



White Paper: Life Skills Reimagined Evidence-Informed Design

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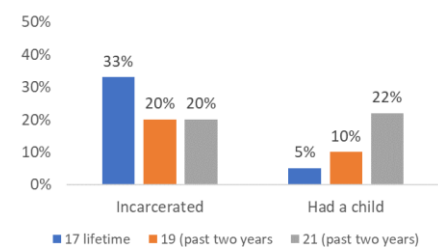
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While leaders in the United States foster care system have acknowledged the criticality of life skills education for foster youth for decades through the policy, funding and content requirements outlined in what is now referred to as the Chafee Program (USDHHS, 1999), the ability to create and implement consistent, effective life skills education as part of a comprehensive case management program has been an ongoing challenge.

There are approximately 500,000 children in foster care in the United States. Twenty-one percent, or 93,500, are age 11 to 15, and 14%, or almost 59,300, are age 16 to 20. Youth age 16+ have an approximately 3% chance of being adopted, thus lacking a traditional family to provide life skills education and long-term transitional support (The Annie Casey Foundation, 2020).

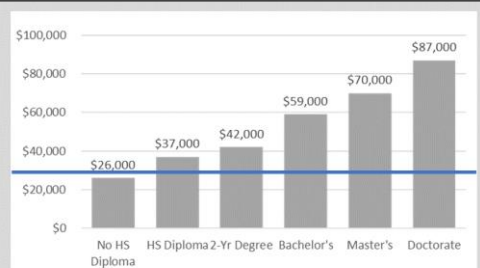
We know that by age 17, many foster youth have already engaged in high-risk behavior that will negatively impact their ability to become self-sufficient (see Figure 1). Before they reach adulthood, 33% have been incarcerated, and 5% have had a child (U.S.ACF, 2019). Both of these outcomes negatively impact educational attainment (Abrams, et al., 2017; Schulkind & Sandler, 2019), contributing to the fact that 50% of foster youth do not graduate high school on time (U.S.ACF, 2019), compared to a nationwide public school average graduation rate of 85% (NCES, 2020a). They also negatively impact employability, the ability to reach self-sustaining income levels and economic mobility. (Abrams, et al., 2017; Schulkind & Sandler, 2019).

Figure 1: Percent of Foster Youth by Age with Life Events that Negatively Impact Self-Sufficiency (NYTD Cohort 2)



Lack of education has a long-lasting financial effect. If we look at U.S. Bureau of Labor Statistics data for median pay by education level attainment (see Figure 2) (U.S.BLS, 2017), using a 2,000-hour work year, we can easily see why there is a foster-care-to-poverty pipeline. Assuming 200% of the poverty line as the threshold of self-sufficiency (approximately \$15 an hour, or \$30,000 per year for an individual, depending on geographic location), a young adult, entry-level worker without a high school degree is most likely making less than median pay and is nowhere near the income needed to be self-sufficient as an individual let alone with a child. A high school diploma or equivalent gets youth closer, but at least some additional training or education beyond high school is needed to break free from poverty and create economic mobility. By age 21, only 7% of foster youth have achieved additional certifications, including from those programs that take less than a year to complete (U.S.ACF, 2019).

Figure 2: Median Annual Pay by Education Level in the U.S.



Clearly, there is a critical need for focused, intentional, effective life skills interventions well before the age of 17 to instill the beliefs, knowledge and self-confidence to break the cycle of poverty faced by many emancipated youth. In 2018, the Families First Preservation Act lowered the age at which states are required to provide transition services to 14 from 16, which creates the policy needed to focus on youth earlier (Fernandez-Alcantara, 2019). But many states have not fully implemented the requirements of the Families First Act, and many counties, states and agencies are not sure how to incorporate life skills education for younger youth.

LYFT Learning launched Life Skills Reimagined in the United States in Spring 2019 to provide a consistent, effective life skills education curriculum and tracking platform for youth and adults working toward self-sufficiency. The foundational philosophical approach originates from the practice of Change Management – that beliefs, knowledge and skills must all be impacted to affect lasting change. The concept of developing beliefs, knowledge and skills in children—intentionally or unintentionally, healthy or unhealthy—has always been a foundational principle of parenting. Concepts like saving money and strong work ethics are beliefs, showing children how to do household tasks is instilling knowledge and a child applying that knowledge and receiving feedback on their work builds that skill.

In typical traditional families, parents are instilling these values into naïve subjects with the benefit of starting with a blank canvas. There is a marked difference between instilling baseline thoughts and actions into a child and needing to shift from one set of ingrained beliefs and behaviors to another; a much more difficult undertaking. When working with youth at risk for poor outcomes (many who have already internalized unhealthy beliefs), the ability to facilitate that shift (without shame) becomes imperative.

Background Research

During the initial product development research phase, federal foster care life skill topic requirements, life skills curriculums, practices, gaps and commonly used assessment tools and sources were reviewed. Their content, strengths and weaknesses were mapped. Informal interviews were also conducted with stakeholders in the child welfare system including caseworkers, guardians ad litem (GALs), Court Appointed Special Advocates (CASAs) and foster youth.

There is a multiple potential reasons why effective life skills education programs may be difficult to implement and to have the desired impact.

It is common for foster youth to move frequently. Thirty-five percent of youth have two or more placements (The Annie Casey Foundation, 2020). Youth who enter care between ages 11-14 may experience an average of 7 to 13 placements prior to leaving care. They experience which can create a lack of consistency and stability during the critical period of both adolescent brain formation and home-based life skills education (Stott, T. 2013). Interviewees stated that as youth are placed or change placements, they may be located in a different county or state than their biological home and support structure, and life skills approaches may vary drastically from placement to placement and even among locations served by the same agency. Youth who work or live far from their caseworkers or independent living programs may miss out on life skills opportunities.

Turnover in a youth's support team can further complicate the implementation of a consistent approach and may interrupt individual learning paths. National child welfare staff turnover rates average 30% with a range of 6% to 65% turnover compared to the 10% to 12% considered "healthy" for an organization (The Annie Casey Foundation, 2017). Interviewees stated that Independent living or caseworker staff positions may go unfilled for weeks or months. Workers in these roles are often recent college graduates who, as they often stated, are still learning how to be self-sufficient themselves. Those with the appropriate life skills knowledge may or may not be effective facilitators, potentially creating vastly different learning experiences for youth exposed to the same content.

