This article describes the content and pedagogical foundations of iLookOut for Child Abuse, an interactive, online learning program that was designed for early childhood professionals and others who provide childcare to young children. It also describes how an online intervention can address a complex social and behavioral issue—viz., how to identify and appropriately respond to concerns of possible child abuse.

Keywords: early childhood professional, professional development, online education, mandated reporter, experiential learning, child abuse

INTRODUCTION

Early childhood professionals (ECPs, a term used here to describe early childhood educators, daycare providers, childcare workers, preschool teachers, and others who work with young children) need better preparation to help them protect young children from abuse (Ayling et al., 2019; Dinehart & Kenny, 2015; McKee & Dillenburger, 2012). Only a very few trainings have any evidence-base for changing knowledge or attitudes (e.g., Gushwa et al., 2019; Kenny, 2007; Townsend & Haviland, 2016). For the vast majority, purported efficacy is based on self-report (e.g., “I feel like I learned a lot”), involves nonvalidated measures, and fails to evaluate for sustained effects on knowledge or attitudes, much less actual behavior (Ayling et al., 2019; Sokolowski, 2005). Even newer online training typically consists of little more than linear recitations of information regarding the various types of child abuse and their consequences, legal definitions and requirements for reporting, and contact information (Goldman & Evans, 2015; New York State Office of Child and Family Services, n.d.; University of Pennsylvania, n.d.). It is in fact rather surprising that the potential of online learning has not been effectively leveraged for an issue as important and far reaching as child abuse.

Over 675,000 cases of child abuse (physical, sexual, and emotional abuse, and neglect) are confirmed annually in the U.S. (U.S. Department of Health & Human Services, 2018), with evidence that the true incidence is much higher (Finkelhor et al., 2010). The long-lasting and sometimes severe consequences of abuse include physical disabilities, cognitive impairment, neurological damage, mental health problems (depression, anxiety, posttraumatic stress, etc.), maladaptive behaviors (alcoholism, drug abuse, intimate partner violence), and of course further victimization (Norman et al., 2012; U.S. Department of Health & Human Services, 2018). In short, abuse can have a devastating impact on a child’s life and the adult they become. Young children (0–5 years) are particularly vulnerable to victimization, accounting for more than 75% of deaths from abuse and a greater proportion of abuse than older

AN INTERACTIVE ONLINE LEARNING PROGRAM ON CHILD ABUSE AND ITS REPORTING

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ABSTRACT

This article describes the content and pedagogical foundations of iLookOut for Child Abuse, an interactive, online learning program that was designed for early childhood professionals and others who provide childcare to young children. It also describes how an online intervention can address a complex social and behavioral issue—viz., how to identify and appropriately respond to concerns of possible child abuse.
children for all categories of maltreatment except sexual abuse (U.S. Department of Health & Human Services, 2018). Despite 10 to 12 million American children being under their watchful eyes, ECPs identify fewer than 1% of all substantiated cases of child abuse in the United States each year (McKee & Dillenburger, 2012; U.S. Department of Health & Human Services, 2018).

There is little question that identifying and appropriately responding to suspected child abuse involves a number of complexities, but the dearth of well-grounded interventions to help people carry out this responsibility is a significant problem. This article describes how the online learning program, *iLookOut* for Child Abuse (*iLookOut*), was designed (conceptually and pedagogically) to help ECPs identify and appropriately respond to possible child abuse. Our hope is that sharing its structure and design can help others in higher education and learning technology develop evidence-based interventions that promote child well-being.

*iLookOut* was developed under the aegis of Penn State’s Center for the Protection of Children, with support from the National Institute of Child Health and Human Development. *iLookOut* is provided free of charge to ECPs and is currently available in the United States in the states of Pennsylvania and Maine.

**EARLY CHILDHOOD PROFESSIONALS (ECPS)**

The population of ECPs is diverse in terms of age, education, work setting, and available resources, but almost all are strategically positioned to identify and respond to child abuse. ECPs may be the only people outside of the immediate family to have extended opportunities to observe children on a daily basis, and thus they have the potential to both help prevent patterns of abuse from taking hold and act as key supports for children/families (Dinehart et al., 2013). Yet ECPs face considerable obstacles in recognizing signs of abuse, differentiating normal childhood injuries from abuse, and knowing when and how to report concerns about abuse. So it is not surprising that ECPs have identified “reporting possible abuse” as one of the most troubling ethical issue they face in their workplace (Ayling et al., 2019; Clyde & Rodd, 1989; Feeney & Sysko, 1986; Feng et al., 2009; McKenna, 2011).

