In D. Bross & B. Mathews (Eds.), *Mandatory reporting laws and the identification of severe child abuse and neglect*. (pp. 347-379). New York: Springer.
- Fontes, L. (2005). *Child abuse and culture*. New York: Guilford.
- Great Schools Project. (2014). Capstone Project. *The Glossary of Education Reform*. Retrieved from <https://www.edglossary.org/capstone-project/>
- Gunderson National Child Protection Training Center. (n.d.). *CAST Approval Process*. Retrieved from <https://www.zeroabuseproject.org/child-advocacy-studies/#approval>
- Knox, M., Pelletier, H., & Vieth, V. (2013). Improving future physicians' responses to adolescent maltreatment. *Adolescent Psychiatry*, 25, 301-308.
- Knox, M. S., Pelletier, H., & Vieth, V. (2014). Effects of medical student training in child advocacy and child abuse prevention and intervention. *Psychological Trauma: Theory, Research, Practice, and Policy*, 6, 129-133.
- Osgood, A. K. (2017). Lessons learned from students survey in a Child Advocacy Studies (CAST) program. *Journal of Child & Adolescent Trauma*, 10, 261-266.
- Parker, J., McMillan, L., Olson, S., Ruppel, S., & Vieth, V. (2019, November 26). Responding to Basic and Complex Cases of Child Abuse: a Comparison Study of Recent and Current Child Advocacy Studies (CAST) Students with DSS Workers in the Field. *Journal of Child & Adolescent Trauma*, 1-8. doi:<https://doi.org/10.1007/s40653-019-00297-7>
- Pelletier, H. L., & Knox, M. (2017). Incorporating child maltreatment training into medical school curricula. *Journal of Child and Adolescent Trauma*, 10, 267-274.

University of Missouri at St. Louis. (2019). *CASGSL Research*. Webpage. Retrieved from <http://www.stlouiscac.org/Programs%20and%20Services/casgsl-research.html>

Vieth, V. G., Goulet, B., Knox, M., Parker, J., Johnson, L.B., Steckler Tye, K., & Cross, T.P. (2019). Child Advocacy Studies (CAST): A national movement to improve the undergraduate and graduate training of child protection professional. *Mitchell Hamline Law Review*, 45, 1130-1150.