Language barriers are also prevalent. Twenty-five percent of all children ages 5 to 17 in the United States have at least one foreign-born parent, and 4% are from immigrant families who have been in the United States for less than five years. Twenty-three percent of youth aged 5 to 17 speak a language other than English at home, the most common being Spanish. Four percent of children have difficulty speaking English (The Annie Casey Foundation, 2020). Even for a relatively fluent English-as-a-second-language (EASL) speaker, the nuances of life skills education may literally be lost in translation.

Youth engagement can also be a challenge. Foster youth may not participate or fully engage in services or available programs. They may not be fully aware of programs and services available to them or how to access them. (Armstrong-Heimsoth, et al., 2020). Interviewees stated that many programs focus on live meetings in the evenings and weekends, and youth may struggle to find transportation to attend, or may be scheduled to work if employed. Financial incentives are commonly used to encourage participation but may lose their attractiveness over time.

In addition to these documented challenges, interviewees shared that there are few detailed methods to ensure accountability across service providers. Life skills assessments and transition plans are often required, but many case management systems only have one or two fields to capture life skills or transitional planning activities. Alternatively, service providers may upload transition plans or other documents that are never looked at again. Few organizations have the structure, technology or processes in place to capture individual learning records for each of the youth they serve, and funding governments may not ask for or require detailed documentation as part of contract fulfillment to ensure youth are receiving life skills education.

Key Findings

After reviewing the research data, nine findings were identified that potentially could be partially or fully addressed through the creation of a well-designed curriculum enabled by technology.

1. While there is no shortage of life skills content written for a variety of audiences, most full curriculums are out-of-date and not designed using current scientific principles of learning and neuroscience.
2. Assessments used in foster care are very long (from 90 to 120 questions), and youth may be “clicking through” just to get finished, potentially providing inaccurate results.
3. Assessments often give all skills the same weighting even though their criticality may be vastly different.
4. Assessments and current practice commonly promote the concept of “filling in gaps” of knowledge as opposed to providing a holistic educational approach like those used in educational settings.
5. For most content, the same teaching method is used (e.g., live meetings, workbooks) regardless of what the learners need to do with the information (understand versus apply).
6. Life skills training provided to youth varies widely by geography, availability of transportation and ability of learners to attend due to work schedules.
7. Organizations may have long lulls in life skills or independent living services due to job vacancies or understaffing.
8. Few, if any, organizations or government entities create or maintain learning records by youth and, therefore, cannot validate which youth has received what content.
9. Few, if any, states or counties require any “proof” that federally mandated foster care life skills education has been provided or receive detailed records of what training individuals have completed.

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Brain-Based Learning

In the last 20 years, hundreds of years of learning science and decades of neuroscience have merged to illuminate how our brains retain and retrieve information. In the 1880s, German psychologist Hermann Ebbinghaus pioneered research in the field of retention and memory. His findings, replicated by researchers in 2015, found that without reinforcement and connection to prior knowledge, information is quickly forgotten. Illustrated in what is called the “forgetting curve,” without reinforcement, learners forget roughly 53% of the content within one hour, 69% after a day and 83% after six days (see Figure 3). In contrast, if information is reviewed over time, often called spaced learning, retention rates improve (Murre & Dros, 2015). This foundational research was conducted with rote memorization of nonsensical words, not taking into account the role of context and other learning methods have on retention.

In the 1960s, Edgar Dale introduced and later revised the Cone of Experience, which illustrates the relative abstractness and concreteness of learning methods and highlights differences among learning methods (Dale, 1969). This later has been inferred to represent differences in passive and active learning and the relative retention rate of information based on how learners encounter information (see Figure 4). While the precision of this relative comparison is debated, it was widely accepted that passive learning methods like reading and lecture have lower retention rates than active learning methods like practice. Also, since Dale’s work was published, the type, access to and prevalence of “audio-visual” teaching methods has exploded, as has research to determine their effectiveness.

Before the 1990s, research on memory and brain function were primarily focused on patients with brain injury or who had undergone brain surgery to treat seizures (Carey, 2014). In the 1990s, structural and functional magnetic resonance imaging (MRI) began to be used more widely to see the brain “in action.” With the use of MRI, we are able to better understand how different parts of the brain work together to process, retain and recall information and experiences (Ofen, 2019).

Also, before the use of MRI, it was widely held that brain development was largely fixed in childhood. Now it is understood that in adolescence our brains essentially completely rewire, and unused neural connections are pruned back. Neural connections are also myelinated (insulated) to increase efficiency, a process that markedly reduces their neuroplasticity, which means that neural connections created in adolescence can be more difficult to change in adulthood (Armstrong, 2016). It also means the window for change created in adolescence can be a once-in-a-lifetime opportunity.

This research has led to the growing use of brain-based learning, including these principles used in the curriculum design:

1. Multisensory learning experiences are more memorable.
2. Learning objectives drive teaching method.
3. Microlearning (short bursts) increases retention and recall.
4. Context and repetition build strong neural connections and long-term retention.

Figure 3: Retention Rate Over Time Without Reinforcement

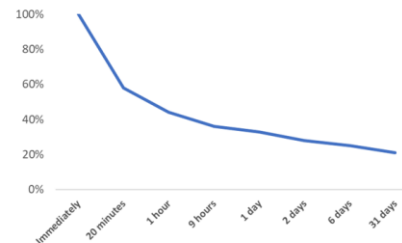


Figure 4: Dale’s Cone of Experience



1. Multisensory Learning Experiences are More Memorable

One of the core tenants of brain-based learning is that multisensory (cross-modal) learning experiences are more effective teaching approaches than ones that are single-sensory. Essentially, the more parts of the brain that are engaged in receiving information, the more effectively we retain and recall them (Shams & Seitz, 2008). Ways to create multi-sensory content to teach basic knowledge within the confines of a structured blended learning curriculum are limited. Animation-with voiceover and text on-screen was chosen for this curriculum because it provides the ability to illustrate scenarios as well as concepts. Characters can be created who are vastly more diverse and less age-specific, and therefore more reflective of the target audiences. This allows the content to apply to a greater range of learners.

2. Learning Objectives Drive Teaching Method

Understanding what learners need to do with content is a critical first step in curriculum content. Using Bloom's Taxonomy, a standard framework for categorizing educational goals (Anderson, et al., 2001), the content chosen for the curriculum was categorized by the objective level youth need to use the information: remember, understand or apply. The higher-level objectives of analyze, evaluate and create were not used because they represent a higher level of expertise than a foundational curriculum can instill.