Studies of ECPs’ reporting habits for child abuse are relatively few compared with the many studies involving other mandated reporters (e.g., teachers, nurses, doctors). The small body of research that examines the reporting experiences of ECPs (Bishop et al., 2002) reveals high levels of uncertainty about the decision to report, perceived “conflicts of loyalty” (Svensson & Janson, 2008), and a plethora of complexities that cause some ECPs to feel as if they are “dancing on the edge” (Feng et al., 2009). The challenges arise in part from ECPs’ desire to preserve relationships with families and avoid causing harm while also meeting their legal, professional, and ethical responsibilities to protect children. One study found that ECPs are less likely to have ever reported child maltreatment compared to other professionals who work with children (Zellman & Bell, 1990), in part due to inadequate education regarding the circumstances and level of concern that warrant reporting (Ayling et al., 2019; Kenny, 2007). Even when ECPs do report, there is considerable report latency, (Svensson et al., 2015), with one older study finding an average lag time of 14 months between ECPs having suspicion and actually making a report (Sundell, 1997), a situation that if left unaddressed risks dire outcomes for many young children.

Professional training has been the chief mechanism for trying to improve ECPs’ recognition and reporting of child abuse, the presumption being that increased knowledge will promote reporting. But due to the lack of rigorously evaluated interventions, little is known about the actual effect of education on ECPs’ recognition of abuse, reporting behavior, or how to best prepare them to meet their responsibilities to protect children (Christian, 2008; Mathews et al., 2015). That said, research suggests that ECPs’ lack of education contributes to their reports of suspected abuse having lower yields—with substantiation rates of just 6.3% compared to 25–33% for other mandated reporters (King et al., 2013; Pennsylvania Department of Human Services, 2017).

**NEED FOR ONLINE INTERVENTIONS**

Any intervention to help ECPs meet their professional, ethical, and legal responsibilities as mandated reporters must deal with multiple widely recognized challenges: wide variability in entry level training of ECPs; variability in the quality of professional development opportunities; logistical barriers to providing professional
development during working hours (be it a lack of down time during the workday or limited access to training); bureaucratic challenges to ensuring quality education across settings (from family-based daycares to corporate chains to church-based facilities); as well as short-staffing and 20%–40% annual turnover rates (Melusky et al., 2013; Whitebook et al., 2014). All these factors make it more difficult to establish childcare environments that are well prepared to protect young children (especially infants and toddlers) from harm (Zaslow, 2014).

The Advantages of Online Learning

That said, well-designed training programs can succeed, provided they deliver standardized, high quality curricula and reinforce learning (Lunenberg, 2011). Online education has particular advantages for meeting the needs of ECPs and overcoming key challenges. Online learning lends itself to standardization is eminently scalable; provides ready, low-cost access to multimedia learning; can easily employ interactive exercises for experiential learning; can be accessed more flexibly than workshop based training; is as effective as in-person training at enhancing ECPs’ knowledge, skills, and professional competencies; and provides ready means for tracking results (Ackerman, 2017; Barnes et al., 2018; Durden et al., 2016; Stone-MacDonald & Douglass, 2015).

To be effective, a training program needs to help ECPs understand the different forms of child abuse and their presenting signs and symptoms (Dinehart & Kenny, 2015), given that child abuse can be challenging to discern and perceptions of abuse can be mistaken (Christian & States, 2017; Reece & Christian, 2008). Effective training must also teach ECPs about their professional and legal responsibilities—which can be confusing (Mathews & Kenny, 2008; Mathews et al., 2015)—and also promote appropriate attitudes and behavior about reporting suspected abuse (Ajzen & Fishbein, 2005; Mathews et al., 2015). If done well, education can help ECPs be more aware, better prepared, and more inclined to appropriately recognize and effectively report suspected abuse (Crenshaw et al., 1995; Fraser et al., 2010; Yang et al., 2020). Importantly, this entails not only reducing missed cases of abuse but also minimizing over-reporting (Ho et al., 2017). Because child abuse is protean in its various presentations, it is at best misinformed to suggest that ECPs should report whenever child abuse is “possible.” A child who is anxious or withdrawn or angry, or small, or tired, or slow to develop, or any number of other common things “may” be being abused. But it is neither warranted, practical, nor helpful to report every such child.

