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AN EVALUATION OF THE SOCIAL VALIDITY OF THE CENTER FOR
ADVANCED PROFESSIONAL STUDIES (CAPS) PROGRAM

by

Jason L. Watt

A dissertation submitted in partial fulfillment
of the requirements for the degree

of

DOCTOR OF PHILOSOPHY

in

Education

Approved:

Michael Freeman, Ph.D.
Major Professor

Courtney Stewart, Ph.D.
Committee Member

Susan Turner, Ph.D.
Committee Member

Brian Warnick, Ph.D.
Committee Member

Rebecca Lawver, Ph.D.
Committee Member

Richard Inouye, Ph.D.
School of Graduate Studies

UTAH STATE UNIVERSITY
Logan, Utah

2018

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ABSTRACT

An Evaluation of the Social Validity of the Center for Advanced Professional
Studies (CAPS) Program

by

Jason L. Watt, Doctor of Philosophy

Utah State University, 2018

Major Professor: Michael Freeman, Ph.D.
Department: Education

The Center for Advanced Professional Studies (CAPS) programs are emerging high school programs emphasizing immersive, real-life professional experiences for students. CAPS programs endeavor to facilitate student-centered partnerships between business and public education to produce personalized learning experiences for students centered around the completion of real-world industry projects. In an effort to contribute to the ongoing evaluation of the CAPS program and the impact of CAPS on student outcomes, the current study provided a research-validated instrument measuring the social validity (aka “consumer satisfaction”) of the CAPS program across CAPS programs nationwide. The term “social validity” was coined by behavior analysts to refer to the social importance and acceptability of program goals, procedures, and outcomes. This study evaluated the dimensions of social validity associated with the CAPS program from the perspective of both students and industry partners as consumers.

Social validity data was collected via a modified Behavior Intervention Rating Scale (BIRS). The BIRS was developed by behavioral researchers and has been shown to reliably assess social validity and its two factors, acceptability and effectiveness.

Participants were asked to rate CAPS programs by agreeing or disagreeing with each of 20 BIRS statements. Respondents included 459 students and 107 industry partners from twelve CAPS programs in six states.

Data from both students and industry partners were analyzed to determine the social validity of CAPS programs. Both students and industry partners rated CAPS programs significantly higher than the assumed null hypothesis on both the acceptability and effectiveness factors of social validity as well as on the complete BIRS scale. CAPS programs are well-positioned to continue to provide positive educational outcomes and experiences to both students and industry partners.

(125 pages)

PUBLIC ABSTRACT

An Evaluation of the Social Validity of the Center for Advanced Professional Studies (CAPS) Program

Jason L. Watt

The Center for Advanced Professional Studies (CAPS) programs are emerging high school programs emphasizing immersive, real-life professional experiences for students. CAPS programs endeavor to facilitate student-centered partnerships between business and public education to produce personalized learning experiences for students centered around the completion of real-world industry projects.

To ensure successful educational programs, leaders must consider more than simple outcome data or statistical descriptions of the program's reliability and validity. Successful leaders of schools must also determine the program's value from the perspective of the stakeholders it purports to serve—that is, by its *social validity*. Understanding what consumers of education do and do not find valuable is crucial when developing, implementing, and evaluating educational programs. Unfortunately, this type of evaluation is seldom utilized and has resulted in a nearly inaudible stakeholder voice in public education and its programs.

This study evaluated the dimensions of social validity associated with the CAPS program from the perspective of both students and industry partners as consumers. Social validity data was collected via a modified Behavior Intervention Rating Scale (BIRS). Participants were asked to rate CAPS programs by agreeing or disagreeing with each of

20 BIRS statements. Respondents included 459 students and 107 industry partners from twelve CAPS programs in six states.

Data from both students and industry partners were analyzed to determine the social validity of CAPS programs. Both students and industry partners rated CAPS programs impressively high on both its acceptability and its effectiveness. CAPS programs are well-positioned to continue to provide positive educational outcomes and experiences to both students and industry partners.

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Jason L. Watt

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CHAPTER I

INTRODUCTION

In today's increasingly difficult educational environment, educational leaders often find themselves overwhelmed by programs aimed at helping students develop the academic and professional skills necessary to succeed in today's world. Certainly, the variety of academic and behavioral programs does little to ensure their effectiveness (Reimers, Wacker, & Koepl, 1987) and education leaders often lack the time necessary to properly evaluate them. Formal program evaluation is done sporadically at best and traditional models of program evaluation rarely evaluate anything more than the program's objectives (Stufflebeam & Coryn, 2014, p. 336). To ensure successful educational programs, leaders must consider more than simple outcome data or statistical descriptions of the program's reliability and validity. Successful leaders of schools must also determine the program's value from the perspective of the stakeholders it purports to serve—that is, by its *social validity* (Marchant, Heath, & Miramontes, 2013).

Social validity was first described by Montrose Wolf in 1978 as value judgements only society can make regarding the goals, the procedures, and the effects of an educational program. Wolf (1978) argued that measuring social validity would “bring the consumer into our science” and make education and its programs more socially relevant. Wolf advocated the use of social validity data especially for programs educators find valuable, arguing that participants who don't like the program “may avoid it, or run away, or complain loudly” and thus would be unlikely to use the program “no matter how potentially effective and efficient it might be” (p. 206, as cited in Miltenberger, 1990).

Understanding what consumers of education do and do not find valuable is crucial when developing, implementing, and evaluating educational programs and the relative dearth of this kind of data has produced a nearly inaudible stakeholder voice in public education and its programs. As a result, consumers of public education feel increasingly isolated from their neighborhood schools and often respond by creating more socially relevant charter schools.

Description of the Center for Advanced Professional Studies Program

Center for Advanced Professional Studies (CAPS) programs are innovative high school programs in which students are fully immersed in a professional culture, solve real-world problems, and use industry standard tools while being mentored by industry professionals. The CAPS model originated in Blue Valley School District in Overland Park, Kansas and has spread to 38 programs in 12 states. While each CAPS program is somewhat different, each adheres to five guiding principles that unite, define, and guide CAPS program implementation. These guiding principles include:

1. Profession-based learning
2. Professional skills development
3. Self-discovery and exploration
4. Entrepreneurial mindset
5. Responsiveness

Profession-based Learning

Perhaps the most critical component of the CAPS model is the use of profession-based learning experiences. CAPS instructors and administrators develop real-world, project-based learning strategies through collaborations with business and community

partners. These interactions enhance the students' learning experience and prepare students for success in their future college and career endeavors.

Professional Skills Development

Unique experiences allow CAPS students to cultivate transformative professional skills such as flexibility and adaptability, initiative and self-direction, productivity and accountability, social and cross-cultural skills, and leadership and responsibility. These skills are critical to providing students a competitive advantage in their post-secondary education and professional careers.

Self-discovery and Exploration

CAPS students realize their strengths and passions by exploring and experiencing potential professions. This allows students to create their own futures by making informed decisions and learning to exhibit leadership and responsibility.

Entrepreneurial Mindset

CAPS instructors create a learning environment in which students are encouraged to cultivate essential learning skills such as creativity and innovation, critical thinking and problem solving, and communication and collaboration. An innovative culture is essential to fostering entrepreneurial learning and design thinking.

Responsiveness

CAPS programs are responsive to the unique needs of the communities they serve. CAPS courses of study support high-skill, high-demand careers through ongoing innovation in curriculum development, programs, and services based on local business

and community needs.

Center for Advanced Professional Studies Implementation Models

While adhering to the five guiding principles described above, leadership of specific CAPS programs utilize differing program structures and implementation models through which they accomplish the CAPS mission. These models of implementation are described below.

Onsite, Project-Based Learning

The majority of CAPS programs are most closely affiliated with this implementation model and are housed at a district facility with an industry-based project as the primary learning experience. In this model, industry partners off-load real-world projects which students complete by working in collaborative student groups. CAPS programs utilizing this program model generally employ professional educators to facilitate student learning and group interaction (although instructors hired from industry may also serve this purpose). These educators communicate regularly with the industry partners to ensure successful student experiences. Often, additional community mentors with specific expertise in the field, are recruited to guide the students through the completion of their project.

While teachers utilizing this model often explicitly teach students the soft skills required for professional interaction with industry partners, no specific course curriculum is delivered. All other course objectives are achieved through the student group/industry partner interaction and the completion of the real-world project.

Off-site, Project-Based Learning

Other CAPS programs use industry-supplied, real-world projects as the primary learning experience but the primary placement of students is at the physical location of the industry partner. Teachers in this model often keep the students at a central location for some time during which they teach students professional skills similar to the on-site model described above. Students are then placed in off-site industry locations where they participate with industry professionals in accomplishing the industry projects. Teachers schedule regular visits to the industry locations to ensure successful student experiences.

Onsite Traditional Courses Supplemented by Industry Projects

Some CAPS programs teach traditional course curriculum in CAPS courses and supplement that content by placing students in collaborative teams to accomplish industry-based projects. Teachers implementing this model are trained to implement project-based learning strategies into existing course structures.

Social Validity of Center for Advanced Professional Studies

Students in CAPS programs work closely with professionals from industry to develop critical thinking, innovation, and the professional skills necessary to succeed in today's economy. Students work in collaborative groups to complete industry projects and are mentored by industry professionals through their CAPS experience. While this applied professional program certainly appears to be meaningful to student participants (strong face validity), too frequently school leaders pursue programs with no authentic

measure of the consumer satisfaction or social validity of such programs. Measuring social validity through stakeholder input is especially important for education programs like CAPS in which students and parents participate by choice. Choice programs that ignore stakeholder perception relative to its goals, procedures, and outcomes take on considerable risks to sustainability, particularly when considering the modern-day school choice climate.

Research Purposes

The purpose of this study was to evaluate the social validity of CAPS programs nation-wide by collecting and analyzing data on its acceptability and effectiveness from two key program stakeholders. Specifically, this study collected social validity data from students enrolled in established CAPS programs and from the industry partners working with those CAPS programs. “Established CAPS programs” is defined as CAPS programs with at least one full year of program implementation. Social validity was measured through a modified Behavior Intervention Rating Scale (Elliott & Von Brock Treuting, 1991) to assess perceptions of consumer satisfaction of CAPS. The Behavior Intervention Rating Scale (BIRS) is a 24-item scale that utilizes a 6-point, Likert-type scale, indicating the degree to which the respondent agrees or disagrees with the presented statements. The Behavior Intervention Rating Scale was selected because of its documented internal consistency (Von Brock & Elliot, 1987) and factorial validity (Elliott & Von Brock Treuting, 1991). The three factors supported by factor analysis of the BIRS include acceptability (15 items), effectiveness (7 items), and time efficiency (2

items). In their discussion of the validity and generalizability of the BIRS, Elliot, and Von Brock Treuting concluded that minor modification of wording in the survey would provide for easy adaptation to other settings and multiple treatments. They also articulated its potential use with other consumers besides teachers (Von Brock & Elliot, 1987). Finn and Sladeczek (2001) further summarized the psychometric properties of the Behavior Intervention Rating Scale in their critique of tools used to measure treatment acceptability.

This was the first academic study of any kind on CAPS programs. The findings of this study can provide existing CAPS programs with critical information regarding the perceptions of two of their most important stakeholder groups—students and industry partners—allowing CAPS leaders to make necessary changes in program design and implementation. In addition, the findings of this study can be used by educators seeking to implement new CAPS programs to better design and implement future programs. This research also provides a platform for future research to explore additional social validation procedures when evaluating educational programs.

Research Statement

The purpose of this study was to evaluate the social validity of CAPS programs nation-wide by collecting and analyzing acceptability and effectiveness data from two key program stakeholders. Specifically, this study collected social validity data from students enrolled in established CAPS programs and from the industry partners working with those CAPS programs.

CHAPTER II

LITERATURE REVIEW

According to Marchant et al. (2013), the criteria used to evaluate education programs is changing. Simply implementing theoretically and technically sound interventions strategies is no longer sufficient (Albin, Lucyshyn, Horner, & Flannert, 1996, as cited in Marchant et al., 2013). Researchers and evaluators are increasingly urged to consider stakeholder opinions as well as the needs of those who are impacted by intervention programs. To illustrate the importance of assessing stakeholder perceptions in program evaluation, the concept of social validity and how it is assessed will be presented. In addition, relevant research on program evaluation models will be presented along with a justification for employing Daniel Stufflebeam's Context, Input, Process and Product (CIPP) model for this evaluation.

Social Validity

Social validity is a measure of how well a social program is embraced by those who are targeted to benefit from it (Marchant et al., 2013). Born from the study of consumer behavior in the business literature (Schwartz, 1991), the construct of social validity was first introduced by Montrose Wolf in the analysis of behavioral intervention treatments. According to Wolf (1978), social validity refers to the social significance of the target behaviors and the social appropriateness or acceptability of the treatment procedures. Wolf noted how rarely the consumers (i.e., parents, teachers, and students) of behavioral intervention programs had been asked about their acceptance of a program's

procedures and goals and warned that non-acceptance from key stakeholders could precede disastrous consumer rejection of otherwise worthwhile treatment programs (Miltenberger, 1990; Schwartz & Baer, 1991). Wolf further advocated that researchers should give the same status to social validity that was given to objective measurement and reliability. He defined social validity as the evaluation of three distinct levels.

1. The social significance of treatment goals—Are the specific behavioral goals really what society wants?
2. The social appropriateness of procedures—Do the relevant stakeholders consider the treatment procedures acceptable?
3. The social importance of the effects—Are consumers satisfied with the results (effectiveness), both predicted and unpredicted?

The primary purpose of establishing the social significance of goals is to evaluate whether such goals serve the needs of clients. Goals that do not meet that standard are not socially valid (Kern & Manz, 2004). The social appropriateness of treatment procedures solicits stakeholder information regarding whether the procedures are judged to be appropriate, fair, and reasonable (Kazdin, 1977). Finally, measuring the social importance of treatment outcomes considers whether the results are meaningful to key stakeholders (Marchant et al., 2013).

Social validity considers the opinions of consumers and helps program directors and educational leaders become aware of how those opinions affect program implementation and acceptance by its key stakeholders. Social validity research spiked (Carr, Austin, Britton, Kellum, & Bailey, 1999; Clarke & Dunlap, 2008) after the seminal works of Wolf (1978) and Kazdin (1977) but was predated by research in three areas: (1) patient satisfaction with medical treatment; (2) client expectations and satisfaction with

psycho-therapy; and (3) consumer and employee satisfaction in business (Kennedy, 1992). The focus of the assessment of social validity is to allow educators and go beyond clinical judgment of educational programs and to derive critical information from the broader social environment in which the program exists (Kennedy, 1992). The importance of consumers to any educational program is intuitive to educators yet rarely assessed (Carr et al., 1999; Clarke & Dunlap, 2008). Schwartz (1991) noted the importance of assessing social validity—especially in consumer-based endeavors like education. In her research on the partnership of consumer behavior and social validity, she advocated for the wide-spread use of social validity assessments as an essential element of long-term maintenance and survival of education programs. It is consumer perceptions of an educational program that will ultimately decide its future rather than educational leaders' perceptions of the program's effectiveness and desirability. Successful programs must be accepted by those for whom the program was designed (Albin et al., 1996; Miramontes, 2010). Properly assessing the social validity of educational programs will allow educational leaders to anticipate rejection of a program before it happens and make the changes necessary to prevent its demise (Schwartz & Baer, 1991). Programs with high social validity are responsive to the needs of consumers which promotes increased fidelity and sustainability of a program (Albin et al., 1996).

Social Validation

As noted by Miramontes (2010), the terms social validation and social validity are used interchangeably in the literature. As she did in her thesis on the social validity of school-wide positive behavior support (SWPBS) systems, this study used social

validation to refer to the measurement of consumer perceptions and behavior. As originally introduced by Wolf (1978), the process of social validation involves assessing consumer perceptions about the significance of program goals, the acceptability of program procedures, and the importance of program effects/outcomes. The science of social validation evolved since its inception and the methods for collecting social validity data vary widely (Miramontes, 2010).

Assessing Social Validity

Kazdin (1980) was the first to define acceptability and to develop and validate an instrument for assessing program (treatment) acceptability. “Acceptability refers to the judgments about the treatment procedures by nonprofessionals, lay persons, clients, and other potential consumers of treatments” (p. 259, as cited in Miltenberger, 1990). In their review of social validity assessments, Schwartz and Baer (1991) noted that the variety of social validity assessments has flourished since the introduction of social validity as a concept and that many of those assessments do not measure social validity as it was proposed originally—as a measure of a program’s viability. They called social validation a “defensive technique” meant to detect unacceptability in any part of a program major components (pp. 191). The results of the process of social validation would provide essential information to program developers as to how key stakeholders would accept or reject the program (Kazdin, 1977; Wolf, 1978).

Schwartz and Baer (1991) argued that there are three key questions which must be successfully answered to accurately measure social validity. The first question is what to ask the audience. The second question is who should constitute the audience, and the

third is how to assess the audience reliably. They pointed to the original questions posed by Wolf (1978) as the answer to the first question.

1. Are the goals of the procedures important and relevant?
2. Are the procedures used acceptable to the consumers of the program?
3. Are the consumers satisfied with the outcomes of the program, both predicted and unpredicted?