3. Microlearning Increases Retention and Recall

The use of microlearning in learning design is based on research that shows that learners best retain and recall knowledge in short bursts, which helps avoid the constraints of attention span, the working memory of the hippocampus and mental fatigue (Mayer, et al., 1999; Kapp et al., 2015; Shail, 2019). Microlearning has many definitions, but for our purposes microlearning is defined as learning segments under 30 minutes in length.

4. Context and Repetition Build Long-Term Retention

Another principle in brain-based learning is that for new neural connections to be made, they must be linked to something we already know. In other words, new neural connections need context, or associations, to be formed. Storytelling and play, both of which rely on context, are long-known, highly effective forms of learning. (Bar, et al., 2007; Snyder, 2016). Throughout the curriculum content, tangible examples are used and knowledge check questions are situational (i.e., asking the question in the context of a realistic scenario that a learner is likely familiar with). Because of the unique challenges faced by this target audience, examples and scenarios were reviewed by foster youth themselves to ensure they were not just contextual, but authentic. If the examples don't feel real, learners, especially learners who may already feel misunderstood, may disengagement.

Also, for new neural connections to be the "go-to" thought or behavior, they must be stronger than the old connections. Every time a neural connection is used, it is strengthened. And, interestingly enough, if two neural connections are used together repeatedly, they will learn to fire together. For changes in beliefs, knowledge or skills to take place, repetition must be used to strengthen the connection until it becomes the default thought or action. Said differently, it must become a new habit, whether that be mental or physical, conscious or unconscious. (Duhigg, 2012; Snyder, 2016).

The key findings and what we know about brain-based learning laid the foundation for the program design.

Six Strategic Design Goals:

1. Ensure consistent, effective transfer of basic life skills knowledge in an easy-to-use format that allows staff to focus on application, problem-solving and relationship building.
2. Provide full tracking and reporting capabilities to help ensure learners receive the education they need, as well as to provide a structure to enable accountability.
3. Provide engaging content that learner like that is soundly grounded in core principles of learning and neuroscience.
4. Ensure the curriculum applies to a wide-range of learners, both youth and adult, not just foster care.
5. Make the program cost-effective and simple to implement, ensuring that all learners have access to an effective program through their respective agencies or governments, regardless of organization size or relative budget.
6. Ensure that the curriculum is flexible so it can be used in a variety of setting types and be effective even in low fidelity implementations.

Content Criticality and Gap Analysis

Once strategic goals were set, a review of common life skills curriculum content, including topics required by Chafee, was conducted to determine common content and themes. Knowing that effectively covering every content area that could conceivably be considered life skills would create an overly burdensome amount of information, a criticality analysis was conducted. The litmus test used to determine the criticality of the topic was whether or not a lack of that knowledge/skill could directly lead to homelessness. To guide decision-making, each question on the two most commonly used foster care assessments, Casey Life Skills and the Daniel Memorial Assessments, was categorized as Critical, Important or Helpful.

Then content gaps based on current knowledge and practices were identified. Changes in technology, the way people work and communicate and our increased knowledge of the long-term impact of emotional trauma and adverse childhood experiences (ACEs) were key considerations.

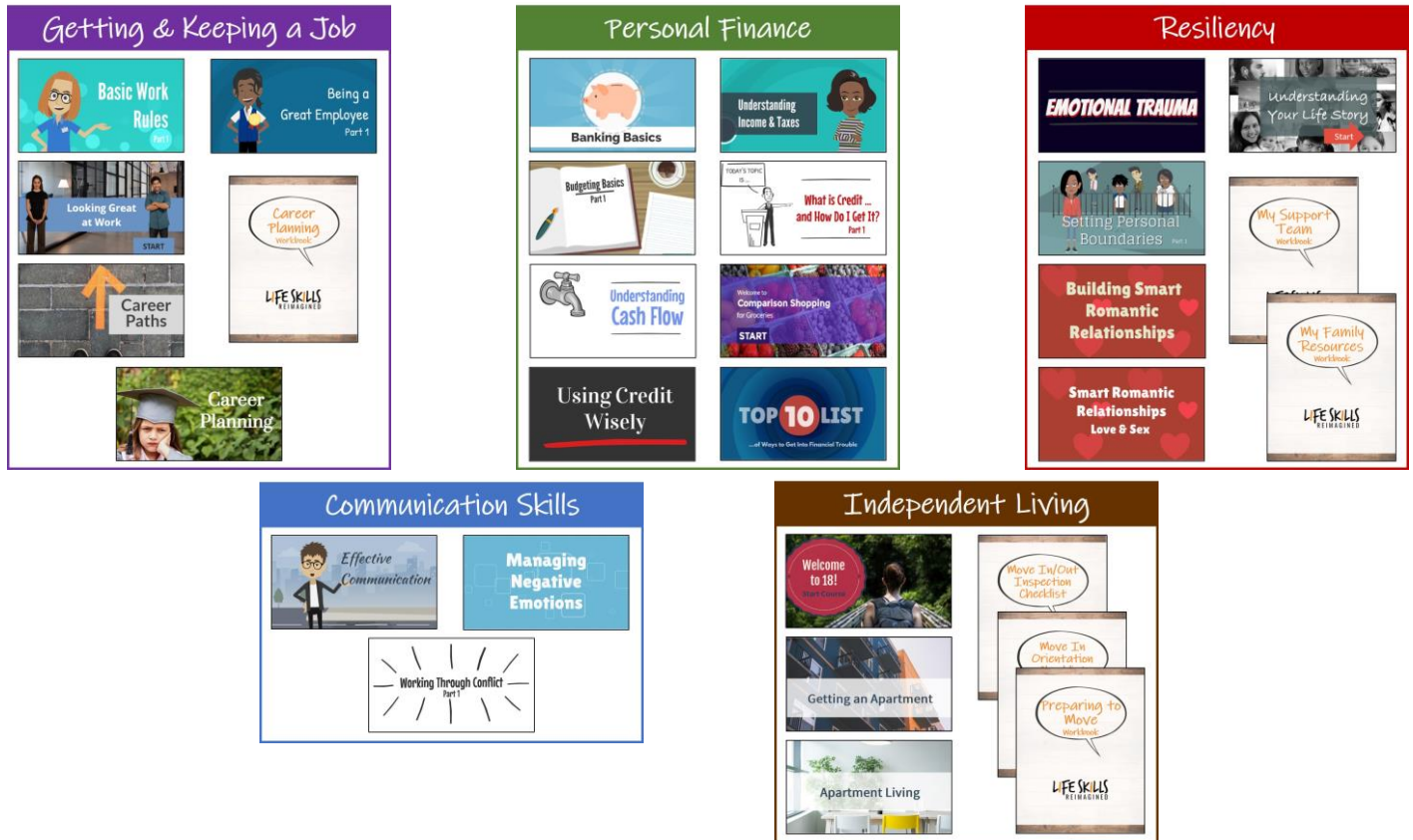
The content was then categorized into common topics titled:

1. Communication Skills
2. Getting and Keeping a Job
3. Independent Living
4. Personal Finance
5. Resiliency

After evaluating the objectives and content, five types of microlearning learning modalities or components were developed, which are discussed in depth in the next section. Topic content was further subdivided and organized by the most appropriate modality for teaching that content, and then content drafts were created.

The final core curriculum consists of 24 courses and six workbooks across the five topics. When all components and discussions are completed, the curriculum is approximately 30 hours long, which is roughly equivalent to .5 high school credit hours.

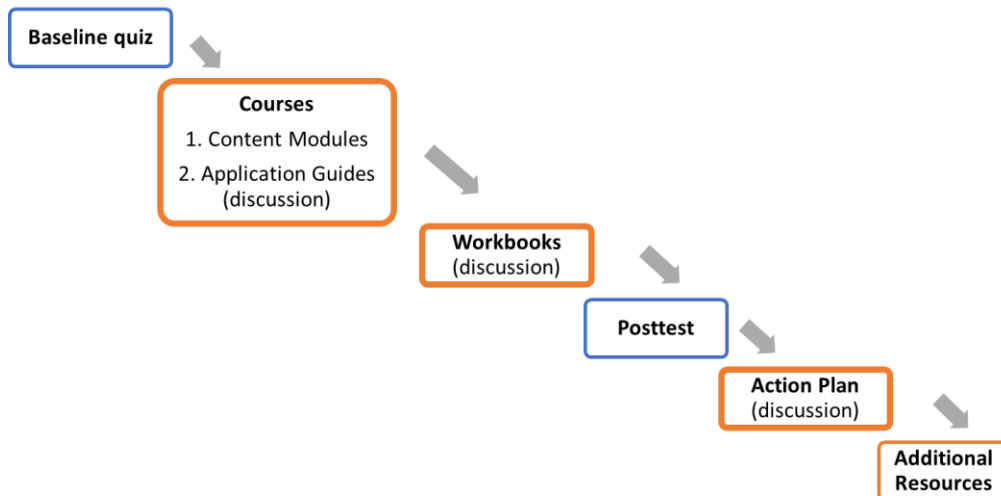
Figure 5: Core Content Courses and Workbooks by Topic



Blended Learning Path for Each Topic

When the curriculum is used at its highest fidelity, the learner follows a standard sequence. These multiple reinforcement points over time strengthen neural connections, and key beliefs are cross-pollinated across topics. For example, the concepts of saving money and maintaining open communication are the focus of one topic and are woven into others as well.

Figure 6: Learning Path for Each Topic



Objective Assessments

Baseline quizzes and posttests are incorporated for each topic, presenting the same questions in slightly different formats, to objectively measure knowledge gains. Learners take each quiz once. There is no pass or fail, the scores are data to be used by their facilitator or support team in considering the next steps in that youth's educational continuum.

Courses

Courses are comprised of Modules & Application Guides.

Part 1: Content Modules

The content modules, primarily animated videos with knowledge checks, are the primary method for baseline knowledge transfer. To create the content modules, the high-level segment outlines were turned into rough content drafts. Based on those drafts, approximate content seat time was determined. The content was then further divided into four- to seven-minute segments. Knowledge checks, which provide instant reinforcement of key points, a change in course cadence to ensure continued engagement and a tool for measuring proficiency were created for each segment. These segments were then recombined into 15- to 20-minute microlearning modules. Learners must receive an 80% or above on the knowledge check questions for the module to be registered as complete.

Part 2: Application Guides

Once learners complete content modules, they must transition from knowledge to application. For life skills in particular, knowledge in and of itself is irrelevant; application of that knowledge must be achieved. Self-awareness activities, peer learning connections and affective (emotional) learning are brain-based techniques leveraged in the transition to application (Armstrong, 2016). Application Guides are designed to help learners answer the question "Now that I know this, how does it apply to me today, in my current situation?" They also serve as a primary discussion tool for facilitators which can be used one-on-one or in small groups, live or virtually.

The Application Guides follow a relatively standard format. They first draw a connection back to the content module, then ask learners to identify their strengths and areas of opportunity in that area. They utilize If/Then Planning, an evidence-based behavior modification technique, also called "implementation intention." Ninety-four studies have proven this technique to increase one's ability to meet planned goals by two to three times. It is as effective for adolescents as it is for adults (Gollwitzer & Sheeran, 2006; Wieber & Gollwitzer, 2017).

If/Then Planning doesn't focus on the goal itself; it focuses on the actions it takes to reach the goal. It results in a tangible process with the identification of specific actions to be taken. The process has three simple steps: (Gollwitzer & Sheeran, 2006; Wieber & Gollwitzer, 2017)

1. Identify a poor decision or bad situation you find yourself repeatedly facing.
2. Determine how you will recognize it. (What's the "red flag" to alert you that you are starting to go down that path?)
3. Decide (write down) what you will do instead. (What will you do or say that will change the trajectory of the outcome?)

Recognizing the type of behavior changes that adolescences often need, a fourth step, "Practice," was added for the purposes of this curriculum.

Role Play: Cold vs. Hot Environments (Cognition)

It is a common belief that adolescents do not have the same rational decision-making skills as adults because their prefrontal cortex, which controls decision making, is not fully developed until their mid-20s. More recent behavioral research differentiates between hot and cold cognition processing. Specifically, when placed in a “cold” environment (i.e., no stress, no peer pressure and no perception that activities or decisions may be judged), the rational decision making of 16- and 17-year-olds is fairly close to that of adults (Zelazo & Carolos, 2012). The challenge is that life is not a “cold” situation and, for adolescents in particular, the approval of their peers is a very strong biological force.