iLookOut for Child Abuse (iLookOut) Intervention

iLookOut is an online, interactive educational program that was designed to help better prepare ECPs for the challenging and important responsibility of protecting society’s most vulnerable members from harm. A randomized controlled trial has shown that iLookOut improves ECPs’ knowledge and changes ECPs’ attitudes (in the desired direction) about child abuse and its reporting, and that ECPs very much like iLookOut. Previously published work describes those results and how the knowledge and attitudinal measures were developed and validated (Mathews et al., 2017), with more recent data demonstrating iLookOut’s efficacy in a real-world trial involving more than 11,000 ECPs (Yang et al., 2020). In the present article we describe the iLookOut learning program and its pedagogical underpinnings.

Learning Objectives

As with most standard training on reporting child abuse, iLookOut’s didactic learning objectives are to help ECPs:

1. Understand and recognize possible child abuse:
   - What does and does not constitute child abuse
   - How and where abuse occurs
   - Risk factors for abuse
   - Signs and symptoms of abuse
   - Consequences of abuse
   - Strategies and resources for responding to suspected abuse

2. Understand your responsibilities as a mandated reporter of suspected abuse:
   - Legal responsibilities as a mandated reporter
   - Steps for carrying out these responsibilities
   - Consequences of failing to report suspected abuse
   - Legal immunity so long as a report is made in good faith

Figure 1. iLookOut’s Didactic Learning Objectives
This includes helping ECPs engage with colleagues when concerns arise about the possibility of abuse, and helping them navigate barriers to reporting suspected abuse.

Structure of the Learning Program

Learners first complete a registration section covering a broad range of demographic items (professional and personal), including prior experience with child abuse education and reporting suspected abuse. Learners then complete a pretest of knowledge (23 items) and attitudes (13 items) regarding child abuse and its reporting. As previously described (Mathews et al., 2017), the validated knowledge instrument examines whether learners know the signs and symptoms of abuse, the laws governing reporting, and the penalties for failing to report. The validated instrument assesses learners’ views about reporting suspected abuse, including its value/utility, potential barriers, concern over legal liabilities and parental backlash, and their willingness to report over the objections of a supervisor. The Getting Started section begins with two separate videos of a young man and a young woman (both actors) talking about their experience of being abused as a child. While these testimonials do not contain any graphic descriptions or images of abuse, learners are alerted beforehand that “some people may find the videos upsetting, particularly if their own lives have somehow been affected by abuse.” (Of note, no objections or negative comments about these testimonial videos have been received from any of the more than 13,000 ECPs who have completed iLookOut.) The purpose of these videos is to impress on learners the very real human impact that our actions (or failures to act) can have for children who are abused, as well as their families. At the end of the learning program, this connection is further reinforced with a brief video of a young girl who asks: “If you don’t protect me, who will?”

Learner Interface

In this initial version of iLookOut, learners are asked to imagine being an early childhood educator working with four- and five-year-olds. Then, using an interactive, video-based storyline filmed with point-of-view videography (i.e., the camera functions as the learner’s eyes), key events unfold through interactions with children, parents, and coworkers (all played by actors). As more is revealed about each child’s situation over the storyline’s two-day time frame, the learner has to decide what, if any, action to take. In-depth information is provided for 5 of the children depicted, each of whom demonstrates risk factors for a particular form of abuse.

At different junctures in the story, resource files become available for learners to access attitudes. These include: 1) Types of Child Abuse (which defines and provides examples of each type of child abuse), 2) Red Flags for Abuse (see Figure 2), 3) Facts About Abuse (which includes state and national statistics about the incidence of abuse, physical and psychological consequences of abuse, tips for identifying abuse, legal penalties for failure to report suspected abuse, and links to useful websites), and 4) Reporting Suspected Abuse (which explains the threshold for reporting, how to operationalize the term “reasonable suspicion,” and that mandated reporters have legal immunity so long as a report is made in good faith).