The answer to the second question as to who should be asked the questions is, of course, the program's consumers, but how the consumers are identified and which consumers control the viability of the program is a more difficult question. Schwartz and Baer (1991) identified four categories of consumers: direct consumers, indirect consumers, members of the immediate community and members of the extended community. Direct consumers are the primary recipients of the program. They are typically the students in school-based programs and can affect program viability at any moment by participating or refusing to participate (Schwartz & Baer, 1991). Indirect consumers are strongly affected by the program but are not its direct recipients. Indirect consumers may have purchased the program or implemented the program into a school. Indirect consumers are typically parents and/or school administrators in school-based settings (Gresham & Lopez, 1996; Schwartz & Baer, 1991) and can influence program validity by spreading positive or negative information about the program. Members of the immediate community are the people who interact with the direct and indirect consumers on a regular basis (Schwartz & Baer, 1991). These consumers influence program viability through continued interaction (or lack thereof) with the direct consumers. Members of the

extended community are consumers who do not interact with the direct or indirect consumers but who live in the same community. The current study surveyed the direct consumers (students) and immediate community (industry partners) of CAPS programs.

The third key question to be answered when assessing social validity is how to assess the consumers reliably (Schwartz & Baer, 1991). Kennedy (1992) noted that social validation can be accomplished through both subjective evaluation and normative comparison. Subjective evaluation is based on the ratings individuals give to some aspect of the program. Normative comparison is accomplished by comparing a person/group's performance before or after the intervention of the program. Kennedy explained that subjective evaluation has become the almost exclusive means of assessing social validity. Miramontes (2010) suggests that, because of this shift towards subjective evaluation, social validity assessment is predominantly accomplished through survey research.

Behavior Intervention Rating Scale

For this study, social validity was measured with a modified Behavior Intervention Rating Scale (BIRS; Elliott & Von Brock Treuting, 1991; Von Brock & Elliot, 1987) to assess perceptions of consumer satisfaction of CAPS. The BIRS was developed by Elliott and Von Brock Treuting as a method to measure teachers' perceptions of treatment acceptability and the perceived effectiveness of classroom interventions. Von Brock and Elliott built the BIRS on the work of Witt and Martens (1983) who developed a widely-used instrument to assess treatment acceptability called the Intervention Rating Profile (IRP). Von Brock and Elliott (1987) added nine items (including treatment effectiveness) to the IRP and used the resulting BIRS to assess the

relationship between acceptability and effectiveness. Using an oblique factor analysis, the BIRS was shown to have content and construct validity and reliably measures both treatment acceptance and perceived effectiveness (Carter, 2007; Elliott & Von Brock Treuting, 1991). The BIRS is a 24-item scale that utilizes a 6-point, Likert-type scale, indicating the degree to which the respondent agrees or disagrees with the presented statements. In their discussion of the validity and generalizability of the BIRS, Elliot and Von Brock Treuting (1991) concluded that minor modification of wording in the survey would provide for easy adaptation to other settings and multiple treatments.

Importance of Social Validation

The main goal of social validation is to gather useful information about possible holes in the program and its implementation to help ensure the future success of the program (Schwartz & Baer, 1991). Social validation is important because the act of seeking the opinions of program stakeholders sets the foundation for trustworthiness in a program (Carnine, 1997). By specifically evaluating if a program is a priority for key consumers, social validation findings can also support the likelihood that a program will be used by those who will employ the program and thus ensure its viability. And finally, if support for a program is established or increased by the outcomes of social validation, then these results will help make the programs more accessible to the school communities (Miramontes, 2010).

Program Evaluation

The Joint Committee on Standards for Educational Evaluation (2011) defined

evaluation as the “systematic assessment of the worth or merit of an object” (p. 3). Operationally defined, evaluation is “the process of delineating, obtaining, reporting, and applying descriptive and judgmental information about an object’s value” as defined by criteria such as quality, worth, cost, and significance (Stufflebeam & Coryn, 2014, p. 312). The origins of program evaluation go back more than a century—beginning in the 1840s when the American Common School in Boston came under scrutiny from the State Board of Education (Anderson, 2000; King, 2008). Since that time, evaluation has been used as a means to guide and strengthen enterprises and to help disseminate effective practices and several competing models and methods have emerged. The foremost methods of program evaluation were advanced by Abraham Flexner (expertise-oriented), Ralph Tyler (objective-oriented), Michael Scriven (consumer-oriented), Robert Stake (participant/response-oriented), and Daniel Stufflebeam (management-decision oriented) (Alkin & Christie, 2004; King, 2008).

Program Evaluation Models

Flexner’s expertise-oriented evaluation. Abraham Flexner’s approach to program evaluation focused on the importance of the evaluator as expert. This approach dominated evaluation—especially in educational settings—beginning in the 1930s (King, 2008; McNamara, Erlandson, & McNamara, 1999). Examples of the expertise-oriented approach include evaluations familiar to most educators: oral doctoral examinations, articles evaluated by peers when submitted to professional journals, educational site visits (i.e., accreditation visits) by other educational organizations, and even reviews by outside organizations who claim expertise in a field (McNamara et al., 1999).

Flexner's expertise-oriented evaluation approach was categorized within four categories: formal professional review systems, informal professional review systems, ad hoc individual reviews, and ad hoc panel reviews (Fitzpatrick, Sanders & Worthen, 2004 as cited in King, 2008).

Tyler's objective-oriented evaluation. According to Madaus and Stufflebeam (1989), Ralph Tyler coined the term "educational evaluation" in the 1930s to describe his procedures—the comparison of well-stated intended outcomes with well-measured actual outcomes. Alkin and Christie (2004) stated that Tyler's work was one of the major starting points for modern program evaluation. His work focused on the specification of objectives and the measurement of outcomes and his point of view became known as objective-oriented (or objective-referenced) evaluation. King (2008) described Tyler's approach as focused on the following factors:

1. Formulating a statement of educational objectives.
2. Classifying these objectives into major types.
3. Defining and refining each of these types of objectives in terms of behavior.
4. Identifying situations in which students can be expected to display these types of behavior.
5. Selecting and trying promising methods of obtaining evidence regarding each type of objective.
6. Selecting on the basis of preliminary trials the more promising appraisal methods for further development and improvement.
7. Devising means for interpreting and using the results.

Tyler's focus on objectives-based measurement as the most effective method of program evaluation weighed heavily on the work of subsequent theorists.

Scriven's consumer-oriented evaluation. Michael Scriven defined evaluation as “the process of determining the merit, worth, and value of things” and his approach to evaluation focused on addressing consumers' needs (Stufflebeam & Coryn, 2014 p. 343). Scriven believed that society needs to be valued and that the role of the evaluator is to do precisely that—evaluate what is good and what is bad (Alkin & Christie, 2007; King, 2008). Alkin and Christie explained Scriven's view of evaluator as that of an enlightened surrogate consumer. Scriven believed that evaluators should do much more than simply pass along critical information and expect non-professionals to make proper judgments and that the responsibility of evaluators extended beyond clients and program stakeholders to include all potential consumers (King, 2008). According to Stufflebeam and Coryn, Scriven's practical approach to evaluation calls for identifying and ranking alternative programs and products available to consumers, similar to producing an evaluative report for *Consumer Reports*.

Scriven was resolute that the goal of evaluation is always the same: to judge value, but he also noted that the roles of evaluation are enormously varied (Stufflebeam & Coryn, 2014). Scriven introduced the terms *formative evaluation* and *summative evaluation* to describe the two main roles of evaluation. The role of formative evaluation is to assist in developing a program while summative evaluations assess a program's value after its development (Stufflebeam & Coryn, 2014).

Stake's participant-oriented (responsive) evaluation. Robert Stake's views on responsive evaluation and the significant impact those views have made on evaluation theorists has been well-documented (Alkin & Christie, 2004; King, 2008). According to

Stufflebeam and Coryn (2014), Stake is the leader of the “social agenda and advocacy school of evaluation” which advocated for a flexible, subjective, constructivist approach to evaluation. According to Alkin and Christie, the fundamental elements of Stake’s responsive evaluation include the following:

1. The belief that there is no true value to anything.
2. The belief that stakeholder perspectives are integral elements in evaluations.
3. The belief that case studies are the best method for representing the beliefs and values of stakeholders and of reporting evaluation results.

Stake’s approach to evaluation is relativistic because the evaluator makes no final authoritative conclusions. Instead, the evaluator interprets findings against the differing values of stakeholders (Stufflebeam & Coryn, 2014). Stake believed that stakeholders should not be allowed to participate in evaluation, but argued that it was essential that the unique perspectives of each stakeholder group be represented within the evaluation (Alkin & Christie, 2004).

Stufflebeam’s management- (decision-) oriented evaluation. Stufflebeams’s CIPP evaluation model is a comprehensive framework for conducting both formative and summative evaluations of programs, projects, products, personnel, policies, and organizations (Stufflebeam & Coryn, 2014, p. 309). CIPP is an acronym for four types of evaluation: context, input, process, and product. In context evaluations, evaluators assess needs, problems, assets and relevant contextual conditions to help decision makers define program goals and priorities that will accurately target the assessed needs and problems. Input evaluations assist with program planning by identifying and assessing alternative approaches. Evaluators then assess procedural plans, personnel provisions, and budgets

for their feasibility in regard to meeting the targeted needs and achieving the desired goals. In process evaluations, evaluators assess and report on the implementation of program plans and provide feedback throughout a program's implementation on the extent to which the program is being carried out as intended. Program staff use this feedback to measure their progress, identify implementation issues, and refine their plans, procedures, and/or performance to ensure program quality and effectiveness. Product evaluations identify costs and outcomes (both intended and unintended) and provide feedback during a program's implementation on the extent to which program goals are being addressed and achieved. Product evaluations identify and assess a program's full range of accomplishments (Stufflebeam & Coryn, 2014).

Stufflebeam and Coryn (2014) viewed the CIPP model as an "organized approach to meeting the evaluation profession's standards" as defined by the Joint Committee for Educational Standards. The 2011 version of *The Program Evaluation Standards* include utility, feasibility, propriety, accuracy, and evaluation accountability standards. The utility standards were intended to ensure that an evaluation delivers useful information and judgments that can be applied by stakeholders to improve programs. The feasibility standards ensure that evaluators use procedures that are realistically operable in the program's environment and that are as cost-effective as possible. The propriety standards ensure that an evaluation be conducted according to clear, written agreements that define the obligations of the evaluator and the client. The evaluation's findings must be honest and not distorted in any way. The accuracy standards were intended to ensure that an evaluation will reveal and convey technically adequate information about the features

that determine worth or merit of the program being evaluated. The evaluation accountability standards ensure that an evaluator documents and makes available all aspects of the evaluation needed for independent assessments how the evaluation met each of the preceding evaluation standards. (Stufflebeam & Coryn, 2014)

For Stufflebeam and Coryn (2014), evaluation is a cyclical process and effective evaluation is accomplished with a carefully designed evaluation. They advocated for flexible evaluation methods to provide as much information to decision makers as possible. King (2008) noted that Stufflebeam's evaluation approach engaged critical stakeholders in focusing the evaluation and in ensuring the evaluation would answer the most important questions and provide relevant information to assist in decision making and program implementation. Including the perspectives of multiple stakeholder groups would increase the possibility that relevant value perspectives were represented. This more complete representation of perspectives would yield a more comprehensive evaluation of the program's value.

Stufflebeam and Coryn (2014) believed in the formative nature of evaluation and argued that evaluation's most important purpose is not to prove, but to improve (King, 2008). They viewed evaluation as an activity which would facilitate stakeholders' attempts to improve the programs being evaluated. They also argued that proper evaluation would identify hopelessly flawed initiatives and help institutions focus on more worthwhile endeavors (Stufflebeam & Coryn, 2014).

The current study evaluated CAPS programs by assessing students' and industry partners' perceptions of its social validity through the lens of Stufflebeam's CIPP model

(specifically the process evaluation portion of the model). Process evaluation, as defined by Stufflebeam and Coryn (2014), focuses on identifying shortcomings in a current program and uses evaluation results in a formative manner to refine program implementation.

Research Questions and Objectives

The purpose of this study was to evaluate the social validity perceptions of students and industry partners in CAPS programs by addressing the following questions:

1. Are CAPS programs socially valid as measured by student ratings of acceptability and effectiveness on a modified Behavior Intervention Rating Scale (BIRS)?

Objectives:

- a. To determine the social validity of CAPS programs as measured by student acceptability ratings on the modified BIRS.
 - b. To determine the social validity of CAPS programs as measured by student effectiveness ratings on the modified BIRS.
 - c. To describe the relationship between gender and student ratings of the acceptability of CAPS programs.
 - d. To describe the relationship between gender and student ratings of the effectiveness of CAPS programs.
2. Are CAPS programs socially valid as measured by industry partner ratings of acceptability and effectiveness on a modified Behavior Intervention Rating Scale (BIRS)?

Objectives:

- a. To determine the social validity of CAPS programs as measured by industry partner acceptability ratings on the modified BIRS.
- b. To determine the social validity of CAPS programs as measured by industry partner effectiveness ratings on the modified BIRS.

CHAPTER III

METHODOLOGY

Setting

CAPS programs are innovative high school programs in which students are fully immersed in a professional culture, solve real-world problems and projects, and use industry standard tools while being mentored by industry professionals. The CAPS model originated in Blue Valley School District in Overland Park, Kansas, in 2009 and has now spread to 38 programs in 12 states. While each CAPS program is somewhat different, each adheres to five guiding principles essential to CAPS program implementation.

1. Profession-based learning
2. Responsiveness
3. Self-discovery and exploration
4. Professional skills development
5. Entrepreneurial mindset

CAPS industry partners off-load real-world projects for students to complete and mentor those students throughout their experience in CAPS. CAPS programs utilize this real-world experience to help students develop the skills necessary to succeed in today's economy. These include the following 21st century skills:

Learning and Innovation Skills

- Creativity and innovation
- Critical thinking and problem solving
- Communication and collaboration

Life and Career Skills

- Flexibility and adaptability
- Initiative and self-direction
- Social and cross-cultural skills

- Productivity and accountability
- Leadership and responsibility (Partnership for 21st Century Learning, 2007)

CAPS programs are located in twelve different states concentrated primarily in the Midwestern portion of the United States. Specific CAPS program environments will range from very small to very large school districts and include urban, suburban and rural school districts. The states represented along with the number of CAPS programs in each state is shown in Table 1.

This study evaluated CAPS programs by assessing students' and industry partners' ratings of CAPS acceptability and effectiveness through the lens of Stufflebeam's CIPP model (specifically the process evaluation portion of the model). Process evaluation, as defined by Stufflebeam (2014), focuses on identifying

Table 1

CAPS Programs by State

State	Number of CAPS programs ^a
Arizona	1
Arkansas	2
Iowa	1
Kansas	3
Minnesota	7
Missouri	12
Nebraska	2
New Jersey	1
Texas	2
Utah	4
Washington	1
Wisconsin	2

^aSome CAPS programs have only been announced and are not yet operational.

Source: www.yourcapsnetwork.org/national-network

shortcomings in a current program and uses evaluation results in a formative manner to refine program implementation.

Participants

Participants for this study were selected from each CAPS program that had been operational for at least one academic year. According to Corey Mohn, executive director of the CAPS Network (personal communication, August 21, 2017), CAPS programs need a year of implementation to provide a properly designed CAPS experience. Thus, first-year programs were excluded from this study to avoid potential variance due to program infidelity. In total, 19 CAPS programs met the participation criteria and were invited to participate in the study. Of the 19 programs selected for inclusion in the study, eighteen agreed to participate. One program (Nebraska CAPS) was excluded from data collection because of a significant difference in program implementation, leaving seventeen remaining programs. The participating programs came from eight states and are listed in Table 2.

Program Directors

Once approval was obtained from program leadership, each program director was interviewed via telephone. The purpose of this interview was three-fold.

1. To gather general program data which would be used for description of the participating CAPS programs. Information such as number of years of operation, number of students enrolled, and program implementation specifics was collected. The program director interview protocol can be found in Appendix A.
2. To explain the procedures which would be used to gather student and industry partner data.

Table 2

CAPS Programs Selected for Study

Program name	Program location	Years of implementation	Agreed to participate?
Alexandria CAPS	South Alexandria, Minnesota	2	Yes
Blue Valley CAPS	Overland Park, Kansas	9	Yes
Cedar Falls CAPS	Cedar Falls, Iowa	2	Yes
GO CAPS	Springfield, Missouri	3	Yes
Ignite!	Bentonville, Arkansas	3	Yes
MN CAPS	Lakeville, Minnesota	2	Yes
Nebraska CAPS	Fairfield, Nebraska	2	Yes ^a
Northland CAPS	Kansas City, Missouri	5	Yes
Parkway Spark!	Chesterfield, Missouri	4	Yes
PC CAPS	Park City, Utah	5	Yes
Peoria MET	Peoria, Arizona	3	Yes
Shakopee CAPS	Shakopee, Minnesota	3	Yes
STL CAPS	St. Louis, Missouri	3	Yes
Topeka T-CALC	Topeka, Kansas	4	Yes
Vantage	Minnetonka, Minnesota	5	Yes
Wasatch CAPS	Heber City, Utah	2	Yes
Washington CAPS	Washington, Missouri	3	Yes
Wayzata COMPASS	Plymouth, Minnesota	2	No
Westside CAPS	Omaha, Nebraska	4	Yes

^a Nebraska CAPS was subsequently excluded from participation.

3. To gather specific program data which could potentially be used to explain variation in student/industry partner evaluations of program acceptability and/or effectiveness. Information about unique program features was gathered from each program director.

Student Participants

Each student who was currently enrolled (2nd semester of the 2017-18 academic year) in a participating CAPS program was sent a request to participate via email along with a link to the online survey. This request/survey link was not sent directly from the researchers but was sent to each program director who had previously agreed to forward

the request to each enrolled student. In total, 459 students answered at least one of the survey questions. Student responses were collected from 12 of the 17 programs as indicated in Table 3. No data were collected from five CAPS programs (Ignite!, Peoria MET, Topeka T-CALC, Vantage, and Washington CAPS) and those programs were subsequently excluded from the study.