The addition of role-play practice into If/Then Planning scenarios provides youth valuable form of practice that been proven effective in affective, cognitive and behavioral domains (Maier, 2002; Rao & Stupans, 2012; Elmore, 2020). Practicing with a trusted adult helps the brain transition from the part of the brain responsible for writing to the one responsible for speaking, facilitating application.

Since many poor decisions are made in the context of peer pressure (real or perceived), using role-play in a safe environment with the learner’s peers can more closely simulate a “hot,” real-life environment, thus potentially improving real-life application (Elmore, 2020). The concept of simulating hot environments to improve performance under pressure has been used for hundreds of years. Military organizations demonstrate the most extreme examples—staged exercises replicating combat situations to attenuate soldiers to working in fear-laden, sensory overloaded, life-or-death situations. Sports scrimmages also follow the same principle: the only way to perform under pressure is to practice under pressure.

Workbooks & Worksheets

Workbooks and worksheets are utilized throughout the curriculum to help learners work through processes (e.g., identifying their support team, planning a move) and actively apply specific skills (e.g., budgeting).

Action Plans

Action Plans provide a tool for continuous improvement.

Once learners have learned knowledge and started to apply it, the focus of the curriculum shifts to continuous skill building. Action Plans feature eight to 10 knowledge, skills or abilities (KSAs) for each of the five topics. Learners complete a self-assessment using a 1 to 9 scale, then their facilitator completes an assessment of them. If their scores differ on any of the KSAs, the facilitator should engage a targeted coaching conversation on that question to recalibrate that learner’s self-perception. The learner then reads what SMART goals are, sees an example and creates their own self-directed Action Plan.

These Action Plans are not dissimilar to the commonly mandated baseline assessments that have historically been used in foster care. The key differences are that they are used to facilitate application after foundational knowledge is obtained and reinforced multiple times. They are also broken up by topic so they are brief and simple to use on an ongoing basis.

While learners may take three to 12 months to complete the entire curriculum, based on the cadence determined by the implementing organization, the Action Plans can be revisited regularly afterward to assess goal attainment and be integrated into the transitional planning process. When goals are achieved, learners then reassess and create more goals. This iterative process can continue, and the improvement of scores be monitored until leaving the program, helping to ensure that learners have and keep the skills necessary to be self-sufficient.

Embedded Evaluation Tools

Five areas of evaluation, enabled by the online platform, are embedded in the curriculum design and can be used by implementing organizations. The value and availability of each evaluation tool varies with organization size, and specifically “Application” is typically only used with large user groups who have the ability to conduct robust evaluation.

The first three areas incorporate the Kirkpatrick Model, an educational industry standard for training evaluation. The Kirkpatrick Model, first published in 1959 (Kirkpatrick, 1959) has been used historically as an efficient means to evaluate training effectiveness in the business sector (Yardley, S. & Dornan, T., 2012). It is recognized for its ability to provide a practical approach for the typically complex evaluation process. It allows organizations to tie the results of what they do to tangible business results (Bates, 2004). More recently the Kirkpatrick model has been proven effective in the evaluation of multi-media and online modalities (Chang & Chen, 2014; Covington, 2012; Embi, Neo, & Neo, 2017).

The Kirkpatrick Model is comprised of four levels: Reaction, Learning, Behavior, and Impact. The recommended application is that each level been evaluated progressively as resources allow (Kirkpatrick, 1976; Kirkpatrick & Kirkpatrick, 2006).

The last two embedded measures, Self-Efficacy and Confidence to Live Independently evaluate psychometric changes associated with completion of the curriculum.

Kirkpatrick Level 1: Reaction

Do they like it? Evaluated in a post-program survey. Learners answer three questions on a Likert scale of 1 to 5. Scores of 3, 4 or 5 are grouped as positive responses.

- How useful did you find the content?
- Would you recommend it to others?

Kirkpatrick Level 2: Knowledge

Did they increase their knowledge? Evaluated utilizing the baseline quiz and posttest for each topic. In all topics, both assessments are comprised of the same questions presented in a slightly different format. Both are automatically graded by the platform, and those scores are automatically recorded as part of the learning record.

Kirkpatrick Level 3: Application

Did they increase their application? Evaluated through the use of the Action Plan surveys. At the end of each topic, learners are asked to complete the Action Plan self-assessment rating themselves on their application of each criterion, both prior to starting the topic (retrospective pre) and after completing the topic (post). To ensure data is captured for learners who have not reached the application stage, as well as those who performed beyond personal mastery, the scale includes knowledge, application and the higher-level concepts of teaching and advocacy.

Kirkpatrick Level 4: Impact

Is there a Return on Investment (ROI) on the training program? ROI in the Human Services sector can be reflected in measures including graduation rates, employment rates, pregnancy rates, incarceration rates and income levels, among others. Level 4 is not currently included in evaluation measures because the goal is to evaluate Levels 1, 2 and 3 to ensure that the curriculum effectively teaches prior to engaging in an outcomes evaluation. More information can be found in Section 10: Research & Evaluation.

Self-Efficacy

Self-Efficacy is assessed in the post-program survey utilizing a validated Self-Efficacy assessment. Self-Efficacy was chosen for evaluation because assessments are designed to assess personal agency. Perceived Self-Efficacy is a prospective and operative construct positively correlated with optimism and self-esteem, as well as negatively correlated with depression, anxiety and pessimism. In addition, Self-Efficacy is positively correlated with extraversion, being action-oriented and having hope for success and is negatively correlated with fear of failure (Schwarzer, 2004; Schwarzer & Luszczynska, 2005; Schwarzer & Warner, 2013).

Self-Esteem, or the perception of self-worth, was also considered as an alternate evaluation measure. Self-Efficacy was chosen because it is a more active or motivational construct where Self-Esteem is a more emotional construct. (Brockner, 1988; Gardner & Pierce, 1998)

An initial literature search was conducted to choose a validated self-efficacy assessment tool. As there were concerns with the overall length of the post program survey and relative attention span of adolescent learners, relative length of the assessment tool was a primary inclusion/exclusion criteria for final evaluation and selection.

Both the General Self-Efficacy Index (Schwarzer, ten questions, 4-point scale) and the New General Self-Efficacy Tool (Chen, eight questions, 5-point scale) were chosen for final evaluation.