Figure 2. Red Flags for Abuse Handout

Learners also can choose to view additional videos and text files to learn more about the children portrayed in the storyline, including back stories.
on the children and their families (see Figure 3). Part of the lesson here is that, as in real life, the more information one has, the better informed one’s choices. That said, it is also made very clear that it is not the ECP’s role to investigate whether child abuse has in fact occurred.

Throughout the iLookOut program, learners are posed questions, and based on their responses are provided information to augment (and/or correct) their understanding of child abuse and its reporting. At the end of the storyline, a video is shown in which narrators discuss elements within the storyline that could (or should) have raised or lowered the learner’s concern about abuse for each of the children they encountered in the story. Learners are then asked to sign a pledge that they will fulfill their responsibilities as mandated reporters. They are also given follow-up materials (e.g., case scenarios for discussion, handouts) that they can print, download, and share with others in their work setting.

Learners then complete a knowledge and attitudes posttest (identical to the pretest) and a survey evaluating the learning experience. If any items on the knowledge test were answered incorrectly, the learner must identify the correct answer in order to complete the iLookOut program. The learning program then finishes with a disclaimer about the characters (children and adults) depicted in iLookOut, explaining that 1) iLookOut was written and casted to demonstrate diversity (race/ethnicity, gender, socio-economic status, awareness, temperament, etc.); 2) various of the depicted behaviors and personal characteristics may inadvertently reinforce negative stereotypes; and 3) the creators welcome suggestions for avoiding such negative characterizations, provided they do not simply shift them to another group. To date, no complaints or suggestions on this matter have been received.

Completing iLookOut earns ECPs three hours of professional development credit and also satisfies their state requirement for mandated reporter training. ECPs’ valuation of iLookOut is perhaps best demonstrated by the fact that more than 13,000 learners have completed it since open access began in January 2015, constituting a greater than 98% completion rate. Of these learners, more than 95% accessed all the supplemental resource files, and 94% reported being very satisfied with the learning program (mean = 8.8, where 10 = highest—manuscript forthcoming).

Pedagogical Approach

iLookOut was created by an interdisciplinary team with expertise in child abuse, pediatrics, early childhood education, online learning (including instructional designers and experts in teaching and learning technology), mandated reporter training, law, ethics, child advocacy, and victim services. Its interactive storyline was designed to 1) engage ECPs emotionally and intellectually, 2) increase their awareness about child abuse, and 3) help them feel both empowered and responsible to contact child protective services when there is reasonable suspicion of child abuse.

The opening testimonial videos set the stage for these goals. Prior to the first video, text appears on the screen rhetorically asking “Do you remember a time when YOU felt hurt and scared?… and nobody helped you?” Prior to the second video, the same question appears in text on the screen: “Do you remember a time when YOU felt hurt and scared?” But this time, the follow-on text reads: “… and someone asked the right questions and did the right thing to protect you?” The purpose of this sequence is to encourage learners not only to identify with the vulnerability of children who are at-risk but also to identify as being part of a system that, however imperfect, is the only system we have for protecting children. As the learning program then moves into the video-based storyline, ECPs are immersed in realistic scenarios that both teach them new information and challenge them to put into practice what they are learning. In addition to helping learners operationalize new information,
this approach encourages important affective skills to encourage ECPs to be more proactive in protecting real children from harm.

This is one example of how iLookOut is grounded in an experiential learning, conceptual model that is a key feature of adult learning theory. Drawing on the work of Knowles (1984), Billington (2000), and Kolb (2009), iLookout’s design recognizes that adults learn best when 1) they know why they need to learn the material, 2) the learning process is experiential, 3) learning is framed as problem-solving, and 4) the material to be learned has immediate value (Knowles, 1984). In keeping with Billington’s key factors for promoting adult development, iLookOut 1) challenges ECPs just beyond their present level of ability so they are pushed to grow but not pushed so far that they give up; 2) uses exercises to reinforce facts and frameworks regarding suspected child abuse; and 3) allows learners to proceed and digest information at their own pace. Because iLookOut is accessible 24/7 and can be paused/resumed as desired, including across multiple sessions, it also leverages ECPs’ preference for flexibility in professional development (Kyzar et al., 2014). Additionally, iLookOut’s online platform provides an emotionally safe environment for experiential learning, which has been shown to improve knowledge acquisition and implementation among ECPs (Kyzar et al., 2014).