The response rate for student respondents ranged from 1.6% at GO CAPS to 43.8% at Cedar Falls CAPS. It should be noted that the number of enrolled students was in some instances estimated by program directors and should be considered close approximations. This, of course, would make reported participation rates close

Table 3

Student Respondents: All Eligible Programs

Program name	Student respondents
Alexandria CAPS	15
Blue Valley CAPS	149
Cedar Falls CAPS	32
GO CAPS	4
Ignite!	0
MN CAPS	31
Northland CAPS	79
Parkway Spark!	26
PC CAPS	4
Peoria MET	0
Shakopee CAPS	24
STL CAPS	14
Topeka T-CALC	0
Vantage	0
Wasatch CAPS	39
Washington CAPS	0
Westside CAPS	42
Total	459

approximations as well. The overall approximated response rate for the student survey is 21.7% as shown in Table 4.

Student respondents included 222 male students (48.4%) and 237 female students (51.6%) as indicated in Table 5. This response is assumed to represent the male/female percentage of the entire CAPS student population, although the precise number of male and female students enrolled in participating programs is not known.

Industry Partner Participants

Each CAPS program director was asked to forward a recruitment email to each industry partner who was currently working with the program. The email contained a link to an online survey. In total, 107 industry partners responded to the survey. Responses were collected from 11 of the 17 programs, although some programs had a very small number of responses from industry partners, as indicated in Table 6. Because many

Table 4

Student Response Rate: Participating Programs

Program name	Students enrolled ^a	Student respondents	Response rate (%) ^a
Alexandria CAPS	100	15	15.0
Blue Valley CAPS	550	149	27.1
Cedar Falls CAPS	73	32	43.8
GO CAPS	250	4	1.6
MN CAPS	126	31	24.6
Northland CAPS	350	79	22.6
Parkway Spark!	120	26	21.7
PC CAPS	27	4	14.8
Shakopee CAPS	60	24	40.0
STL CAPS	47	14	29.8
Wasatch CAPS	90	39	43.3
Westside CAPS	326	42	12.9
Total	2,119	459	21.7

^aApproximate.

Table 5

Student Respondents by Gender

Program name	Student respondents	Male students	Female students
Alexandria CAPS	15	4	11
Blue Valley CAPS	149	78	71
Cedar Falls CAPS	32	14	18
GO CAPS	4	3	1
MN CAPS	31	20	11
Northland CAPS	79	31	48
Parkway Spark!	26	10	16
PC CAPS	4	2	2
Shakopee CAPS	24	11	13
STL CAPS	14	6	8
Wasatch CAPS	39	25	14
Westside CAPS	42	18	24
Total	459	222	237

Table 6

Industry Partner Respondents: All Participating Programs

Program name	Industry partner respondents
Alexandria CAPS	1
Blue Valley CAPS	10
Cedar Falls CAPS	12
GO CAPS	0
Ignite!	0
MN CAPS	13
Northland CAPS	1
Parkway Spark!	6
PC CAPS	2
Peoria MET	0
Shakopee CAPS	18
STL CAPS	5
Topeka T-CALC	0
Vantage	0
Wasatch CAPS	20
Washington CAPS	0
Westside CAPS	19
Total	107

program directors could not provide an accurate estimate the total number of industry partners with whom their program worked, a response rate was not calculated.

Of the responses from industry, most have been partnering with CAPS programs for fewer than 3 years. Table 7 shows the breakdown of industry respondents based on number of years partnering with CAPS.

Summary of Participants

Nineteen CAPS programs met the study's inclusion criteria of being operational for at least one academic year. Eighteen of those programs agreed to participate, and one was excluded from data collection because of a significant difference in program implementation (see Table 1). Of the seventeen remaining programs, student and/or industry partner data was collected from twelve. No data was collected from students or industry partners from five programs which were subsequently eliminated from study as shown in Table 8.

Measures

Survey Instrument

This study measured social validity through a modified Behavior Intervention

Table 7

Industry Partner Respondents by Years Partnering with CAPS

	> 1 Year		1-3 Years		3-5 Years		< 5 Years	
	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%
Industry respondents	37	34.6	53	49.5	13	12.1	4	3.7

Table 8

Summary of Respondents: All Participating Programs

Program name	Student respondents	Industry respondents
Alexandria CAPS	15	1
Blue Valley CAPS	149	10
Cedar Falls CAPS	32	12
GO CAPS	4	0
Ignite!*	0	0
MN CAPS	31	13
Northland CAPS	79	1
Parkway Spark!	26	6
PC CAPS	4	2
Peoria MET ^a	0	0
Shakopee CAPS	24	18
STL CAPS	14	5
Topeka T-CALC ^a	0	0
Vantage ^a	0	0
Wasatch CAPS	39	20
Washington CAPS ^a	0	0
Westside CAPS	42	19
Total	459	107

^aEliminated from study because no data were collected.

Rating Scale (Elliott & Von Brock Treuting, 1991) to assess ratings of consumer satisfaction of CAPS. The BIRS is a 24-item scale that utilizes a 6-point, Likert-type scale, indicating the degree to which the respondent agrees or disagrees with the presented statements. The BIRS was selected because of its documented internal consistency (Von Brock & Elliott, 1987) and factorial validity (Elliott & Von Brock Treuting, 1991). The BIRS was originally developed to assess the effectiveness and acceptability of intervention treatments. However, in their discussion of the validity and generalizability of the BIRS, Elliot and Von Brock Treuting concluded that minor modification of wording in the survey would provide for easy adaptation to other settings

and multiple treatments. Thus, the BIRS wording was modified for this study to make sense when measuring social validity in a CAPS setting. For example, the original BIRS question, “I would suggest the use of this intervention to other teachers” was modified to read, “I would suggest participation in CAPS to other students.” These modifications were reviewed by Dr. Benjamin Springer, Ph.D., a psychologist trained in factor analysis and who has experience with BIRS modification (Springer, 2012). The original BIRS questions (Appendix D) along with the modifications used in this study for both students (Appendix B) and industry partners (Appendix C) can be found in the appendices.

The three factors supported by factor analysis of the BIRS include Acceptability (15 items), Effectiveness (7 items), and Time Efficiency (2 items). Due to the scope of this study and the program design of CAPS, the Time Efficiency factor of the BIRS is not relevant to this research and questions relating to time efficiency were eliminated. Although Wolf (1978) advocated collecting information on a program’s goals, the acceptability of its procedures, and the effectiveness of a program’s outcomes, this study focused only on the acceptability of procedures and the effectiveness of outcomes because of the demonstrated validity and reliability the BIRS has shown when used to collect data on those two measures.

Procedures and Data Collection

The program director of each CAPS program identified for inclusion in the study was contacted by telephone and asked to participate in the study. This conversation emphasized the benefits of participating in the study by focusing on good that will come to the CAPS Network from an academic study and to specific programs by understanding

how students and industry partners are experiencing CAPS programs. Once consent was obtained (this study's Letter of Information and Informed Consent Documents can be found in Appendices F and G, respectively), researchers conducted a brief telephone interview. The purpose of this interview was to collect general, descriptive program data, to describe data collection procedures for both student and industry partners, and to collect unique program data which could be used to explain differences in the survey results. Participating program directors were then sent two recruitment emails; one to be forwarded to enrolled students and the other to be forwarded to each industry partner currently working with each CAPS program. These emails explained the purpose of the study and contained a link to the on-line survey (collected through the Utah State University Qualtrics account). Program surveys were customized to contain the specific name and course offerings of each CAPS program. Researchers then monitored survey completion for each of the participating CAPS programs. Approximately 2 weeks after the initial email, an email was sent to each program director with the number of student and industry partner responses collected to date. That email was followed by a second set of recruitment emails sent to each program director with a request that they be forwarded to both students and industry partners. Survey collection occurred over the course of approximately 1 month.

To increase survey response and ensure accurate data collection, this study utilized Don Dillman's Tailored Design Method to guide both survey design and data collection methods. Dillman, Smyth, and Christian (2014) emphasize the importance of using a holistic approach to survey design and collection (p. 43). The Tailored Design

Method draws on principles of social exchange theory which assumes that the likelihood of an individual responding to a survey increases as the expected rewards and benefits of responding outweigh the anticipated costs of responding to the survey (p. 17). Dillman et al. note that establishing trust is the foundation of the Tailored Design Method and is “the single most important issue affecting response to questionnaires in today’s world” (p. 37). As establishing trust with respondents and increasing perceived benefits while decreasing perceived costs associated with this survey is critical to successful data collection, survey design and collection methodology focused on accomplishing those objectives. Some of the measures utilized by this study to accomplish these objectives are listed below:

Establish Trust

- Survey link was sent to respondents from a legitimate and trusted source—the program director.
- Message from program director crafted to draw on past relationships to encourage survey participation.
- Confidentiality and data protection was assured.

Increase Perceived Benefits

- Surveys were customized to each CAPS program—using specific program and course names.
- Introductory message in email focused on benefits of responding—specifically to assist current and future CAPS programs implement successful programs.
- Request to participate emphasized that every CAPS student from each eligible CAPS program in the country would be asked to respond to the survey.
- Survey came from a legitimate and trusted source.

Decrease Perceived Costs

- Survey was uncomplicated and brief.
- Survey utilized a visually appealing design.
- Respondents were offered a convenient way to respond through a web link.
- No sensitive information was requested from either students or industry partners.

Data Analysis

Data from Likert scales. While data from Likert scales are technically ordinal, many researchers (i.e., Baggaley & Hull, 1983; Carifio & Perla, 2007; Maurer & Pierce, 1998; Vickers, 1999) argue that parametric tests can be used with Likert data as long as the data is analyzed as a scale (summed composite score) and not from individual items. Jamieson (2004) concluded that parametric tests can be utilized with Likert data as long as there is an adequate sample size (defined as at least 5-10 per group). Additionally, Norman (2010) notes that parametric tests are sufficiently robust to yield “the right answer” and yield unbiased answers even when statistical assumptions like a normal distribution of the data are violated (Sullivan & Artino, 2013).

One-sample *t* test: In order to determine the statistical significance of the acceptability and effectiveness ratings of social validity of CAPS programs by students and industry partners, the modified BIRS data were analyzed using a simple, yet robust, one-sample *t* test. This test compared the observed acceptability and effectiveness means of both students and industry partners against a null hypothesis value of 3.5 (on a 6-point Likert scale).

Independent-sample *t* test. To explore the relationship between gender and student ratings of acceptability and effectiveness of CAPS programs, student data ratings on both BIRS factors were compared using an independent-sample *t* test. This test compared the observed acceptability and effectiveness means of male students against the observed means scores of female students.

Analysis of variance/post-hoc analysis. To determine whether the social validity

results were consistent with each of the participating CAPS programs and could, therefore, be attributed to the CAPS model as a whole, or whether the results were being carried by a few exceptionally rated programs, some post-hoc analysis was performed to investigate variance between participating CAPS programs. An analysis of variance (ANOVA) was used to determine whether differences existed among the mean acceptability, effectiveness, and total scale ratings of the participating programs from both the student and industry partner data sets. Based on the ANOVA results, Tukey's HSD was then used to conduct a post-hoc analysis in an effort to determine which programs were rated significantly differently.

CHAPTER IV

RESULTS

The purpose of this study was to evaluate the social validity of CAPS programs nation-wide by collecting and analyzing acceptability and effectiveness data from two key program stakeholders. Specifically, this study collected social validity data from students enrolled in established CAPS programs and from the industry partners working with those CAPS programs. This chapter presents the data that were gathered and analyzed to answer the following research questions and objectives.

1. Are CAPS programs socially valid as measured by student ratings of acceptability and effectiveness on a modified Behavior Intervention Rating Scale (BIRS)?

Objectives:

- a. To determine the social validity of CAPS programs as measured by student acceptability ratings on the modified BIRS.
 - b. To determine the social validity of CAPS programs as measured by student effectiveness ratings on the modified BIRS.
 - c. To describe the relationship between gender and student ratings of the acceptability of CAPS programs.
 - d. To describe the relationship between gender and student ratings of the effectiveness of CAPS programs.
2. Are CAPS programs socially valid as measured by industry partner ratings of acceptability and effectiveness on a modified Behavior Intervention Rating Scale (BIRS)?

Objectives:

- a. To determine the social validity of CAPS programs as measured by industry partner acceptability ratings on the modified BIRS.
- b. To determine the social validity of CAPS programs as measured by

industry partner effectiveness ratings on the modified BIRS.

Research Question #1

- 1. Are CAPS programs socially valid as measured by student ratings of acceptability and effectiveness on a modified Behavior Intervention Rating Scale (BIRS)?*

Social Validity

To answer the question about the social validity of CAPS programs, student ratings of acceptability and effectiveness as measured by a modified Behavior Intervention Rating Scale (BIRS) were analyzed. The BIRS has proven to be a valid measure of social validity (Von Brock & Elliott, 1987) and a reliable measure of both the acceptability and effectiveness factors of social validity (Elliott & Von Brock Treuting, 1991).

Acceptability

To answer this research question, measures of central tendency (mean and standard variation) were computed for each of the fifteen acceptability statements in the modified BIRS (numbers 3-17 on the student survey; see Appendix B). In addition, the mean and standard deviation of the entire acceptability factor was computed. These results can be found in Table 9.

Student ratings of acceptability on the modified BIRS were then analyzed using a one-sample *t* test. This test compared the observed student ratings of CAPS on the acceptability factor of the modified BIRS against a null hypothesis value of 3.5 for each

Table 9

Measures of Central Tendency: Student Ratings of Acceptability

Modified BIRS question	Total ratings	Mean	SD
3. The CAPS program is an acceptable school-based program for students seeking professional skills in career fields.	459	5.72	.517
4. Most students would find the CAPS program appropriate for learning professional skills in career fields.	456	5.55	.668
5. CAPS should prove effective in helping students acquire professional skills in career fields.	454	5.54	.679
6. I would suggest participation in CAPS to other students.	454	5.53	.870
7. My professional interests are aligned with the mission and goals of CAPS.	452	5.15	.991
8. Most students would find CAPS suitable for acquiring professional skills.	454	5.42	.720
9. I would be willing to re-enroll in the CAPS program.	454	5.20	1.196
10. The CAPS program does NOT result in negative side effects for students.	454	5.02	1.036
11. CAPS would be an appropriate program for a variety of students.	453	5.22	.882
12. CAPS is consistent with other school programs in which I have participated in the past.	452	3.93	1.542
13. CAPS does a fair job at providing me professional skills in career fields.	452	5.40	.771
14. The CAPS program is a reasonable way to meet the professional interests of enrolled students.	451	5.41	.790
15. I like the programs and experiences offered through CAPS.	451	5.48	.784
16. CAPS is a good way to address the professional goals of enrolled students.	451	5.39	.770
17. Overall, CAPS is beneficial for students.	451	5.52	.798
Total acceptability factor	6,798	5.30	.986

acceptability statement as well as the acceptability factor as a whole. The null hypothesis was set at 3.5 because the modified BIRS is rated on a 6-point Likert scale as shown below:

- Strongly Agree 6
- Agree 5
- Slightly Agree 4

- Slightly Disagree 3
- Disagree 2
- Strongly Disagree 1

A mean of 3.5 places the null hypothesis directly in the center of the scale, neither “agreeing” nor “disagreeing” with the acceptability statements. Thus, a mean significantly higher than 3.5 would indicate significant student acceptability of the CAPS program. Conversely, a mean significantly lower than 3.5 would indicate significant unacceptability of the CAPS program. The *t* tests were analyzed at a 95% confidence level and results for each acceptability statement and for the acceptability factor as a whole are shown in

Student acceptability ratings of CAPS were significant ($p < .001$) for every statement in the acceptability factor as shown in Table 10. The mean of the highest rated statement, “The CAPS program is an acceptable school-based program for students seeking professional skills in career fields” was 5.72, significantly higher ($t = 92.09$; $p < .001$) than the null hypothesis. Fourteen of the 15 acceptability statement means were greater than 5.0 and all fifteen were significant at the $p < .001$ level. The lowest rated statement, “CAPS is consistent with other school programs in which I have participated in the past” had a mean acceptability rating of 3.93. While still significant ($t = 5.92$; $p < .001$), this lower acceptability rating is not unexpected given that CAPS programs are not like most other school programs. The mean student rating of the acceptability factor as a whole was 5.30 and was also significant ($t = 150.40$; $p < .001$) as determined by the one-sample *t*-test results.

Table 10

One-Sample t-Test Results: Student Ratings of Acceptability

Modified BIRS question	<i>t</i>	<i>df</i>	Sig.	Diff.	95% C.I.	
3. The CAPS program is an acceptable school-based program for students seeking professional skills in career fields.	92.09*	458	.000	2.221	2.17	2.27
4. Most students would find the CAPS program appropriate for learning professional skills in career fields.	65.58*	455	.000	2.050	1.99	2.11
5. CAPS should prove effective in helping students acquire professional skills in career fields.	64.18*	453	.000	2.044	1.98	2.11
6. I would suggest participation in CAPS to other students.	49.61*	453	.000	2.026	1.95	2.11
7. My professional interests are aligned with the mission and goals of CAPS.	35.49*	451	.000	1.655	1.56	1.75
8. Most students would find CAPS suitable for acquiring professional skills.	56.86*	453	.000	1.921	1.85	1.99
9. I would be willing to re-enroll in the CAPS program.	30.23*	453	.000	1.696	1.59	1.81
10. The CAPS program does NOT result in negative side effects for students.	31.32*	453	.000	1.522	1.43	1.62
11. CAPS would be an appropriate program for a variety of students.	41.49*	452	.000	1.719	1.64	1.80
12. CAPS is consistent with other school programs in which I have participated in the past.	5.92*	451	.000	.429	.29	.57
13. CAPS does a fair job at providing me professional skills in career fields.	52.28*	451	.000	1.896	1.82	1.97
14. The CAPS program is a reasonable way to meet the professional interests of enrolled students.	51.33*	450	.000	1.910	1.84	1.98
15. I like the programs and experiences offered through CAPS.	53.55*	450	.000	1.977	1.90	2.05
16. CAPS is a good way to address the professional goals of enrolled students.	52.01*	450	.000	1.886	1.81	1.96
17. Overall, CAPS is beneficial for students.	53.66*	450	.000	2.017	1.94	2.09
Total acceptability factor	150.40*	6,797	.000	1.798	1.78	1.82

Notes. Test value = 3.5. Sig. = Significance (two-tailed). Diff. = mean difference. 95% C.I.=95% confidence interval of the difference.