The New General Self-Efficacy (NGSE) tool was created based on research using the Scherer scale, but is shorter in length. “NGSE scale demonstrated high reliability, predicted specific self-efficacy (SSE) for a variety of tasks in various contexts, and moderated the influence of previous performance on subsequent SSE formation” (Chen, Gully & Eden, 2001). It’s five point scale provided greater potential to detect change than the Schwarzer four point scale.

Learners are asked how they would have rated themselves both prior to the program (retrospective pre) and then after they have completed the program (post) in response to the eight Self-Efficacy questions.

Figure 9: New General Self-Efficacy Assessment Questions

1. I will be able to achieve most of the goals that I set for myself.
2. When facing difficult tasks, I am certain that I will accomplish them.
3. In general, I think that I can obtain outcomes that are important to me.
4. I believe I can succeed at most any endeavor to which I set my mind.
5. I will be able to successfully overcome many challenges.
6. I am confident that I can perform effectively on many different tasks.
7. Compared to other people, I can do most tasks very well.
8. Even when things are tough, I can perform quite well.

Confidence to Live Independently

Self-confidence can be defined as: ‘the ability to take charge of your own destiny’ or in other words: confidence in who one is and what one can do, its powers and abilities.

Self-Confidence is often broken down into two components: Self-Esteem and Self-Efficacy. Self-Efficacy was already chosen as the in-depth psychosocial assessment tool, and it was determined that a general self-confidence question would be included to evaluate changes in learner’s overall confidence to live independently.

Confidence to Live Independently is evaluated in the post-program survey. Learners are asked how they would have rated themselves on a scale of 1 to 10 both prior to the program (retrospective pre) and then after they have completed the program (post) in response to the statement “I am confident in my abilities to live independently.”

To ensure learners of all abilities can obtain value from the curriculum, it incorporates multiple inclusivity and accessibility features.

Diversity & Inclusivity

The use of animation enables characters to be highly diverse and even ethno-indistinct. Persons with disabilities are represented. Individual gender-specific pronoun use is limited, using “they” as the second reference instead of “he or she” when possible. Character names represent many cultures and even cross-pollinate traditional names from one culture to what may be perceived as members of a different culture. Whenever possible, “significant other” or “partner” is used instead of husband/wife or girlfriend/boyfriend. This approach also helps widen the potential audience, as marriage is commonly indicative of age. Socio-economically, the content refers to apartments more than homes and public transportation more than car ownership.

In the relationship content, sexual preference is generally not highlighted as relationships, regardless of preference, are fundamentally the same and to focus on any individually, by definition, is not inclusive. When there were relevant differences, as in the context of birth control or STD prevention, they are addressed. For example, birth control generally is only a concern “for couples for whom pregnancy is biologically possible.”

Vision Impairment

For learners with sight impairment, videos have an alternative audio description version in which the narrator occasionally stops the video and explains what is happening on screen. For courses or parts of courses that are not animated videos, a learner’s screen reader can read the content. Certified accessible copies of any print materials for use with screen readers are also available.

Hearing Impairment

For those with hearing impairment, all videos are closed captioned, and all other components of the content can be read on-screen.

Cognitive Levels

To address the challenges of a wide range of cognitive and reading levels, the goal was for content to be written at the middle school level. This varies some by the complexity of the course, especially in Personal Finance. The multi-modal approach—voiceover, text on-screen, context and illustration—helps widen the cognitive range. Clients in an alternative school setting have shared anecdotal feedback that youth in the “low average” or “borderline” IQ levels can utilize the curriculum primarily independently. Lower levels start to need assistance on the knowledge checks. Some financial concepts including credit may be too difficult for learners at lower cognitive levels to grasp.

Language

Language is also a significant consideration. For Spanish EASL speakers, most of the modules have a Spanish path, and print materials are translated.

Young adults were involved in every step of the curriculum research, design, development and evaluation prior to and immediately post launch. Their feedback was incorporated into the curriculum after each step. To ensure a consistent youth voice during the 18-month research, design and development process, a foster youth who had recently graduated high school was employed by LYFT Learning. She reviewed and provided feedback on all content, examples and scenarios. In addition:

Research Phase

1. LYFT Learning partnered with HEMI, a Cincinnati-area foster youth mentoring program, to create an eight-week summer internship program for seven foster youth who had recently graduated high school or had started college. The design team was able to experience and work through first-hand the challenges of employing foster youth. Several times a month the youth participated in informal focus group sessions to help the design team better understand their previous experiences with life skills programs and perceived level of preparation, as well as provide feedback on training examples and the curriculum design.

When providing feedback on training examples, there were overwhelming only two guiding principles voiced by the youth

1. Don't make me read.
2. Don't make it all look the same.

2. At the same time, a Cincinnati-area collaboration of area organizations received a \$3.8 million Youth Homelessness Demonstration Grant to create and implement a Youth at Risk of Homelessness project. Design team members participated in community discussions and reviewed all public reports from the initiative. Youth-identified goals for the youth homelessness project included education in financial literacy, job readiness, communication skills and receiving therapeutic support (Hicks, 2017), all of which were incorporated into the curriculum.

Design & Development Phase

1. Once the program design was outlined and sample courses were created, they were presented to the Lighthouse Youth Services, a Cincinnati-area organization serving foster and homeless youth, youth advisory board for feedback.
2. Once full draft courses were created, two content feedback sessions were conducted in partnership with Opportunities Knocking, a Cincinnati-area non profit founded by foster youth to serve foster youth. During these sessions, foster youth completed a series of modules and a five question survey for each module providing quantitative and qualitative feedback. The platform ease of use was also assessed through observation. Learners were provided no instructions after login except for what modules to complete. There were no challenges navigating the system or completing content.
3. An informal pilot was then conducted with a high school after-school program in which youth voluntarily completed modules and completed the five question survey for each.

Post Launch Phase

Early post-launch, members of the Commonwealth of Kentucky Youth Advisory Board completed content and the five question surveys, providing feedback from the perspective of having already experienced life skills programs and had been emancipated from care.

Survey Questions

1. How would you rate the usefulness of the content? (Likert scale 1-5)
2. How would you rate the creative approach/look and feel compared to other life skills training you have received? (Likert scale 1-5)
3. What did you like the most? (Free text)
4. What did you like the least? (Free text)
5. What suggestions would you have for improvement? (Free text)

Survey Results

Across the three groups who completed surveys, 48 surveys were received.