By interweaving an interactive storyline with didactic information, decision-points, and critical feedback to learners’ responses, iLookOut aims to reflect adult learning best practices (Billington, 2000) and embody the key elements of Kolb’s experiential model (Kolb & Kolb, 2009). In the context of helping ECPs become responsible, mandated reporters of child abuse, these key elements manifest as follows:

- **“Concrete Experience”**—helping ECPs reinterpret experiences they have previously encountered.
- **“Reflective Observation”**—helping ECPs consider and problem-solve any tension/conflict between the lived experience of being a ECP and their responsibilities to protect children.
- **“Abstract Conceptualization”**—promoting reflection about the meaning/implications of concepts such as abuse and suspicion.
- **“Active Experimentation”**—providing practice opportunities to apply new information/understanding.

Taken together, these elements are intended to provide a nuanced, yet practical, educational experience expressly designed for early childhood educators and caregivers. In particular, iLookout’s interactive storyline, pairing of questions with immediate critical feedback, posttest reinforcement, reflective debriefing, and follow-up engagement capitalize on Kolb’s observation that critical thinking skills develop best when learners transform their own experience into knowledge by acting on their learning.

**iLookOut’s Evidence Base**

The iLookOut program is integrated with a learning management system that tracks pre- and posttest data, responses to questions within the learning program and a postprogram evaluation of the learning experience. In both randomized controlled trials (Mathews et al., 2017; National Library of Medicine, n.d.) and a real-world study (Yang et al., 2020), iLookOut has been shown to significantly improve knowledge (effect size = 0.96) and change attitudes (effect size = 0.8), such that learners are more predisposed to seeing reporting as the right thing to do when they suspect that a child may have been abused. In an ongoing randomized controlled trial (Humphrey et al., 2021), the interactive, experiential learning approach employed by iLookOut resulted in significantly higher effect sizes regarding both knowledge (1.09) and attitudes (0.67) compared to standard didactic online training (0.67 and 0.54, respectively). Additionally, preliminary data suggest that reports from ECPs who complete iLookOut are more likely to be screened-in for further consideration, and when formally assessed they are more likely to result in findings of abuse and/or social services being recommend for the child/family in question. Because the learner’s responses within the various learning modules are also recorded by the learning management system, it is also possible to study patterns of learning; however, this has not been a focus of inquiry to date.

By design, all legal/policy-related content in iLookOut is contained within discreet learning modules (as opposed to the video-based storyline). So, while iLookOut was originally developed
for use in Pennsylvania, state-specific content can be readily revised to comport with legal and policy-related requirements of other states, as has already been done for the state of Maine. This adaptability provides opportunities to study the efficacy of iLookOut with diverse populations and to experiment with different ways of framing the learning material.

**IMPLICATIONS FOR PRACTICE**

Where child well-being is concerned, educational interventions should aim not only to impart knowledge but also to help learners feel more empowered and motivated to act when needed. Because interactive, story-based learning can help engage learners and facilitate skill-building, it is a particularly promising approach for achieving such affective and behavioral goals. Moreover, when experiential learning is not only problem-based but practical in its application, learners are more likely to appreciate the relevance of what is being taught and draw the connections needed to apply it in real life. Online interventions have the additional advantage of being accessible, adaptable, and open to analysis, as well as a ready mechanism for promoting a greater, shared understanding about how to effectively support child well-being.

For projects with even quite modest budgets there are several general techniques for optimizing learner engagement and increasing scholarship on which elements are best suited to various purposes (Boller & Kapp, 2017). Such techniques include introducing characters and/or storylines that are likely to resonate with the perspectives and experiences of learners, providing (safe) opportunities for learners to practice and fail at applying newly acquired knowledge, and employing digital badging as a way to leverage people’s desire for recognition. Advances in technology have also made immersive educational experiences increasingly affordable through the use of off-the-shelf animated scenarios that can be tailored to the desired setting and content such as Gamelearn (www.game-learn.com). Such gamification techniques can be very effective at augmenting educational interventions, particularly when coupled with a clear understanding of adult learning theory.
REFERENCES