* $p < 0.001$ level.

Effectiveness

This question was answered in the same way the acceptability question was answered—by analyzing the student ratings of effectiveness statements on the BIRS. Measures of central tendency (mean and standard variation) were computed for each of the five effectiveness statements in the modified BIRS (numbers 18-22 on the student survey; see Appendix B). In addition, the mean and standard deviation of the entire effectiveness factor was computed. These results can be found in Table 11.

Student ratings of effectiveness on the modified BIRS were then analyzed using a one-sample t test. This test compared the observed student ratings of CAPS on the effectiveness factor of the modified BIRS against a null hypothesis value of 3.5 for each effectiveness statement as well as the effectiveness factor as a whole. The t -tests were analyzed at a 95% confidence level. Results for each effectiveness statement and for the effectiveness factor as a whole are shown in Table 12.

Table 11

Measures of Central Tendency: Student Ratings of Effectiveness

Modified BIRS question	Total ratings	Mean	SD
18. CAPS will produce a lasting improvement in my education.	450	5.46	.806
19. The professional skills I learn in CAPS will help me in my future career.	449	5.53	.839
20. The skills acquired in CAPS should not only improve my professional skills, but also skills in other academic and/or professional areas.	448	5.30	.839
21. CAPS should produce enough improvement in my professional skills that I will feel prepared to enter a professional field.	448	5.24	.875
22. Other skills (e.g., communication skills, organizational skills, etc.) related to professional skills are likely to be improved by CAPS as well.	446	5.41	.791
Total effectiveness factor	2,241	5.39	.819

Table 12

One-Sample t-Test Results: Student Ratings of Effectiveness

Modified BIRS question	<i>t</i>	<i>df</i>	Sig.	Diff.	95% C.I.	
18. CAPS will produce a lasting improvement in my education.	51.48*	449	.000	1.956	1.88	2.03
19. The professional skills I learn in CAPS will help me in my future career.	57.15*	448	.000	2.030	1.96	2.10
20. The skills acquired in CAPS should not only improve my professional skills, but also skills in other academic and/or professional areas.	45.47*	447	.000	1.801	1.72	1.88
21. CAPS should produce enough improvement in my professional skills that I will feel prepared to enter a professional field.	42.13*	447	.000	1.741	1.66	1.82
22. Other skills (e.g., communication skills, organizational skills, etc.) related to professional skills are likely to be improved by CAPS as well.	51.09*	445	.000	1.913	1.84	1.99
Total Effectiveness Factor	109.08*	2240	.000	1.888	1.85	1.92

Notes. Test value = 3.5. Sig. = Significance (two-tailed). Diff. = mean difference. 95% C.I. = 95% confidence interval of the difference.

* $p < 0.001$.

Student effectiveness ratings of CAPS were significant ($p < .001$) for every statement in the effectiveness factor as shown in Table 12. The mean of the highest rated statement, “The professional skills I learn in CAPS will help me in my future career” was 5.53, significantly higher ($p < .001$) than the null hypothesis. All five of the effectiveness statement means were greater than 5.0 and all were all significant at the $p < .001$ level. The lowest rated statement, “CAPS should produce enough improvement in my professional skills that I will feel prepared to enter a professional field” had a mean effectiveness rating of 5.27. The mean rating of the effectiveness factor as a whole was 5.39 and was also significant ($t = 109.08$; $p < .001$) as determined by the one-sample *t*-test results.

Student Ratings Summary—Acceptability, Effectiveness, and Total Scale

A summary of student ratings of the social validity of CAPS as measured by the acceptability and effectiveness factors of the modified BIRS as well as the total BIRS scale reveal an acceptability mean of 5.30, an effectiveness mean of 5.39, and a total scale mean of 5.32. These results are summarized in Table 13.

When analyzed with a one-sample *t*-test student ratings of CAPS programs were all shown to be significantly above the null-hypothesis mean of 3.5. Acceptability ratings ($t = 150.396$; $p < .001$), effectiveness ratings ($t = 109.078$; $p < .001$), and total scale ratings ($t = 182.567$, $p < .001$) are summarized in Table 14.

Table 13

Measures of Central Tendency: Student Ratings Summary

Factor	Total ratings	Mean	SD
Total acceptability factor	6,798	5.30	.986
Total effectiveness factor	2,241	5.39	.819
Total scale	9,039	5.32	.948

Table 14

One-Sample t-Test Results: Student Ratings Summary

Factor	<i>t</i>	<i>df</i>	Sig.	Diff.	95% C.I.	
Total acceptability factor	150.40*	6797	.000	1.798	1.78	1.82
Total effectiveness factor	109.08*	2240	.000	1.888	1.85	1.92
Total scale	182.57*	9038	.000	1.821	1.81	1.84

Notes. Test value = 3.5. Sig. = Significance (two-tailed). Diff. = mean difference. 95% C.I. = 95% confidence interval of the difference.

* $p < 0.001$ level.

Gender Differences in Acceptability and Effectiveness Ratings

To answer the question of whether male and female students rate the acceptability and effectiveness of CAPS programs differently, mean acceptability and effectiveness ratings were compared for each modified BIRS statement in both factor groups as well as the mean ratings for each factor as a whole. Ratings by gender for each of the modified BIRS acceptability and effectiveness statements as well as each factor as a whole can be seen in Tables 15 and 16, respectively.

Female students rated the acceptability of CAPS programs higher on fourteen of the fifteen acceptability statements on the modified BIRS as shown in Table 15. The only acceptability statement which male students rated higher than female students was the statement that read, “CAPS is consistent with other school programs in which I have participated in the past.” The acceptability rating on the complete acceptability factor was also higher for female students (5.36) than male students (5.23).

Similar results were found when male/female effectiveness ratings were compared. Female students rated the effectiveness of CAPS programs higher on four of the five effectiveness statements and rated the final effectiveness statement equal to their male counterparts as shown in Table 16. Ratings on the complete effectiveness factor were also higher for female students (5.45) than for male students (5.37).

To determine whether these differences were significant, an independent samples *t* test was used to analyze the differences in acceptability and effectiveness ratings by gender. Before the data from the independent samples *t* test was analyzed, Levene’s test for equality of variance was utilized to determine whether it was appropriate to assume

Table 15

Student Acceptability Ratings by Gender

Modified BIRS Question	Gender	Total ratings	Mean	SD
3. The CAPS program is an acceptable school-based program for students seeking professional skills in career fields.	Male	222	5.64	.574
	Female	237	5.79	.446
4. Most students would find the CAPS program appropriate for learning professional skills in career fields.	Male	221	5.45	.728
	Female	235	5.64	.592
5. CAPS should prove effective in helping students acquire professional skills in career fields.	Male	220	5.48	.749
	Female	234	5.60	.601
6. I would suggest participation in CAPS to other students.	Male	220	5.46	.938
	Female	234	5.59	.799
7. My professional interests are aligned with the mission and goals of CAPS.	Male	218	5.03	1.123
	Female	234	5.27	.835
8. Most students would find CAPS suitable for acquiring professional skills.	Male	220	5.35	.764
	Female	234	5.49	.670
9. I would be willing to re-enroll in the CAPS program.	Male	220	5.09	1.337
	Female	234	5.30	1.038
10. The CAPS program does NOT result in negative side effects for students.	Male	220	4.98	1.068
	Female	234	5.06	1.005
11. CAPS would be an appropriate program for a variety of students.	Male	219	5.21	.879
	Female	234	5.23	.886
12. CAPS is consistent with other school programs in which I have participated in the past.	Male	219	3.98	1.555
	Female	233	3.88	1.531
13. CAPS does a fair job at providing me professional skills in career fields.	Male	219	5.35	.828
	Female	233	5.44	.712
14. The CAPS program is a reasonable way to meet the professional interests of enrolled students.	Male	218	5.36	.870
	Female	233	5.45	.706
15. I like the programs and experiences offered through CAPS.	Male	218	5.39	.863
	Female	233	5.56	.693
16. CAPS is a good way to address the professional goals of enrolled students.	Male	218	5.33	.838
	Female	233	5.44	.699
17. Overall, CAPS is beneficial for students.	Male	218	5.44	.879
	Female	233	5.58	.709
Total acceptability factor	Male	222	5.23	.671
	Female	237	5.36	.539

Table 16

Student Effectiveness Ratings by Gender

Modified BIRS question	Gender	Total ratings	Mean	SD
18. CAPS will produce a lasting improvement in my education.	Male	218	5.37	.897
	Female	232	5.54	.701
19. The professional skills I learn in CAPS will help me in my future career.	Male	218	5.40	.865
	Female	231	5.65	.606
20. The skills acquired in CAPS should not only improve my professional skills, but also skills in other academic and/or professional areas.	Male	218	5.24	.885
	Female	230	5.36	.790
21. CAPS should produce enough improvement in my professional skills that I will feel prepared to enter a professional field.	Male	218	5.21	.895
	Female	230	5.27	.856
22. Other skills (e.g., communication skills, organizational skills, etc.) related to professional skills are likely to be improved by CAPS as well.	Male	217	5.41	.801
	Female	229	5.41	.782
Total effectiveness factor	Male	218	5.37	.897
	Female	232	5.45	.599

equal variances within the two data sets. Equal variance was assumed (did not reject the null hypothesis of equal variance) on 7 of the 15 acceptability statements (numbers 7, 8, 10, 11, 12, 13, and 16) and equal variance was not assumed on the remaining eight (numbers 3, 4, 5, 6, 9, 14, 15, and 17) acceptability statements. After accounting for these differences, significant differences were found at the $p < .05$ level for 5 of the 15 acceptability statements (numbers 3, 4, 7, 8, and 15) as indicated in Table 17.

On the effectiveness factor, equal variance was assumed (did not reject the null hypothesis of equal variance) on three of the five statements (numbers 20, 21, and 22), and equal variance was not assumed on the remaining two (numbers 18 and 19)

Table 17

Independent Samples t Test: Comparison of Gender Ratings of Acceptability

Modified BIRS statement	<i>t</i>	<i>df</i>	Sig.
3. The CAPS program is an acceptable school-based program for students seeking professional skills in career fields.	-3.093*	416.5	.002
4. Most students would find the CAPS program appropriate for learning professional skills in career fields.	-3.047*	424.2	.002
5. CAPS should prove effective in helping students acquire professional skills in career fields.	-1.887	419.6	.060
6. I would suggest participation in CAPS to other students.	-1.593	431.1	.112
7. My professional interests are aligned with the mission and goals of CAPS.	-1.601*	450.0	.008
8. Most students would find CAPS suitable for acquiring professional skills.	-2.169*	452.0	.031
9. I would be willing to re-enroll in the CAPS program.	-1.886	412.9	.060
10. The CAPS program does NOT result in negative side effects for students.	-.802	452.0	.423
11. CAPS would be an appropriate program for a variety of students.	-.198	451.0	.843
12. CAPS is consistent with other school programs in which I have participated in the past.	.641	450.0	.522
13. CAPS does a fair job at providing me professional skills in career fields.	-1.311	450.0	.191
14. The CAPS program is a reasonable way to meet the professional interests of enrolled students.	-1.235	418.3	.218
15. I like the programs and experiences offered through CAPS.	-2.391*	416.1	.017
16. CAPS is a good way to address the professional goals of enrolled students.	-1.483	449.0	.139
17. Overall, CAPS is beneficial for students.	-1.837*	416.9	.067

Notes. Sig. = Significance (two-tailed).

* $p < 0.05$.

effectiveness statements. After accounting for these differences, significant differences were found at the $p < .05$ level for two of the five effectiveness statements (numbers 18 and 19) as shown in Table 18.

The differences between male and female ratings of acceptability and effectiveness of CAPS programs becomes more apparent when analyzed as larger data sets. Female students rated CAPS programs higher than male students on each of the

Table 18

Independent Samples t Test: Comparison of Gender Ratings of Effectiveness

Modified BIRS statement	<i>t</i>	<i>df</i>	Sig.
18. CAPS will produce a lasting improvement in my education.	-2.254*	410.6	.025
19. The professional skills I learn in CAPS will help me in my future career.	-3.465*	386.5	.001
20. The skills acquired in CAPS should not only improve my professional skills, but also skills in other academic and/or professional areas.	-1.432	446.0	.153
21. CAPS should produce enough improvement in my professional skills that I will feel prepared to enter a professional field.	-.816	446.0	.415
22. Other skills (e.g., communication skills, organizational skills, etc.) related to professional skills are likely to be improved by CAPS as well.	.057	444.0	.955

Notes. Sig. = Significance (two-tailed).

* $p < 0.05$.

acceptability and effectiveness factors as well as on the complete scale as shown in Table 19. When independent samples *t* tests were run on this data, the results were significant at the $p < .05$ level for the acceptability factor as well as the entire scale but was not significant for the effectiveness factor as shown in Table 20.

Research Question #2

2. *Are CAPS programs acceptable and effective as measured by industry partner ratings on a modified Behavior Intervention Rating Scale (BIRS)?*

Acceptability

To answer this question, the data analysis procedures used on the student data set were repeated with the data from the industry partner survey. Measures of central tendency (mean and standard variation) were computed for each of the 15 acceptability

Table 19

Measures of Central Tendency: Acceptability, Effectiveness and Total Scale Ratings by Gender

Factor	Gender	Total ratings	Mean	SD
Acceptability factor	Male	222	5.23	.671
	Female	237	5.36	.539
Effectiveness factor	Male	218	5.37	.897
	Female	232	5.45	.599
Total scale	Male	222	5.25	.666
	Female	237	5.38	.534

Table 20

Independent samples t Test: Acceptability, Effectiveness and Total Scale Ratings by Gender

Factor	<i>t</i>	<i>df</i>	Sig.
Acceptability factor	-2.207*	423.8	.027
Effectiveness factor	-1.886	448.0	.060
Total scale	-2.216*	423.2	.027

Notes. Sig. = Significance (two-tailed).

* $p < 0.05$.

statements in the modified BIRS (numbers 3-17 on the industry partner survey; see Appendix C). The mean and standard deviation of each acceptability statement as well as for the entire acceptability factor was computed as shown in Table 21.

Industry Partner ratings of acceptability on the modified BIRS were then analyzed using a one-sample *t* test. This test compared the observed industry partner ratings of CAPS on the acceptability factor of the modified BIRS against a null hypothesis value of 3.5 for each acceptability statement as well as the acceptability factor as a whole. A mean of 3.5 places the null hypothesis directly in the center of the scale, neither “agreeing” nor

Table 21

Measures of Central Tendency: Industry Partner Ratings of Acceptability

Modified BIRS question	Total ratings	Mean	SD
3. The CAPS program is an acceptable school-based program for students seeking professional skills in career fields.	107	5.85	.384
4. Most students would find the CAPS program appropriate for learning professional skills in career fields.	106	5.64	.555
5. CAPS should prove effective in helping students acquire professional skills in career fields.	106	5.67	.564
6. I would suggest participation in CAPS to other students.	105	5.64	.622
7. My professional interests are aligned with the mission and goals of CAPS.	104	5.63	.525
8. Most students would find CAPS suitable for acquiring professional skills.	105	5.50	.606
9. I would be willing to re-enroll in the CAPS program.	105	5.68	.672
10. The CAPS program does NOT result in negative side effects for students.	104	5.52	.788
11. CAPS would be an appropriate program for a variety of students.	104	5.57	.587
12. CAPS is consistent with other school programs in which I have participated in the past.	97	4.67	1.264
13. CAPS does a fair job at providing me professional skills in career fields.	103	5.40	.844
14. The CAPS program is a reasonable way to meet the professional interests of enrolled students.	104	5.55	.573
15. I like the programs and experiences offered through CAPS.	103	5.56	.589
16. CAPS is a good way to address the professional goals of enrolled students.	104	5.57	.553
17. Overall, CAPS is beneficial for students.	104	5.78	.440
Total acceptability factor	1,561	5.55	.707

“disagreeing” with the acceptability statements. Thus, a mean significantly higher than 3.5 would indicate significant industry partner acceptability of the CAPS program. Conversely, a mean significantly lower than 3.5 would indicate significant unacceptability of the CAPS program. The *t* tests were analyzed at a 95% confidence level. Results for each acceptability statement and for the acceptability factor as a whole

are shown in Table 22.

Industry partner acceptability ratings of CAPS were significant ($p < .001$) for every statement in the acceptability factor as shown in Table 22. The mean of the highest rated statement, “The CAPS program is an acceptable school-based program for students seeking professional skills in career fields” was 5.85, significantly higher ($p < .001$) than the null hypothesis. Fourteen of the 15 acceptability statement means were greater than 5.0 and all 15 were all significant at the $p < .001$ level. The lowest rated statement, “CAPS is consistent with other educational programs in which I have participated in the past” had a mean acceptability rating of 4.67. While still significant at the $p < .001$ level, this lower acceptability rating is not unexpected given that CAPS programs are not like most other educational programs. The mean of the acceptability factor as a whole was 5.55 and was also significant ($t = 114.67$; $p < .001$) at the $p < .001$ level.