1. Usefulness: 90% of the courses were rated a 4 or 5.
2. Look & Feel: 82% of the courses were rated it a 4 or 5.
3. The average rating across all of the content: 4.5
4. The overall score averages ranged from 3.75-5:
 - a) *Understanding Cash Flow received a 3.75*
 - b) *What is Credit and How Do I Get It? scored a 5.0.*
 - c) *Only one module scored below a 4.0.*

Most learners who rated the “look and feel” under four stated that they would prefer live videos instead of animation.

Strategic Goals 5 and 6 are related to ease of implementation and program effectiveness at low fidelities. To ensure ease of implementation:

1. The platform selected is highly intuitive and easy-to-use allowing for minimal staff and learner training. Ease-of-use was initially evaluated through observation outlined in Section 9: Young Adult Participation.
2. The curriculum components are designed to be multi-functional. For example Application Guides and Action Plans also serve as Discussion Guides for facilitators.
3. “Getting Started” tools including an introduction video, a step-by-step navigation guide and a job aid for using the mobile app are integrated into the learner dashboard and accessible at all times.

Implementation Training

Training delivered via webinars are required for all organizations implementing the curriculum. It consists of

- 1:45 hour Facilitator training which outlines the program design, the components and how to use them and the learner experience.
- 1:00 hour Administrator training which teaches how to add/deactivate learners and run report.

Implementation Process Effectiveness

Approximately one year postlaunch a survey of current customers with at least 6 months experience with the curriculum and platform was conducted to determine if current implementation approaches and training had met their needs.

Seven responses from a variety of organization types including foster care, drug rehab and alternative schools were received. Using a Likert scale of 1-5, all customers rated the five steps of the selection, training and implementation process a 4 or 5.

Fidelity Scale

Based on interviews during the research and design process, as well as during client implementations, the design team drafted a scale to identify the different fidelity levels at which an organization may be implementing Life Skills Reimagined depending on their program length and audience. The primary differentiators are 1) whether the curriculum is completed in its entirety and 2) the percentage of intended discussions that are completed with learners as they go through the program (see Section 4, Figure 6). In the customer survey, implementing organizations were asked to identify their implementation fidelity or describe their fidelity if they did not feel the scale represented their use. Their responses provided an initial validation of the scale.

The program is designed to teach at all fidelity levels, so as long as users are completing the content modules, learning is taking place. Current research is focused primarily on organizations at Fidelity Level 2 to evaluate curriculum effectiveness when used by learners with minimal or no support staff support.

Figure 10: Implementing Organization Survey Responses



Figure 11: Fidelity Levels and Customer Types

1	Use modules PRN	Shorter-term programs Juvenile Drug rehab Juvenile Probation/Diversion
2	Voluntary Self-directed (on your own)	Foster Care Summer Work Programs Foster Care Transition/Independent Living
3	“Required” Self-directed (on your own)	Foster Care Transition/Independent Living
4	Somewhat Directed <50% discussions	Foster Care Transition/Independent Living
5	Directed >50% discussions	Foster Care Transition/Independent Living
6	Fully Directed Classroom (virtual or live)	Alternative Schools Formal Summer Programs

One of the biggest challenges of a life skills curriculum is to evaluate its effectiveness. We find it frustrating to see studies (on any topic) rush to evaluate long-term outcomes without actually determining if the intervention actually has a quantitative short-term impact. In human services working with complex cases and interwoven interventions and external influences, the ability to isolate an intervention's impact on multi-factoral outcomes is extremely difficult.

The common-sense research approach for Life Skills Reimagined starts with examining the most foundational of questions before leaping into long-term studies.

Phase I

COMPLETE

Is it a solution that is embraced by its target audiences? **YES**

Prelaunch and early postlaunch feedback from learners in the target audience to determine usefulness, receive suggestions and determine if learners like the solution. This research is outlined in Section 9: Youth Voice.

Phase II

ONGOING

Does it effectively teach? **YES**

In an analysis of 358 learners in a Fidelity Level 2 implementation completed in Spring 2022, Life Skills Reimagined demonstrated ($p < .0005$, all):

- Knowledge: Up to a 60% relative increase in Knowledge depending on topic.
- Application: Up to a 31% relative increase in Application depending on topic.
- Confidence to Live Independently: 50% relative increase.
- Self-Efficacy: 23% relative percent increase.

Do learners like it? **YES**

- With more than 500 learners completing the post program survey, more than 95% of learners would recommend the curriculum to others.

Phase IIb

IN PROGRESS

Do results vary by subgroup (gender, age, geography, etc.)

- In an analysis of 358 learners, there are some statistically significant differences among gender and geography. The clinical relevance is unknown.

Are quantitative improvements sustained? (Retention)

Early data of more than 50 learners demonstrate 3 month retention of all 5 topics at >90%.

One of the biggest challenges of a life skills curriculum is to evaluate its effectiveness. We find it frustrating to see studies (on any topic) rush to evaluate long-term outcomes without actually determining if the intervention actually has a quantitative short-term impact. In human services working with complex cases and interwoven interventions and external influences, the ability to isolate an intervention's impact on multi-factoral outcomes is extremely difficult.

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Phase III

Evidence-Based Designation

We have spent significant time considering what the trial design to support an Evidence-Based designation would look like. At the same time, industry advocates and leaders are advocating for changes to the current standards for an Evidence-Based designation as the current medical-based criteria may not be best suited for human services interventions for which it is difficult to isolate effect. Updates will be provided as they are available.