Effectiveness

This question was answered in the same way the acceptability question was answered. Measures of central tendency (mean and standard variation) were computed for each of the five effectiveness statements in the modified BIRS (numbers 18-22 on the industry partner survey; see Appendix C). Results indicating the industry partner ratings for each of the effectiveness statements as well as for the entire effectiveness factor are shown in Table 23.

Industry partner ratings of effectiveness on the modified BIRS were then analyzed by using a one-sample t test. This test compared the observed industry partner ratings of CAPS on the effectiveness factor of the modified BIRS against a null hypothesis value of

Table 22

One-Sample t-Test Results: Industry Partner Ratings of Acceptability

Modified BIRS Question	<i>t</i>	<i>df</i>	Sig.	Diff.	95% C.I.	
3. The CAPS program is an acceptable school-based program for students seeking professional skills in career fields.	63.36*	106	.000	2.350	2.28	2.42
4. Most students would find the CAPS program appropriate for learning professional skills in career fields.	39.71*	105	.000	2.142	2.03	2.25
5. CAPS should prove effective in helping students acquire professional skills in career fields.	39.58*	105	.000	2.170	2.06	2.28
6. I would suggest participation in CAPS to other students.	35.22*	104	.000	2.138	2.02	2.26
7. My professional interests are aligned with the mission and goals of CAPS.	41.29*	103	.000	2.125	2.02	2.23
8. Most students would find CAPS suitable for acquiring professional skills.	33.71*	104	.000	1.995	1.88	2.11
9. I would be willing to re-enroll in the CAPS program.	33.17*	104	.000	2.176	2.05	2.31
10. The CAPS program does NOT result in negative side effects for students.	26.13*	103	.000	2.019	1.87	2.17
11. CAPS would be an appropriate program for a variety of students.	35.90*	103	.000	2.067	1.95	2.18
12. CAPS is consistent with other school programs in which I have participated in the past.	9.12*	96	.000	1.170	.92	1.42
13. CAPS does a fair job at providing me professional skills in career fields.	22.82*	102	.000	1.898	1.73	2.06
14. The CAPS program is a reasonable way to meet the professional interests of enrolled students.	36.48*	103	.000	2.048	1.94	2.16
15. I like the programs and experiences offered through CAPS.	35.57*	102	.000	2.063	1.95	2.18
16. CAPS is a good way to address the professional goals of enrolled students.	38.11*	103	.000	2.067	1.96	2.17
17. Overall, CAPS is beneficial for students.	52.85*	103	.000	2.279	2.19	2.36
Total acceptability factor	114.67*	1,560	.000	2.052	2.02	2.09

Notes. Test value = 3.5. Sig. = Significance (two-tailed). Diff. = mean difference.
95% C.I. = 95% confidence interval of the difference.

* $p < 0.001$ level.

Table 23

Measures of Central Tendency: Industry Partner Ratings of Effectiveness

Modified BIRS Question	Total ratings	Mean	SD
18. CAPS will produce a lasting improvement in my education.	104	5.65	.536
19. The professional skills I learn in CAPS will help me in my future career.	104	5.72	.492
20. The skills acquired in CAPS should not only improve my professional skills, but also skills in other academic and/or professional areas.	104	5.61	.582
21. CAPS should produce enough improvement in my professional skills that I will feel prepared to enter a professional field.	104	5.15	.785
22. Other skills (e.g., communication skills, organizational skills, etc.) related to professional skills are likely to be improved by CAPS as well.	104	5.66	.514
Total effectiveness factor	520	5.56	.624

3.5 for each effectiveness statement as well as the effectiveness factor as a whole. The t tests were analyzed at a 95% confidence level and results for each of the effectiveness statements and for the effectiveness factor as a whole are shown in Table 24.

Industry partner effectiveness ratings of CAPS were significant ($p < .001$) for every statement in the effectiveness factor as shown in Table 24. The mean of the highest rated statement, “The professional skills students learn in CAPS will help them in their future career” was 5.72, significantly higher ($p < .001$) than the null hypothesis. All five of the effectiveness statement means were greater than 5.0 and all were all significant at the $p < .001$ level. The lowest rated statement, “CAPS should produce enough improvement in my professional skills that I will feel prepared to enter a professional field” had a mean effectiveness rating of 5.15. The mean of the effectiveness factor as a whole was 5.56 and was also significant ($t = 75.26$; $p < .001$) at the $p < .001$ level.

Table 24

One-Sample t-Test Results: Industry Partner Ratings of Effectiveness

Modified BIRS question	<i>t</i>	<i>df</i>	Sig.	Diff.	95% C.I.	
18. CAPS will produce a lasting improvement in my education.	41.02*	103	.000	2.154	2.05	2.26
19. The professional skills I learn in CAPS will help me in my future career.	46.06*	103	.000	2.221	2.13	2.32
20. The skills acquired in CAPS should not only improve my professional skills, but also skills in other academic and/or professional areas.	36.93*	103	.000	2.106	1.99	2.22
21. CAPS should produce enough improvement in my professional skills that I will feel prepared to enter a professional field.	21.47*	103	.000	1.654	1.50	1.81
22. Other skills (e.g., communication skills, organizational skills, etc.) related to professional skills are likely to be improved by CAPS as well.	42.92*	103	.000	2.163	2.06	2.26
Total effectiveness factor	75.26*	519	.000	2.060	2.01	2.11

Notes. Test value = 3.5. Sig. = Significance (two-tailed). Diff. = mean difference. 95% C.I. = 95% confidence interval of the difference.

* $p < 0.001$ level.

Industry Partner Ratings Summary: Acceptability, Effectiveness, and Total Scale

A summary of industry partner ratings of the social validity of CAPS as measured by the acceptability and effectiveness factors of the modified BIRS as well as the total BIRS scale reveal an acceptability mean of 5.55, an effectiveness mean of 5.56, and a total scale mean of 5.55. These results are summarized in Table 25.

When analyzed with a one-sample t-test industry partner ratings of CAPS programs were all shown to be significantly above the null-hypothesis mean of 3.5. Acceptability ratings ($t = 114.67$; $p < .001$), effectiveness ratings ($t = 75.26$; $p < .001$), and total scale ratings ($t = 136.36$, $p < .001$) are summarized in Table 26.

Table 25

Measures of Central Tendency: Industry Partner Ratings Summary

Factor	Total ratings	Mean	SD
Total acceptability factor	1,561	5.55	.707
Total effectiveness factor	520	5.56	.624
Total scale	2,081	5.55	.688

Table 26

One-Sample t-Test Results: Industry Partner Ratings Summary

Factor	<i>t</i>	<i>df</i>	Sig.	Diff.	95% C.I.	
Total acceptability factor	114.67*	1,560	.000	2.052	2.02	2.09
Total effectiveness factor	75.26*	519	.000	2.060	2.01	2.11
Total scale	136.36*	2,080	.000	2.054	2.02	2.08

Notes. Test value = 3.5. Sig. = Significance (two-tailed). Diff. = mean difference. 95% C.I. = 95% confidence interval of the difference.

* $p < 0.001$ level.

ANOVA/Post-Hoc Analysis

To determine whether the social validity results discussed above were consistent with each of the participating CAPS programs and could, therefore, be attributed to the CAPS model as a whole, or whether the results were being carried by a few exceptionally rated programs, some post-hoc analysis was performed to investigate variance between participating CAPS programs.

To determine whether students and/or industry partners rated the social validity of participating CAPS programs differently, a one-way ANOVA was conducted on both the student and industry partner data sets. The ANOVA was used to compare mean acceptability ratings, mean effectiveness ratings, and mean total scale ratings among

CAPS programs.

Student ratings. To determine whether differences exist in social validity ratings among participating CAPS programs as rated by students, mean acceptability, effectiveness, and total scale rating scores were calculated for each program. These results are shown in Table 27.

As shown in Table 27, each participating CAPS program was rated high by students on both the acceptability and effectiveness factors of social validity and on the total BIRS scale. Each of the programs studied had mean ratings over 5 except for CF CAPS whose mean acceptability, effectiveness, and total scale ratings were 4.8943, 5.1161, and 4.9391, respectively.

A one-way ANOVA was then used to determine whether significant variance existed among any of the programs in either acceptability, effectiveness, or the total scale means. ANOVA results revealed significant differences among programs in student ratings of acceptability ($f = 4.60$; $p < .001$) and in student ratings on the total scale ($f = 3.77$; $p < .001$). No significant variance was found among programs in the student ratings of effectiveness ($f = 1.709$; $p = .069$). These results are summarized in Table 28.

Because the ANOVA results indicated significant differences existed among means of student ratings of acceptability and the total scale, Tukey's HSD was used to determine which programs the students rated differently. Five significant differences were found between mean student rating scores of acceptability. Blue Valley CAPS was rated significantly higher than CF CAPS (mean difference = .60988; $p < .001$), Northland CAPS (mean difference = .32450; $p = .004$) and Westside CAPS (mean difference =

Table 27

Student Acceptability, Effectiveness, and Total Scale Means by Program

Program name	Acceptability			Effectiveness			Total scale		
	Mean	Total rating	SD	Mean	Total rating	SD	Mean	Total rating	SD
Alexandria CAPS	5.5756	15	.22972	5.4400	15	.36410	5.5470	15	.24297
Blue Valley CAPS	5.5043	149	.51554	5.4886	149	.69180	5.5003	149	.53368
CF CAPS	4.8943	32	.67702	5.1161	31	.66287	4.9391	32	.66729
GO CAPS	5.0167	4	.74709	5.1000	4	.77460	5.0375	4	.72730
MN CAPS	5.2710	31	.80552	5.5133	30	.76055	5.3274	31	.77951
Northland CAPS	5.1797	79	.59956	5.3493	75	.63849	5.2213	79	.59148
Pathway Spark!	5.1011	26	.56588	5.2538	26	.70327	5.1391	26	.57449
PC CAPS	5.4833	4	.06383	5.3500	4	.34157	5.4500	4	.12247
Shakopee CAPS	5.4667	24	.43472	5.5826	23	.47064	5.4892	24	.41972
St Louis CAPS	5.1476	14	.41028	5.5231	13	.54491	5.2345	14	.41605
Wasatch CAPS	5.2674	39	.50886	5.3846	39	.50759	5.2968	39	.48022
Westside CAPS	5.1492	42	.77548	5.1610	41	.88456	5.1574	42	.79225
Total	5.2997	459	.60884	5.3884	450	.67619	5.3207	459	.60416

Table 28

One-Way ANOVA Results: Student Ratings

Factor mean	Type of variance	Sum of squares	df	Mean square	F	Sig.
Acceptability mean	Between groups	17.264	11	1.569	4.60*	.000
	Within groups	152.512	447	.341		
	Total	169.775	458			
Effectiveness mean	Between groups	8.450	11	.768	1.71	.069
	Within groups	196.850	438	.449		
	Total	205.300	449			
Total scale mean	Between groups	14.192	11	1.290	3.77*	.000
	Within groups	152.982	447	.342		
	Total	167.174	458			

Note. Sig. = Significance. Diff. = mean difference.

* $p < 0.001$.

.35504; $p = .027$). In addition, both Alexandria CAPS (mean difference = .68128; $p = .012$) and Shakopee CAPS (mean difference = .57240; $p = .016$) were rated significantly higher than CF CAPS on acceptability by students. The same five differences between programs were found when total scale means were analyzed. Blue Valley CAPS was rated significantly higher than CF CAPS (mean difference = .56127; $p < .001$), Northland CAPS (mean difference = .27902; $p = .032$) and Westside CAPS (mean difference = .34294; $p = .040$). In addition, both Alexandria CAPS (mean difference = .60791; $p = .045$) and Shakopee CAPS (mean difference = .55015; $p = .027$) were rated significantly higher than CF CAPS on acceptability by students. These results are summarized in Table 29 and differences between all programs can be found in Appendix E.

Industry partner ratings. To determine whether differences exist in social validity ratings among participating CAPS programs as rated by industry partners, mean

Table 29

Tukey HSD Results: Student Ratings of Acceptability and Total Scale by Program

Factor	Program name	Program name	Mean diff.	Sig.	95% C.I.	
Acceptability	Alexandria CAPS	CF CAPS	.68128*	.012	.081	1.282
	Blue Valley CAPS	CF CAPS	.60998*	.000	.236	.984
	Blue Valley CAPS	Northland CAPS	.32450*	.004	.057	.592
	Blue Valley CAPS	Westside CAPS	.35504*	.027	.020	.690
	Shakopee CAPS	CF CAPS	.57240*	.016	.054	1.091
Total Scale	Alexandria CAPS	CF CAPS	.60791*	.045	.007	1.209
	Blue Valley CAPS	CF CAPS	.56127*	.000	.187	.936
	Blue Valley CAPS	Northland CAPS	.27902*	.032	.012	.547
	Blue Valley CAPS	Westside CAPS	.34294*	.040	.007	.679
	Shakopee CAPS	CF CAPS	.55015*	.027	.031	1.069

Notes. Sig. = Significance. Mean diff. = mean difference. 95% C.I. = 95% confidence interval of the difference.

* $p < 0.05$.

acceptability, effectiveness, and total scale rating scores were calculated for each program as shown in Table 30.

A one-way ANOVA was subsequently used to determine whether significant variance existed among any of the program's industry partner ratings of either acceptability, effectiveness, or the total scale mean scores. ANOVA results revealed no significant differences among programs as shown in Table 31. Because these results showed no significant variance among programs, no further post-hoc analysis was conducted between programs.

Table 30

Industry Partner Acceptability, Effectiveness, and Total Scale Means by Program

Program name	Acceptability			Effectiveness			Total scale		
	Mean	SD	Total rating	Mean	SD	Total rating	Mean	SD	Total rating
Alexandria CAPS	5.5333	--	1	5.8000	--	1	5.6000	--	1
Blue Valley CAPS	5.7933	.17342	10	5.8600	.13499	10	5.8100	.15776	10
CF CAPS	5.4905	.38277	12	5.4833	.45494	12	5.4883	.38369	12
MN CAPS	5.5141	.33415	13	5.5385	.45007	13	5.5200	.33583	13
Northland CAPS	6.0000	--	1	6.0000	--	1	6.0000	--	1
Pathway Spark!	5.2778	.83949	6	5.4667	.54650	6	5.3250	.74549	6
PC CAPS	6.0000	.0000	2	6.0000	--	1	6.0000	.0000	2
Shakopee CAPS	5.5632	.33592	18	5.5647	.39519	17	5.5656	.33670	18
St Louis CAPS	5.4800	.39271	5	5.4800	.46043	5	5.4800	.38503	5
Wasatch CAPS	5.5386	.45062	20	5.6000	.43042	20	5.5540	.43432	20
Westside CAPS	5.5602	.45532	19	5.4000	.70294	18	5.5279	.50575	19
Total	5.5575	.41890	107	5.5596	.47898	104	5.5604	.41616	107

Table 31

One-Way ANOVA Results: Industry Partner Ratings

Factor mean	Type of variance	Sum of squares	<i>df</i>	Mean Square	<i>F</i>	Sig.
Acceptability mean	Between groups	1.730	10	.173	.984	.462
	Within groups	16.871	96	.176		
	Total	18.601	106			
Effectiveness mean	Between groups	1.999	10	.200	.859	.574
	Within groups	21.632	93	.233		
	Total	23.630	103			
Total scale mean	Between groups	1.674	10	.167	.963	.480
	Within groups	16.684	96	.174		
	Total	18.358	106			

Notes. Sig. = Significance. Diff. = mean difference.

CHAPTER V

DISCUSSION

Introduction

The current study evaluated the social validity of the CAPS programs nation-wide by collecting and analyzing acceptability and effectiveness data from two key stakeholders: students and industry partners. Social validity is a measure of how well a social program is embraced by those who are targeted to benefit from it (Marchant et al., 2013). Social validity considers the opinions of consumers (i.e., CAPS students and industry partners) and helps program directors and educational leaders become aware of how those opinions affect program implementation and acceptance by its key stakeholders. It is consumer perceptions of an educational program that will ultimately decide its future rather than educational leaders' perceptions of the program's effectiveness and desirability.

CAPS programs are innovative high school programs in which students are fully immersed in a professional culture, solve real-world problems, and use industry standard tools while being mentored by industry professionals. Students in CAPS programs work closely with professionals from industry to develop critical thinking, innovation, and the professional skills necessary to succeed in today's economy. Students work in collaborative groups to complete industry projects and are mentored by industry professionals through their CAPS experience. The evaluation included all established CAPS programs, defined as each program that has been operational for at least one

calendar year. In total, nineteen CAPS programs met the participation criteria and were invited to participate in the study. Of the 19 programs selected for inclusion in the study, 18 agreed to participate. One program was subsequently eliminated from participation because of a significant difference in program implementation and data were not collected from five additional programs, leaving 12 programs as final study participants.

Social validity data was collected from 459 students and 107 industry partners representing each of the twelve participating CAPS programs. Social validity data was collected via a modified BIRS (Elliott & Von Brock Treuting, 1991). The Behavior Intervention Rating Scale is a 24-item scale that utilizes a 6-point, Likert-type scale, indicating the degree to which the respondent agrees or disagrees with the presented statements. The BIRS was selected because of its documented internal consistency (Von Brock & Elliott, 1987) and its factorial validity (Elliott & Von Brock Treuting, 1991). The BIRS was originally developed to assess the effectiveness and acceptability of intervention treatments. However, in their discussion of the validity and generalizability of the BIRS, Elliot, and Von Brock Treuting (1991) concluded that minor modification of wording in the survey would provide for easy adaptation to other settings and multiple treatments. Thus, the BIRS wording was modified for this study to make sense when measuring social validity in a CAPS setting.

The current study answered the following research questions:

1. Are CAPS programs socially valid as measured by student ratings of acceptability and effectiveness on a modified Behavior Intervention Rating Scale (BIRS)?
2. Are CAPS programs socially valid as measured by industry partner ratings of acceptability and effectiveness on a modified Behavior Intervention Rating Scale (BIRS)?

Findings and Conclusions

Student Ratings of the Social Validity of CAPS

Student ratings of the social validity of CAPS were overwhelmingly positive. Students ratings of CAPS were significantly greater than the null hypothesis value of 3.5 (neither agree nor disagree with BIRS statements) for both the BIRS acceptability ($\bar{x} = 5.30$) and effectiveness ($\bar{x} = 5.39$) factors as well as for the entire BIRS scale ($\bar{x} = 5.32$). In addition, student ratings for each of the fifteen acceptability statements and each of the effectiveness statements were all significantly above the null hypothesis. The mean student rating of every acceptability and effectiveness statement was above 5.0 except for one. That statement, “CAPS is consistent with other school programs in which I have participated in the past” was rated 3.93. This lower acceptability rating is not unexpected given that CAPS programs are not like most other school programs in which students participate. Perhaps the most telling evidence regarding student acceptability of CAPS programs is their staggering agreement with the statement “I would suggest participation in CAPS to other students.” This statement is the essence of social validity and the mean student rating of that statement was 5.53.

Both male and female students give CAPS programs high social validity marks. Mean ratings on the entire BIRS scale for male students was 5.25 and 5.38 for female students. Female student ratings of the social validity of CAPS were significantly higher than their male peers on both the acceptability and the entire BIRS scale, but was not significantly different on the effectiveness factors. That this difference in gender ratings

was manifest in both the acceptability factor and for the entire BIRS scale is not surprising given that the entire BIRS scale (twenty total questions) was comprised of fifteen questions from the acceptability factor and only five from the effectiveness factor. Thus, the acceptability questions factor into the total scale ratings at three times the weight of the effectiveness factor. While these results are interesting and may merit additional research, in this study both male and female social validity ratings were high enough to render any differences of little practical significance.

Industry Partner Ratings of the Social Validity of CAPS

Results from the industry partner ratings of CAPS programs is remarkably similar to the student ratings of CAPS programs. Like their student counterparts, industry professionals who responded to this study also rated CAPS programs extremely high. Industry partner ratings of CAPS were significantly greater than the null hypothesis value of 3.5 (neither agree nor disagree with BIRS statements) for both the BIRS acceptability ($\bar{x} = 5.55$) and effectiveness ($\bar{x} = 5.56$) factors as well as for the entire BIRS scale ($\bar{x} = 5.55$). Also like the student ratings, industry partner ratings for each of the fifteen acceptability statements and each of the effectiveness statements were all significantly above the null hypothesis. The mean industry partner rating of every acceptability and effectiveness statement was above 5.0 except for one. That statement, “CAPS is consistent with other school programs in which I have participated in the past” was rated 4.67. This lower acceptability rating is not unexpected given that CAPS programs are not like most other school programs in which industry partners participate. Industry partners agreed wholeheartedly with the statement, “The CAPS program is an acceptable school-

based program for students seeking professional skills in career fields” giving that statement a nearly perfect mean rating of 5.85. They also strongly agreed with the “I would suggest participation in CAPS to other industry professionals.” This statement is the essence of social validity and the mean industry partner rating of that statement was 5.64.

Student and industry ratings of social validity were remarkably consistent across each CAPS program studied. Every acceptability and effectiveness statement of the BIRS as well as both social validity factors and the entire BIRS scale ratings was significantly higher than the expected null for both students and industry partners. The ubiquitous positive results in this study invariably lead to the conclusion that CAPS programs are socially valid among both student and industry partner groups and impressively so.

Additional/Post-Hoc Analysis

While the purpose of this study was not to distinguish which of the CAPS programs had “the most” social validity or which was rated highest by students or industry partners, some analysis was conducted among the programs surveyed to determine whether the impressive social validity results were consistent among each CAPS program studied and could therefore be attributed to the CAPS model as a whole or whether the results were being carried by a few of the larger and more established programs. While ANOVA results revealed some significant variance among programs in the student ratings of acceptability and total scale, subsequent post-hoc analysis revealed differences between a relatively small number of the programs. The same five differences between programs were found in both the student acceptability and total scale ratings.

This number is extremely low when one considers that there was potential for sixty-six differences between programs. Blue Valley CAPS, the originator of the CAPS model and the most established program, was rated higher than CF CAPS, Northland CAPS, and Westside CAPS in student ratings of both acceptability and total scale. In addition, CF CAPS was rated lower than Alexandria CAPS and Shakopee CAPS on the same scales. These results should be interpreted carefully, because each program was rated significantly high in social validity by its students. The range of student acceptability means among programs was 4.89 - 5.58 on a 6-point Likert scale and is 4.94 – 5.55 when mean student ratings of the total scale are considered. These results, even on the low end of the range are high enough to preclude any assumptions about the relative social validity ratings of participating CAPS programs.

It is significant that so little variance was found among CAPS programs. In addition to the small amount of variance in student ratings discussed above, ANOVA results showed no significant variance in industry partner ratings of either acceptability, effectiveness, or the total BIRS scale. These results lead to the logical conclusion that the high student and industry partner ratings of social validity are attributable to the CAPS model and not to any specific CAPS program.

Implications for Practice

Social Validity

In this era of heightened choice among the consumers of public education programs, educational leaders must consider what key stakeholders do and do not find

valuable when evaluating potential or existing educational programs. The relative dearth of this type of evaluation has produced a nearly inaudible stakeholder voice in public education and its programs. Assessing the social validity of students, parents, and other program stakeholders is one way to help educational leaders develop socially relevant programs to address the needs of those they serve.

The results of this study offer an example of this type of evaluation. Assessing the social validity of educational programs is not outside the reach of educational leaders and practitioners and should be conducted regularly when evaluating all education programs, but especially when developing and/or evaluating programs which depend on student choice for their survival. Assessing a program's social validity offers educational leaders and program evaluators essential information regarding how the program is being perceived by its most important stakeholders. Social validity data from students, parents, teachers, and other stakeholders is alarmingly missing from typical program evaluations in public schools and from research in general. Both researchers and educational leaders would do well to add this type of analysis to typical outcome-driven program evaluations. Indeed, a program's social validity is likely to significantly influence the very outcomes traditional evaluations seek to assess and measure. Adding social validity data could be key to program evaluators and educators in attempting to explain both successful and unsuccessful educational initiatives.

Center for Advanced Professional Studies Programs

As shown in the current study, the Center for Advanced Professional Studies

(CAPS) is an emerging model with extremely high social validity ratings among key program stakeholders. The near universal agreement of both students and industry partners that CAPS programs are both acceptable and effective is even more impressive when one considers the variety of settings in which CAPS programs operate and the diversity of students they serve. Successful CAPS programs can be found in urban, suburban, and rural school districts and report successful outcomes from a diverse student group—both racial and socioeconomic.

What is it about CAPS programs that produces such positive outcomes and universal acceptance? The answer to this question may require additional study, but some conclusions can be drawn from what we currently know about CAPS programs. CAPS programs focus on providing opportunities for students to acquire 21st Century Skills such as creativity and innovation, critical thinking and problem solving, and communication and collaboration. While this endeavor is not unique to CAPS, the process utilized to accomplish that endeavor is, and is what sets CAPS programs apart from others. CAPS programs provide students with the opportunity to apply the academic and technical skills obtained through traditional coursework to the completion of an actual, real-world industry project. It is in the completion of an authentic, industry-driven project, complete with personal mentoring from industry professionals, that students acquire transformative professional skills crucial to success in today's economy. CAPS students are drawn to both the rigor and the unquestioned relevance of CAPS projects. "When will I ever use in the real world?" is a question common to educators in a traditional classroom that is never uttered in a CAPS program.

In addition, CAPS programs stand apart from traditional education programs through their professional culture and work environment. Whether hosted by a school district in a separate facility, or off-site at the physical location of an industry partner, CAPS programs immerse their students in a professional setting and treat CAPS students like industry professionals. CAPS students do not seek information based on what will be selected for examination at the end of the course. Instead, they seek information critical to the successful completion of their project—a project which will provide real value to a real client in a real industry.

Professionals from industry who partner with CAPS programs are also nearly unanimous in their praise of CAPS. Industry has long lamented students entering the work force lacking critical professional skills like problem solving and collaboration and has sought opportunities to engage with education in their shared goal to prepare students for post-secondary success. CAPS programs provide a mutually beneficial way to do so. CAPS programs provide talented and motivated students and industry provides relevant projects. This blend of resources produces positive outcomes—both educational and professional—which will continue to benefit both students and industry well into the future.

Limitations and Future Research

As CAPS programs continue to provide both students and industry professionals with positive educational experiences, this model will continue to expand. As of this writing, there are 38 CAPS programs services students in 81 school districts across 12

states at some point of program implementation. Future research will require data from more programs than the current study in order to provide educational professionals with the information necessary to successfully implement CAPS programs. Future research should investigate further which specific aspects of the CAPS experience students and industry partners find so appealing. In addition, longitudinal information on CAPS students (professional accomplishments, etc.) may provide valuable information on the long-term effects of CAPS programs on students. Future research may also be warranted on the difference in male/female ratings of CAPS' social validity. Do female students experience CAPS differently from their male counterparts?

The researcher of the current study is currently employed by Wasatch County School District in Heber City, UT. While not responsible for day to day operations of Wasatch CAPS, he is a member of the Wasatch CAPS Board of Directors.

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APPENDICES

Appendix A

CAPS Program Director Interview Protocol

CAPS Program Director Interview Protocol

1. What is the name of your CAPS Program?
2. How long has your program been operational?
3. How many students are enrolled in your program?
4. How many industry partners does your program utilize?
5. Describe how you have implemented the CAPS program.
 - a. On-site, project based?
 - b. Off-site, project based?
 - c. On-site traditional courses supplemented by industry projects.
6. Do you teach course content in your program?
7. What percentage of their CAPS time do your students spend at the physical location of your industry partners?
8. Is there anything unique about your program's CAPS implementation?

Appendix B
CAPS Student Survey

CAPS Student Survey

Demographic Information:

1. What is your gender?
2. In which CAPS course/area of study are you participating?

Modified BIRS:

3. The CAPS program is an acceptable school-based program for students seeking professional skills in career fields.
4. Most students would find the CAPS program appropriate for learning professional skills in career fields.
5. CAPS should prove effective in helping students acquire professional skills in career fields.
6. I would suggest participation in CAPS to other students.
7. My professional interests are aligned with the mission and goals of CAPS.
8. Most students would find CAPS suitable for acquiring professional skills.
9. I would be willing to re-enroll in the CAPS program.
10. The CAPS program does NOT result in negative side-effects for students.
11. CAPS would be an appropriate program for a variety of students.
12. CAPS is consistent with other school programs in which I have participated in the past.
13. CAPS does a fair job at providing me professional skills in career fields.
14. The CAPS program is a reasonable way to meet the professional interests of enrolled students.
15. I like the programs and experiences offered through CAPS.
16. CAPS is a good way to address the professional goals of enrolled students.

17. Overall, CAPS is beneficial for students.
18. (Omitted—Time)
19. CAPS will produce a lasting improvement in my education.
20. (Omitted—Effectiveness)
21. (Omitted—Time)
22. The professional skills I learn in CAPS will help me in my future career.
23. The skills acquired in CAPS should not only improve my professional skills, but also skills in other academic and/or professional areas.
24. (Omitted—Effectiveness)
25. CAPS should produce enough improvement in my professional skills that I will feel prepared to enter a professional field.
26. Other skills (e.g., communication skills, organizational skills, etc.) related to professional skills are likely to be improved by CAPS as well.

Appendix C
CAPS Industry Partner Survey

CAPS Industry Partner Survey

Demographic Information:

1. For how long have you been participating with CAPS?
2. In which CAPS course/area of study are you participating?

Modified BIRS:

3. The CAPS program is an acceptable school-based program for students seeking professional skills in career fields.
4. Most industry professionals would find the CAPS program appropriate for helping students acquire professional skills in career fields.
5. CAPS should prove effective in helping students acquire professional skills in career fields.
6. I would suggest participation in CAPS to other industry professionals.
7. My professional interests are aligned with the mission and goals of CAPS.
8. Most industry professionals would find CAPS suitable for helping students acquire professional skills.
9. I would be willing to continue to participate in the CAPS program.
10. The CAPS program does NOT result in negative side-effects for me or my business.
11. CAPS would be an appropriate program for a variety of industry professionals.
12. CAPS is consistent with other educational programs in which I have participated in the past.
13. CAPS does a fair job at providing students professional skills in career fields.
14. The CAPS program is a reasonable way to meet the professional interests of enrolled students.
15. I like the programs and experiences offered through CAPS.
16. CAPS is a good way to address the professional goals of enrolled students.

17. Overall, CAPS is beneficial for students.
18. (Omitted—Time)
19. CAPS will produce a lasting improvement in students' education.
20. (Omitted—Effectiveness)
21. (Omitted—Time)
22. The professional skills students learn in CAPS will help them in their future career.
23. The skills students acquire in CAPS should not only improve their professional skills, but also skills in other academic and/or professional areas.
24. (Omitted—Effectiveness)
25. CAPS should produce enough improvement in students' professional skills that they will feel prepared to enter a professional field.
26. Other skills (e.g., communication skills, organizational skills, etc.) related to professional skills are likely to be improved by CAPS as well.

Appendix D

Original Behavior Intervention Rating Scale (BIRS)

Behavior Intervention Rating Scale (BIRS) Questions:

1. This would be an acceptable intervention for the child's problem behavior. (acceptability)
2. Most teachers would find this intervention appropriate for behavior problems in addition to the one described. (acceptability)
3. The intervention should prove effective in changing the child's problem behavior. (acceptability)
4. I would suggest the use of this intervention to other teachers. (acceptability)
5. The child's behavior problem is severe enough to warrant use of this intervention. (acceptability)
6. Most teachers would find this intervention suitable for the behavior problem described. (acceptability)
7. I would be willing to use this in the classroom setting. (acceptability)
8. The intervention would not result in negative side-effects for the child. (acceptability)
9. The intervention would be appropriate intervention for a variety of children. (acceptability)
10. The intervention is consistent with those I have used in classroom settings. (acceptability)
11. The intervention was a fair way to handle the child's problem behavior. (acceptability)
12. The intervention is reasonable for the behavior problem described. (acceptability)
13. I like the procedures used in the intervention. (acceptability)
14. This intervention was a good way to handle this child's behavior problem. (acceptability)
15. Overall, the intervention would be beneficial for the child. (acceptability)
16. The intervention would quickly improve the child's behavior. (time)

17. The intervention would produce a lasting improvement in the child's behavior. (effectiveness)
18. The intervention would improve the child's behavior to the point that it would not noticeably deviate from other classmates' behavior. (effectiveness)
19. Soon after using the intervention, the teacher would notice a positive change in the problem behavior. (time)
20. The child's behavior will remain at an improved level even after the intervention is discontinued. (effectiveness)
21. Using the intervention should not only improve the child's behavior in the classroom, but also in other settings (e.g., other classrooms, home). (effectiveness)
22. When comparing this child with a well-behaved peer before and after use of the intervention, the child's and the peer's behavior would be more alike after using the intervention. (effectiveness)
23. The intervention should produce enough improvement in the child's behavior so the behavior no longer is a problem in the classroom. (effectiveness)
24. Other behaviors related to the problem behavior also are likely to be improved by the intervention. (effectiveness)

Note. From "The Behavior Intervention Rating Scale: Development and validation of a pretreatment acceptability and effectiveness measure," by S. Elliott and M. Von Brock Treuting, 1991, *The Journal of School Psychology*, 29, p. 46. Copyright 1991 by Copyright Holder. Reprinted with permission.

From: Steve Elliott (Sanford School) <Steve_Elliott@asu.edu>
Sent: Monday, August 27, 2018 4:46 PM
To: JASON L. WATT
Subject: RE: Permission to use BIRS questions in dissertation

Well Jason, congratulations on your research and degree completion. You have my permission to publish the BIRS in your dissertation. Best, Steve

From: JASON L. WATT <JASON.WATT@wasatch.edu>
Sent: Monday, August 27, 2018 3:44 PM
To: Steve Elliott (Sanford School) <Steve_Elliott@asu.edu>
Subject: Permission to use BIRS questions in dissertation

Dr. Elliott,

My name is Jason Watt--I am a doctoral student at Utah State University. I recently defended my dissertation (pew!) in which I modified your Behavior Intervention Rating Scale to conduct a social validity evaluation of an innovative education program several districts across the country have implemented called the Center for Advanced Professional Studies (CAPS).

I'm emailing to request permission to include the original BIRS questions (as listed in your 1991 article with Dr. Von Brock Treuting) in the appendix of my dissertation.

Thank you so much for your work in this area and for your consideration in this matter.

Sincerely,

Jason Watt
CTE/Student Services Director
Wasatch County School District
435-654-0280; jason.watt@wasatch.edu

Appendix E
Social Validity Data Tables

Table E1

Tukey HSD Results: Student Ratings of Acceptability Factor

Program Name	Program Name	Mean Diff.	Sig.	95% C.I.	
Alexandria CAPS	Blue Valley CAPS	.07130	1.000	-.4486	.5912
	CF CAPS	.68128*	.012	.0808	1.2818
	GO CAPS	.55889	.868	-.5211	1.6388
	MN CAPS	.30459	.886	-.2990	.9082
	Northland CAPS	.39581	.404	-.1447	.9363
	PC CAPS	.09222	1.000	-.9877	1.1722
	Shakopee CAPS	.10889	1.000	-.5228	.7405
	St Louis CAPS	.42794	.713	-.2852	1.1411
	Wasatch CAPS	.30816	.850	-.2749	.8912
	Westside CAPS	.42635	.390	-.1509	1.0036
	Pathway Spark!	.47446	.339	-.1478	1.0967
Blue Valley CAPS	Alexandria CAPS	-.07130	1.000	-.5912	.4486
	CF CAPS	.60998*	.000	.2361	.9839
	GO CAPS	.48758	.890	-.4848	1.4599
	MN CAPS	.23328	.677	-.1456	.6121
	Northland CAPS	.32450*	.004	.0574	.5916
	PC CAPS	.02092	1.000	-.9514	.9933
	Shakopee CAPS	.03758	1.000	-.3845	.4597
	St Louis CAPS	.35663	.562	-.1798	.8931
	Wasatch CAPS	.23685	.511	-.1083	.5820
	Westside CAPS	.35504*	.027	.0198	.6903
	Pathway Spark!	.40315	.056	-.0047	.8110
CF CAPS	Alexandria CAPS	-.68128*	.012	-1.2818	-.0808
	Blue Valley CAPS	-.60998*	.000	-.9839	-.2361
	GO CAPS	-.12240	1.000	-1.1402	.8954
	MN CAPS	-.37670	.307	-.8603	.1069
	Northland CAPS	-.28548	.455	-.6876	.1167
	PC CAPS	-.58906	.758	-1.6068	.4287
	Shakopee CAPS	-.57240*	.016	-1.0906	-.0542
	St Louis CAPS	-.25335	.971	-.8683	.3616
	Wasatch CAPS	-.37313	.241	-.8309	.0846
	Westside CAPS	-.25494	.783	-.7053	.1954
	Pathway Spark!	-.20683	.973	-.7135	.2999

Program Name	Program Name	Mean Diff.	Sig.	95% C.I.	
GO CAPS	Alexandria CAPS	-.55889	.868	-1.6388	.5211
	Blue Valley CAPS	-.48758	.890	-1.4599	.4848
	CF CAPS	.12240	1.000	-.8954	1.1402
	MN CAPS	-.25430	1.000	-1.2739	.7653
	Northland CAPS	-.16308	1.000	-1.1466	.8205
	PC CAPS	-.46667	.993	-1.8237	.8904
	Shakopee CAPS	-.45000	.958	-1.4864	.5864
	St Louis CAPS	-.13095	1.000	-1.2190	.9571
	Wasatch CAPS	-.25073	1.000	-1.2583	.7568
	Westside CAPS	-.13254	1.000	-1.1368	.8717
	Pathway Spark!	-.08443	1.000	-1.1152	.9463
MN CAPS	Alexandria CAPS	-.30459	.886	-.9082	.2990
	Blue Valley CAPS	-.23328	.677	-.6121	.1456
	CF CAPS	.37670	.307	-1.069	.8603
	GO CAPS	.25430	1.000	-.7653	1.2739
	Northland CAPS	.09122	1.000	-.3155	.4979
	PC CAPS	-.21237	1.000	-1.2320	.8072
	Shakopee CAPS	-.19570	.986	-.7175	.3261
	St Louis CAPS	.12335	1.000	-.4946	.7413
	Wasatch CAPS	.00357	1.000	-.4582	.4654
	Westside CAPS	.12176	.999	-.3327	.5762
	Pathway Spark!	.16987	.995	-.3405	.6802
Northland CAPS	Alexandria CAPS	-.39581	.404	-.9363	.1447
	Blue Valley CAPS	-.32450*	.004	-.5916	-.0574
	CF CAPS	.28548	.455	-.1167	.6876
	GO CAPS	.16308	1.000	-.8205	1.1466
	MN CAPS	-.09122	1.000	-.4979	.3155
	PC CAPS	-.30359	.997	-1.2871	.6800
	Shakopee CAPS	-.28692	.618	-.7342	.1604
	St Louis CAPS	.03213	1.000	-.5244	.5886
	Wasatch CAPS	-.08765	1.000	-.4632	.2879
	Westside CAPS	.03054	1.000	-.3359	.3970
	Pathway Spark!	.07865	1.000	-.3553	.5126
PC CAPS	Alexandria CAPS	-.09222	1.000	-1.1722	.9877
	Blue Valley CAPS	-.02092	1.000	-.9933	.9514
	CF CAPS	.58906	.758	-.4287	1.6068
	GO CAPS	.46667	.993	-.8904	1.8237

Program Name	Program Name	Mean Diff.	Sig.	95% C.I.	
	MN CAPS	.21237	1.000	-.8072	1.2320
	Northland CAPS	.30359	.997	-.6800	1.2871
	Shakopee CAPS	.01667	1.000	-1.0198	1.0531
	St Louis CAPS	.33571	.997	-.7523	1.4238
	Wasatch CAPS	.21593	1.000	-.7916	1.2235
	Westside CAPS	.33413	.995	-.6701	1.3383
	Pathway Spark!	.38223	.987	-.6485	1.4130
Shakopee CAPS	Alexandria CAPS	-.10889	1.000	-.7405	.5228
	Blue Valley CAPS	-.03758	1.000	-.4597	.3845
	CF CAPS	.57240*	.016	.0542	1.0906
	GO CAPS	.45000	.958	-.5864	1.4864
	MN CAPS	.19570	.986	-.3261	.7175
	Northland CAPS	.28692	.618	-.1604	.7342
	PC CAPS	-.01667	1.000	-1.0531	1.0198
	St Louis CAPS	.31905	.900	-.3263	.9644
	Wasatch CAPS	.19927	.977	-.2986	.6972
	Westside CAPS	.31746	.606	-.1736	.8085
	Pathway Spark!	.36557	.543	-.1777	.9088
St Louis CAPS	Alexandria CAPS	-.42794	.713	-1.1411	.2852
	Blue Valley CAPS	-.35663	.562	-.8931	.1798
	CF CAPS	.25335	.971	-.3616	.8683
	GO CAPS	.13095	1.000	-.9571	1.2190
	MN CAPS	-.12335	1.000	-.7413	.4946
	Northland CAPS	-.03213	1.000	-.5886	.5244
	PC CAPS	-.33571	.997	-1.4238	.7523
	Shakopee CAPS	-.31905	.900	-.9644	.3263
	Wasatch CAPS	-.11978	1.000	-.7177	.4781
	Westside CAPS	-.00159	1.000	-.5938	.5907
	Pathway Spark!	.04652	1.000	-.5897	.6827
Wasatch CAPS	Alexandria CAPS	-.30816	.850	-.8912	.2749
	Blue Valley CAPS	-.23685	.511	-.5820	.1083
	CF CAPS	.37313	.241	-.0846	.8309
	GO CAPS	.25073	1.000	-.7568	1.2583
	MN CAPS	-.00357	1.000	-.4654	.4582
	Northland CAPS	.08765	1.000	-.2879	.4632
	PC CAPS	-.21593	1.000	-1.2235	.7916
	Shakopee CAPS	-.19927	.977	-.6972	.2986

Program Name	Program Name	Mean Diff.	Sig.	95% C.I.	
	St Louis CAPS	.11978	1.000	-.4781	.7177
	Westside CAPS	.11819	.999	-.3086	.5450
	Pathway Spark!	.16630	.993	-.3196	.6522
Westside CAPS	Alexandria CAPS	-.42635	.390	-1.0036	.1509
	Blue Valley CAPS	-.35504*	.027	-.6903	-.0198
	CF CAPS	.25494	.783	-.1954	.7053
	GO CAPS	.13254	1.000	-.8717	1.1368
	MN CAPS	-.12176	.999	-.5762	.3327
	Northland CAPS	-.03054	1.000	-.3970	.3359
	PC CAPS	-.33413	.995	-1.3383	.6701
	Shakopee CAPS	-.31746	.606	-.8085	.1736
	St Louis CAPS	.00159	1.000	-.5907	.5938
	Wasatch CAPS	-.11819	.999	-.5450	.3086
	Pathway Spark!	.04811	1.000	-.4308	.5270
Pathway Spark!	Alexandria CAPS	-.47446	.339	-1.0967	.1478
	Blue Valley CAPS	-.40315	.056	-.8110	.0047
	CF CAPS	.20683	.973	-.2999	.7135
	GO CAPS	.08443	1.000	-.9463	1.1152
	MN CAPS	-.16987	.995	-.6802	.3405
	Northland CAPS	-.07865	1.000	-.5126	.3553
	PC CAPS	-.38223	.987	-1.4130	.6485
	Shakopee CAPS	-.36557	.543	-.9088	.1777
	St Louis CAPS	-.04652	1.000	-.6827	.5897
	Wasatch CAPS	-.16630	.993	-.6522	.3196
	Westside CAPS	-.04811	1.000	-.5270	.4308
<i>Notes.</i> *Significant at the $p < 0.05$ level. Sig.=Significance. Mean Diff.=mean difference. 95% C.I.=95% confidence interval of the difference.					

Table E2

Tukey HSD Results: Industry Partner Ratings of Acceptability Factor

Program Name	Program Name	Mean Diff.	Sig.	95% C.I.	
Alexandria CAPS	Blue Valley CAPS	.04663	1.000	-.4740	.5673
	CF CAPS	.60791*	.045	.0065	1.2094
	GO CAPS	.50947	.926	-.5721	1.5911
	MN CAPS	.21955	.989	-.3850	.8241
	Northland CAPS	.32565	.709	-.2157	.8670
	PC CAPS	.09697	1.000	-.9846	1.1786
	Shakopee CAPS	.05775	1.000	-.5749	.6904
	St Louis CAPS	.31245	.956	-.4018	1.0267
	Wasatch CAPS	.25014	.962	-.3338	.8341
	Westside CAPS	.38958	.540	-.1886	.9677
	Pathway Spark!	.40790	.587	-.2153	1.0311
Blue Valley CAPS	Alexandria CAPS	-.04663	1.000	-.5673	.4740
	CF CAPS	.56127*	.000	.1868	.9358
	GO CAPS	.46284	.922	-.5110	1.4367
	MN CAPS	.17292	.941	-.2065	.5523
	Northland CAPS	.27902*	.032	.0115	.5465
	PC CAPS	.05034	1.000	-.9235	1.0242
	Shakopee CAPS	.01112	1.000	-.4116	.4339
	St Louis CAPS	.26581	.899	-.2715	.8031
	Wasatch CAPS	.20351	.737	-.1422	.5492
	Westside CAPS	.34294*	.040	.0072	.6787
	Pathway Spark!	.36127	.142	-.0473	.7698
CF CAPS	Alexandria CAPS	-.60791*	.045	-1.2094	-.0065
	Blue Valley CAPS	-.56127*	.000	-.9358	-.1868
	GO CAPS	-.09844	1.000	-1.1178	.9209
	MN CAPS	-.38836	.264	-.8727	.0960
	Northland CAPS	-.28226	.476	-.6850	.1205
	PC CAPS	-.51094	.891	-1.5303	.5084
	Shakopee CAPS	-.55015*	.027	-1.0692	-.0311
	St Louis CAPS	-.29546	.917	-.9114	.3204
	Wasatch CAPS	-.35777	.304	-.8162	.1007
	Westside CAPS	-.21833	.912	-.6693	.2327
	Pathway Spark!	-.20001	.980	-.7075	.3075

Program Name	Program Name	Mean Diff.	Sig.	95% C.I.	
GO CAPS	Alexandria CAPS	-.50947	.926	-1.5911	.5721
	Blue Valley CAPS	-.46284	.922	-1.4367	.5110
	CF CAPS	.09844	1.000	-.9209	1.1178
	MN CAPS	-.28992	.999	-1.3111	.7312
	Northland CAPS	-.18382	1.000	-1.1689	.8012
	PC CAPS	-.41250	.998	-1.7716	.9466
	Shakopee CAPS	-.45172	.957	-1.4898	.5863
	St Louis CAPS	-.19702	1.000	-1.2867	.8927
	Wasatch CAPS	-.25933	1.000	-1.2684	.7498
	Westside CAPS	-.11989	1.000	-1.1257	.8859
	Pathway Spark!	-.10157	1.000	-1.1339	.9308
MN CAPS	Alexandria CAPS	-.21955	.989	-.8241	.3850
	Blue Valley CAPS	-.17292	.941	-.5523	.2065
	CF CAPS	.38836	.264	-.0960	.8727
	GO CAPS	.28992	.999	-.7312	1.3111
	Northland CAPS	.10610	.999	-.3013	.5135
	PC CAPS	-.12258	1.000	-1.1437	.8986
	Shakopee CAPS	-.16180	.997	-.6844	.3608
	St Louis CAPS	.09290	1.000	-.5260	.7118
	Wasatch CAPS	.03059	1.000	-.4319	.4931
	Westside CAPS	.17003	.987	-.2851	.6251
	Pathway Spark!	.18835	.988	-.3228	.6995
Northland CAPS	Alexandria CAPS	-.32565	.709	-.8670	.2157
	Blue Valley CAPS	-.27902*	.032	-.5465	-.0115
	CF CAPS	.28226	.476	-.1205	.6850
	GO CAPS	.18382	1.000	-.8012	1.1689
	MN CAPS	-.10610	.999	-.5135	.3013
	PC CAPS	-.22868	1.000	-1.2137	.7564
	Shakopee CAPS	-.26790	.717	-.7159	.1801
	St Louis CAPS	-.01320	1.000	-.5706	.5442
	Wasatch CAPS	-.07551	1.000	-.4517	.3006
	Westside CAPS	.06393	1.000	-.3031	.4310
	Pathway Spark!	.08225	1.000	-.3523	.5168
PC CAPS	Alexandria CAPS	-.09697	1.000	-1.1786	.9846
	Blue Valley CAPS	-.05034	1.000	-1.0242	.9235
	CF CAPS	.51094	.891	-.5084	1.5303
	GO CAPS	.41250	.998	-.9466	1.7716

Program Name	Program Name	Mean Diff.	Sig.	95% C.I.	
	MN CAPS	.12258	1.000	-.8986	1.1437
	Northland CAPS	.22868	1.000	-.7564	1.2137
	Shakopee CAPS	-.03922	1.000	-1.0773	.9988
	St Louis CAPS	.21548	1.000	-.8742	1.3052
	Wasatch CAPS	.15317	1.000	-.8559	1.1623
	Westside CAPS	.29261	.998	-.7132	1.2984
	Pathway Spark!	.31093	.998	-.7214	1.3433
Shakopee CAPS	Alexandria CAPS	-.05775	1.000	-.6904	.5749
	Blue Valley CAPS	-.01112	1.000	-.4339	.4116
	CF CAPS	.55015*	.027	.0311	1.0692
	GO CAPS	.45172	.957	-.5863	1.4898
	MN CAPS	.16180	.997	-.3608	.6844
	Northland CAPS	.26790	.717	-.1801	.7159
	PC CAPS	.03922	1.000	-.9988	1.0773
	St Louis CAPS	.25469	.980	-.3917	.9011
	Wasatch CAPS	.19239	.983	-.3063	.6910
	Westside CAPS	.33182	.538	-.1600	.8236
	Pathway Spark!	.35015	.613	-.1939	.8942
St Louis CAPS	Alexandria CAPS	-.31245	.956	-1.0267	.4018
	Blue Valley CAPS	-.26581	.899	-.8031	.2715
	CF CAPS	.29546	.917	-.3204	.9114
	GO CAPS	.19702	1.000	-.8927	1.2867
	MN CAPS	-.09290	1.000	-.7118	.5260
	Northland CAPS	.01320	1.000	-.5442	.5706
	PC CAPS	-.21548	1.000	-1.3052	.8742
	Shakopee CAPS	-.25469	.980	-.9011	.3917
	Wasatch CAPS	-.06230	1.000	-.6611	.5365
	Westside CAPS	.07713	1.000	-.5160	.6703
	Pathway Spark!	.09545	1.000	-.5417	.7326
Wasatch CAPS	Alexandria CAPS	-.25014	.962	-.8341	.3338
	Blue Valley CAPS	-.20351	.737	-.5492	.1422
	CF CAPS	.35777	.304	-1.007	.8162
	GO CAPS	.25933	1.000	-.7498	1.2684
	MN CAPS	-.03059	1.000	-.4931	.4319
	Northland CAPS	.07551	1.000	-.3006	.4517
	PC CAPS	-.15317	1.000	-1.1623	.8559
	Shakopee CAPS	-.19239	.983	-.6910	.3063

Program Name	Program Name	Mean Diff.	Sig.	95% C.I.	
	St Louis CAPS	.06230	1.000	-.5365	.6611
	Westside CAPS	.13944	.996	-.2880	.5669
	Pathway Spark!	.15776	.996	-.3289	.6444
Westside CAPS	Alexandria CAPS	-.38958	.540	-.9677	.1886
	Blue Valley CAPS	-.34294*	.040	-.6787	-.0072
	CF CAPS	.21833	.912	-.2327	.6693
	GO CAPS	.11989	1.000	-.8859	1.1257
	MN CAPS	-.17003	.987	-.6251	.2851
	Northland CAPS	-.06393	1.000	-.4310	.3031
	PC CAPS	-.29261	.998	-1.2984	.7132
	Shakopee CAPS	-.33182	.538	-.8236	.1600
	St Louis CAPS	-.07713	1.000	-.6703	.5160
	Wasatch CAPS	-.13944	.996	-.5669	.2880
	Pathway Spark!	.01832	1.000	-.4613	.4980
Pathway Spark!	Alexandria CAPS	-.40790	.587	-1.0311	.2153
	Blue Valley CAPS	-.36127	.142	-.7698	.0473
	CF CAPS	.20001	.980	-.3075	.7075
	GO CAPS	.10157	1.000	-.9308	1.1339
	MN CAPS	-.18835	.988	-.6995	.3228
	Northland CAPS	-.08225	1.000	-.5168	.3523
	PC CAPS	-.31093	.998	-1.3433	.7214
	Shakopee CAPS	-.35015	.613	-.8942	.1939
	St Louis CAPS	-.09545	1.000	-.7326	.5417
	Wasatch CAPS	-.15776	.996	-.6444	.3289
	Westside CAPS	-.01832	1.000	-.4980	.4613
<i>Notes.</i> *Significant at the $p < 0.05$ level. Sig.=Significance. Mean Diff.=mean difference. 95% C.I.=95% confidence interval of the difference.					

Appendix F
Letter of Information

An Evaluation of the Social Validity of the Center for Advanced Professional Studies (CAPS) Program

Introduction and Purpose

You are invited to participate in a research study conducted by Michael Freeman, a Professor in the School of Teacher Education and Leadership at Utah State University and Jason Watt, a student researcher. The purpose of this research is to evaluate Center for Advanced Professional Studies (CAPS) programs.

This form includes detailed information on the research to help you decide whether to participate in this study. Please read it carefully and ask any questions you have before you agree to participate.

Procedures

Your participation will involve participation in a brief phone interview regarding the CAPS program you direct. You will be asked questions regarding your implementation of the CAPS model and the courses offered in your CAPS program. Your total participation in this project is expected to be 30 minutes. If you agree to participate, you will be asked to collect survey data from CAPS students and industry partners by forwarding a link to an on-line survey.

Risks

This is a minimal risk research study. That means that the risks of participating are no more likely or serious than those you encounter in everyday activities. The foreseeable risks or discomforts include discomfort from answering some questions about your CAPS program. In order to minimize those risks and discomforts, the researchers will allow you to skip any question you do not wish to answer. If you have a bad research-related experience or are injured in any way during your participation, please contact the principal investigator of this study right away at 435-797-1474 or michael.freeman@usu.edu.

Benefits

Participation in this study may directly benefit you by helping you understand how key CAPS stakeholders experience CAPS programs. This understanding may assist you in your efforts to more effectively direct your program. More broadly, this study will help the researchers learn more about how CAPS programs are experienced by key stakeholder groups and may help future CAPS program directors implement more socially relevant programs.

Confidentiality

The researchers will make every effort to ensure that the information you provide as part of this study remains confidential. Your identity will not be revealed in any publications, presentations, or reports resulting from this research study.

We will collect your information through a phone interview and Qualtrics. This information will be securely stored on a password-protected computer in a locker drawer in a restricted-access office. Personal, identifiable information will be removed from study documents and digital files and will be replaced with a study identifier. Identifying information will be stored separately from data and will be kept only until the project is completed by May 2018.

It is unlikely, but possible, that others (Utah State University, or state or federal officials) may require us to share the information you give us from the study to ensure that the research was

conducted safely and appropriately. We will only share your information if law or policy requires us to do so.

The research team works to ensure confidentiality to the degree permitted by technology. It is possible, although unlikely, that unauthorized individuals could gain access to your responses because you are responding online. However, your participation in this online survey involves risks similar to a person's everyday use of the Internet.

Voluntary Participation & Withdrawal

Your participation in this research is completely voluntary. If you agree to participate now and change your mind later, you may withdraw at any time by discontinuing the interview. If you choose to withdraw after we have already collected information about you, all information previously gathered will be deleted.

While unlikely, the researchers may choose to terminate your participation in this research study if any information received is found to be false or misleading. You will be notified by the researchers if this is the case.

Compensation

For your participation in this research study, you will not receive compensation.

IRB Review

The Institutional Review Board (IRB) for the protection of human research participants at Utah State University has reviewed and approved this study. If you have questions about the research study itself, please contact the Principal Investigator at 435-797-1474 or michael.freeman@usu.edu. If you have questions about your rights or would simply like to speak with someone other than the research team about questions or concerns, please contact the IRB Director at (435) 797-0567 or irb@usu.edu.

Michael Freeman, Ph.D.
Principal Investigator
435-797-1474 (office)
michael.freeman@usu.edu

Jason L. Watt
Student Researcher
435-671-2453 (mobile)
jason.watt@wasatch.edu

Appendix G
Informed Consent Documents

An Evaluation of the Social Validity of the Center for Advanced Professional Studies (CAPS) Program**Introduction and Purpose**

Your student is invited to participate in a research study conducted by Mike Freeman, Ph.D., a Professor in the School of Teacher Education and Leadership at Utah State University and Jason Watt, a student researcher. The purpose of this research is to evaluate Center for Advanced Professional Studies (CAPS) programs.

This form includes detailed information on the research to help you decide whether to allow participation in this study. Please read it carefully and ask any questions you have before you agree to allow your student to participate.

Procedures

Your student's participation will involve completing a brief survey concerning his/her experience in the CAPS program. The total time spent participating in this project is expected to be 10 minutes. No additional data will be collected. We anticipate that 250 students will participate in this research study.

Risks

This is a minimal risk research study. That means that the risks of participating are no more likely or serious than those your student would encounter in everyday activities. The foreseeable risks or discomforts include discomfort from answering some questions about your student's CAPS program experience. In order to minimize those risks and discomforts, the researchers will allow your student to skip any question s/he does not wish to answer. In addition, there is some risk of loss of confidentiality associated with this study but measures will be taken to mitigate that risk as described in the "Confidentiality" section below. If your student has a bad research-related experience or is injured in any way during her/his participation, please contact the principal investigator of this study right away at 435-797-1474 or michael.freeman@usu.edu.

Benefits

There is no direct benefit to your student for participating in this research study. More broadly, this study will help the researchers learn more about how students and industry partners perceive CAPS and may help future school districts implement socially relevant CAPS programs.

Confidentiality

The researchers will make every effort to ensure that the information provided as part of this study remains confidential. Your student's identity will only be collected during this consent process. We will not collect identifiable information on the survey and your student's information will not be revealed in any publications, presentations, or reports resulting from this research study.

We will collect student responses through an online survey tool called Qualtrics. This information will be securely stored on a password-protected computer in a locked drawer in a restricted-access office. Personal, identifiable information will be removed from study documents and digital files and will be replaced with a study identifier. Identifying information will be stored separately from data and will be kept only until the project is completed by May 2018.

It is unlikely, but possible, that others (Utah State University, or state or federal officials) may require us to share the information you give us from the study to ensure that the research was conducted safely and appropriately. We will only share your information if law or policy requires us to do so.

The research team works to ensure confidentiality to the degree permitted by technology. It is possible, although unlikely, that unauthorized individuals could gain access to your student's responses because s/he is responding online. However, participation in this online survey involves risks similar to a person's everyday use of the Internet.

Voluntary Participation & Withdrawal

Your student's participation in this research is completely voluntary. If you agree to allow your student to participate now and change your mind later, your student may withdraw at any time by discontinuing his/her participation on the survey. If you or your student chooses to withdraw permission after we have already collected information, please contact the Principal Investigator (michael.freeman@usu.edu) as soon as possible. All information previously gathered will be deleted.

IRB Review

The Institutional Review Board (IRB) for the protection of human research participants at Utah State University has reviewed and approved this study. If you have questions about the research study itself, please contact the Principal Investigator at 435-797-1474 or michael.freeman@usu.edu. If you have questions about your rights or would simply like to speak with someone other than the research team about questions or concerns, please contact the IRB Director at (435) 797-0567 or irb@usu.edu.

Michael Freeman, Ph.D.
Principal Investigator
435-797-1474; mike.freeman@usu.edu

Jason L. Watt
Student Investigator
435-671-2453; jason.watt@wasatch.edu

Informed Consent

By signing below, you agree to allow your student to participate in this study. You indicate that you understand the risks and benefits of participation, and that you know what your student will be asked to do. You also agree that you have asked any questions you might have, and are clear on how to stop your student's participation in the study if you choose to do so. Please be sure to retain a copy of this form for your records.

Student's Name

Parent/Guardian's Signature

Parent/Guardian's Name, Printed

Date

Youth Assent

We are doing a research study about how you feel about your experience in the CAPS program. This research study will help us learn more about how you have experienced CAPS and will help school districts develop and implement higher-quality CAPS programs. If you would like to be a part of this research study, you will be asked to complete a 22-question survey that will take about 10 minutes.

Before you agree to do these things, we need to tell you a little more. First, when you are answering the survey questions about your experience, you may be slightly uncomfortable answering some questions. You may skip any question at any time or stop taking the survey altogether.

While you will not receive any direct benefits from completing this survey, your participation will help us learn a lot about CAPS and how students experience it. Also, the results of this study will be shared with others in an effort to help them understand how to improve CAPS programs. Your participation in this study will be kept strictly confidential. We will not use your name or any of your specific answers to the survey questions when we share the results of this study.

If you would like to be part of this study, please sign below to indicate that you understand this information and would like to participate. You do not have to participate in this study if you do not wish to. If you decide to stop after we begin you only need to stop answering the survey questions.

You can ask any questions you have, now or later. Your parents know about this research study, and they have said you can participate, if you want.

If you would like to be in this study, please sign your name and write the date.

Name

Date

An Evaluation of the Social Validity of the Center for Advanced Professional Studies (CAPS) Program**Introduction and Purpose**

You are invited to participate in a research study conducted by Mike Freeman, Ph.D., a Professor in the School of Teacher Education and Leadership at Utah State University and Jason Watt, a student researcher. The purpose of this research is to evaluate Center for Advanced Professional Studies (CAPS) programs.

This form includes detailed information on the research to help you decide whether to participate in this study. Please read it carefully and ask any questions you have before you agree to participate.

Procedures

Your participation will involve completing a brief survey concerning your experience in your CAPS program. Your total participation in this project is expected to be 10 minutes. No additional data will be collected. We anticipate that 250 people will participate in this research study.

Risks

This is a minimal risk research study. That means that the risks of participating are no more likely or serious than those you encounter in everyday activities. The foreseeable risks or discomforts include discomfort from answering some questions about your CAPS program experience. In order to minimize those risks and discomforts, the researchers will allow you to skip any question you do not wish to answer. In addition, there is some risk of loss of confidentiality associated with this study but measures will be taken to mitigate that risk as described in the “Confidentiality” section below. If you have a bad research-related experience or are injured in any way during your participation, please contact the principal investigator of this study right away at 435-797-1474 or michael.freeman@usu.edu.

Benefits

There is no direct benefit to you for participating in this research study. More broadly, this study will help the researchers learn more about how students and industry partners perceive CAPS and may help future school districts implement socially relevant CAPS programs.

Confidentiality

The researchers will make every effort to ensure that the information you provide as part of this study remains confidential. Your identity will not be revealed in any publications, presentations, or reports resulting from this research study.

We will collect your information through an online survey tool called Qualtrics. This

information will be securely stored on a password-protected computer in a locked drawer in a restricted-access office. Personal, identifiable information will be removed from study documents and digital files and will be replaced with a study identifier. Identifying information will be stored separately from data and will be kept only until the project is completed by May 2018.

It is unlikely, but possible, that others (Utah State University, or state or federal officials) may require us to share the information you give us from the study to ensure that the research was conducted safely and appropriately. We will only share your information if law or policy requires us to do so.

The research team works to ensure confidentiality to the degree permitted by technology. It is possible, although unlikely, that unauthorized individuals could gain access to your responses because you are responding online. However, your participation in this online survey involves risks similar to a person's everyday use of the Internet.

Voluntary Participation & Withdrawal

Your participation in this research is completely voluntary. If you agree to participate now and change your mind later, you may withdraw at any time by discontinuing your participation on the survey. If you choose to withdraw permission after we have already collected information, please contact the Principal Investigator (michael.freeman@usu.edu) as soon as possible. All information previously gathered will be deleted.

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Jason L. Watt
Student Investigator
435-671-2453; jason.watt@wasatch.edu

Informed Consent

By signing below, you agree to participate in this study. You indicate that you understand the risks and benefits of participation, and that you know what you will be asked to do. You also agree that you have asked any questions you might have, and are clear on how to stop your participation in the study if you choose to do so. Please be sure to retain a copy of this form for your records.

Participant's Signature

Participant's Name, Printed

Date

An Evaluation of the Social Validity of the Center for Advanced Professional Studies (CAPS) Program**Introduction and Purpose**

You are invited to participate in a research study conducted by Mike Freeman, Ph.D., a Professor in the School of Teacher Education and Leadership at Utah State University and Jason Watt, a student researcher. The purpose of this research is to evaluate Center for Advanced Professional Studies (CAPS) programs.

This form includes detailed information on the research to help you decide whether to participate in this study. Please read it carefully and ask any questions you have before you agree to participate.

Procedures

Your participation will involve a brief phone interview concerning the CAPS program you direct. Your total participation in this project is expected to be 15 minutes. No additional data will be collected. We anticipate that 18 other CAPS directors will participate in this research study.

Risks

This is a minimal risk research study. That means that the risks of participating are no more likely or serious than those you encounter in everyday activities. The foreseeable risks or discomforts include discomfort from answering some questions about your CAPS program experience. In order to minimize those risks and discomforts, the researchers will allow you to skip any question you do not wish to answer. In addition, there is some risk of loss of confidentiality associated with this study but measures will be taken to mitigate that risk as described in the “Confidentiality” section below. If you have a bad research-related experience or are injured in any way during your participation, please contact the principal investigator of this study right away at 435-797-1474 or michael.freeman@usu.edu.

Benefits

There is no direct benefit to you for participating in this research study. More broadly, this study will help the researchers learn more about how students and industry partners perceive CAPS and may help future school districts implement socially relevant CAPS programs.

Confidentiality

The researchers will make every effort to ensure that the information you provide as part of this study remains confidential. Your identity will not be revealed in any publications, presentations, or reports resulting from this research study.

We will collect your information through a telephone interview. This information obtained will be securely stored on a password-protected computer in a locked drawer in a restricted-access office. Personal, identifiable information will be removed from study documents and digital files and will be replaced with a study identifier. Identifying information will be stored separately from data and will be kept only until the project is completed by May 2018.

It is unlikely, but possible, that others (Utah State University, or state or federal officials) may require us to share the information you give us from the study to ensure that the research was conducted safely and appropriately. We will only share your information if law or policy requires us to do so.

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Participant's Signature

Participant's Name, Printed

Date

CURRICULUM VITAE

JASON L. WATT

Director, Career & Technical Education and Student Services
Wasatch County School District
101 East 200 North
Heber City, UT 84032
435-654-0280
jason.watt@wasatch.edu

EDUCATION

Ph.D., Education, emphasis Curriculum and Instruction, 2018
Utah State University, Logan, Utah
Dissertation: “An Evaluation of the Social Validity of the Center for Advanced Professional Studies (CAPS) Program”
Advisor: Dr. Michael Freeman

M.Ed., Educational Leadership and Policy, 2007
University of Utah, Salt Lake City, Utah

M.S., Counseling and School Psychology, 1999
Brigham Young University, Provo, Utah

B.S., Major: Psychology, Minor: Business, 1996
Brigham Young University, Provo, Utah
Summa Cum Laude

RESEARCH INTERESTS

Educational leadership
Social validity
Project-based learning

Program evaluation
21st Century Learning

PROFESSIONAL EXPERIENCE

July 2012 – Present, Wasatch County School District, Heber City, UT
Director of Career & Technical Education and Student Services

- Direct all aspects of Career & Technical Education programs for school district including teacher supervision and hiring, program innovation, and connection with industry. Manage CTE budget and maintain compliance with federal and state funded programs.
- Direct district's Student Services department. Supervise and direct all of the district's K-12 counseling and guidance services, and assist in the development of student behavioral supports. District supervisor of athletics and discipline issues.
- Direct and implement district concurrent enrollment program and partnerships with local universities.

July 2015 – Present, Wasatch CAPS, Heber City, UT

Wasatch CAPS Executive Committee and Board of Directors

- Directed CAPS program design and implementation. Wrote for and was awarded Utah Cluster Acceleration Partnership grant--\$200,000.
- Develop partnerships with education leaders and industry professionals to provide project-based learning experience for district students.

July 2006 – June 2012, Wasatch High School, Heber City, UT

Assistant Principal/Athletic Director

- Supervise, evaluate and mentor both teachers and coaches at Wasatch High School.
- Assisted administrative team with the development and implementation of Professional Learning Community Framework to WHS.
- Instrumental in the design and construction of new high school and athletic facilities in Wasatch County.

August 1998 – June 2006, Wasatch High School, Heber City, UT

School Counselor

- Implemented Comprehensive Counseling and Guidance program to WHS students.
- Conducted Self-evaluation of WHS Comprehensive Counseling & Guidance Program as well as programs in other Utah school districts.

PROFESSIONAL AFFILIATIONS

- Association for Career & Technical Education (ACTE)—Member
- Utah Association for Career & Technical Education (UACTE)—Member
- Utah Alliance of Concurrent Enrollment Partnerships (UACEP)—Member
- Utah School Counselor Association (USCA)—Member

COMMITTEES

- Wasatch County School District Discipline Appeals Committee Chair, 2012 – Present
- Wasatch County School District Comprehensive Counseling and Guidance Committee Chair, 2012 – Present
- Mountainland Region Career & Technical Education Coordinating Committee, 2012 – Present
- UVU/MTECH K-16 Alliance—Career & Technical Education Coordinating Committee Representative, 2017 – Present
- UVU/MTECH K-16 Alliance Counselor Conference Committee Member, 2012 – Present
- Wasatch High School Accreditation Committee, 2004 and 2010

SKILLS

Languages: English (native), Spanish (conversational)