- Abram, K.M., Azores-Gococo, N.M., Emanuel, K.M., Aaby, D.A., Welty, L.J., Hershfield, J.A., Rosenbaum, M.S., & Teplin, L.A. (2017). Sex and Racial/Ethnic Differences in Positive Outcomes in Delinquent Youth After Detention: A 12-Year Longitudinal Study. *JAMA Pediatrics*, *171*(2), 123–132. <https://doi.org/10.1001/jamapediatrics.2016.3260>
- Anderson, L.W. (Ed.), Krathwohl, D.R. (Ed.), Airasian, P.W., Cruikshank, K.A., Mayer, R.E., Pintrich, P.R., Raths, J., & Wittrock, M.C. (2001). *A taxonomy for learning, teaching, and assessing: A revision of Bloom's Taxonomy of Educational Objectives*. New York, NY: Longman.
- The Annie E. Casey Foundation. (2017). How does turnover affect outcomes and what can be done to address retention? Retrieved 10/14/20. URL: <https://www.casey.org/turnover-costs-and-retention-strategies>
- The Annie E. Casey Foundation. (2020). Kid Count Data Center. Retrieved 10/14/20. URL: <https://datacenter.kidscount.org>
- Armstrong-Heimsoth, A., Hahn-Floyd, M., Williamson, H. J., Kurka, J.M., Yoo, W., & Rodríguez De Jesús, S.A. (2020). Former Foster System Youth: Perspectives on Transitional Supports and Programs. *The Journal of Behavioral Health Services & Research*, *10.1007/s11414-020-09693-6*. <https://doi.org/10.1007/s11414-020-09693-6>
- Armstrong, T. (2016). *The Power of the Adolescent Brain: Strategies for Teaching Middle and High School Students*. Alexandria, VA: ASCD Press.
- Bates, R. (2004). A critical analysis of evaluation practice: the Kirkpatrick Model and the principle of beneficence. *Evaluation and Program Planning*, *27*, 341-347. <https://doi.org/10.1016/j.evalprogplan.2004.04.011>
- Bar, M., Aminoff, E., Mason, M. & Fenske, M. (2007). The units of thought. *Hippocampus*, *17*. 420-8. doi: 10.1002/hipo.20287.
- Brockner, J. (1988). *Self-esteem at work: Research, theory, and practice*. Lexington, MA: Lexington Books.
- Carey, B. (2014). *How We Learn*. New York, NY: Random House.
- Chang, N. & Chen, L. (2014). Evaluating the learning effectiveness of an online information literacy class based on the Kirkpatrick framework. *Libri*, *64*(3), 211-223. <https://doi.org/10.1515/libri-2014-0016>
- Chen, G., Gully, S. M. & Eden, D. (2001). Validation of a new general Self-Efficacy scale. *Organizational Research Methods*, *4*; 62. doi: 10.1177/109442810141004
- Covington, J.A. (2012). *Efficacy of webinar training for continuing professional education: applications for school personnel in k-12 settings* (Ph.D. dissertation, University of North Carolina) Retrieved from <https://eric.ed.gov/?id=ED550661>
- Dale, Edgar. (1969). *Audio-Visual Methods in Teaching*, 3rd ed., New York, NY: Holt, Rinehart & Winston.
- Duhigg, C. (2002). *The Power of Habit*. New York, NY: Random House.
- Elmore, E.B. (2020). Role Play. ABL Connect, Harvard University. Retrieved 10/10/20. <https://ablconnect.harvard.edu/role-play-research>
- Embi, Z.C., Neo, T.K., & Neo, M. (2017). Using Kirkpatrick's evaluation model in a multimedia-based blended learning environment. *Journal of Multimedia Information System*, *4*(3), 115-122, 2383-7632. <http://dx.doi.org/10.9717/JMIS.2017.4.3.115>
- Fernandez-Alcantara, A. L. (2019). John H. Chafee Foster Care Program for Successful Transition to Adulthood (H.R. 1892). Congressional Research Service. Retrieved 10/10/20. <https://fas.org/sgp/crs/misc/IF11070.pdf>
- Gardner, D. G., & Pierce, J. L. (1998). Self-esteem and self-efficacy within the organizational context. *Group and Organization Management*, *23*, 48-70.
- Gollwitzer, P.M. & Sheeran, P. (2006). Implementation intentions and goal achievement: a meta-analysis of effects and processes. *Advances in Experimental Social Psychology*, *38*, 69-119. doi: 10.1016/S0065-2601(06)38220-1
- Hicks, M. (2017). Youth at Risk for Homelessness Model Intervention: Planning Phase Summary.
- Kapp, F., Prose, A., Narciss, S., & Kördle, H. (2015). Distributing vs. Blocking Learning Questions in a Web-Based Learning Environment. *Journal of Educational Computing Research*, *51*(4), 397–416. <https://doi.org/10.2190/EC.51.4.b>
- Kirkpatrick, D. L. (1959). Techniques for evaluating training programs. *Journal of the American Society of Training and Development*, *13*, 3-9.
- Kirkpatrick, D. L. (1976). Evaluation of training. In R. L. Craig (Ed.), *Training and development handbook: A guide to human resource development* (2nd ed., pp. 301–319). New York: McGraw-Hill.
- Kirkpatrick D. L, Kirkpatrick J. D. (2006). *Evaluating training programs: The four levels* (3rd ed.). San Francisco: Berrett-Koehler Publication.
- Maier, H.W. (2002). Role playing: structures and educational objectives. *International Child and Youth Care Network*, *36*. Retrieved 10/10/20. url: www.cyc-net.org/cyc-online/cyc0102-roleplay.html.
- Mayer, R.E., Moreno, R., Boire, M., & Vagge, S. (1999). Maximizing constructivist learning from multimedia communications by minimizing cognitive load. *Journal of Educational Psychology*, *91*:638-643. doi: 10.1037/0022-0663.91.4.638
- Murre, J.M.J. & Dros, J. (2015). Replication and Analysis of Ebbinghaus' Forgetting Curve. *PLoS ONE* *10*(7): e0120644. <https://doi.org/10.1371/journal.pone.0120644>
- NCES (National Center for Education Statistics). (2020a). Children's Internet Access at Home. Retrieved 10/10/20. https://nces.ed.gov/programs/coe/indicator_cch.asp
- NCES (National Center for Education Statistics). (2020b). Public High School Graduation Rates. Retrieved 2/2/21. https://nces.ed.gov/programs/coe/indicator_coi.asp
- Ofen, N., Tang, L., Yu, Q. & Johnson, E.L. (2019). Memory and the developing brain: From description to explanation with innovation in methods. *Development Cognitive Neuroscience*, *36*: 100613. doi: [10.1016/j.dcn.2018.12.011](https://doi.org/10.1016/j.dcn.2018.12.011)
- Pew Research Center. (2018). Teens, Social Media and Technology. Retrieved 10/10/20. <https://www.pewresearch.org/internet/2018/05/31/teens-social-media-technology-2018>
- Rao, D. & Stupans, I. (2012). Exploring the potential of role play in higher education: development of a typology and teacher guidelines. *Innovations in Education and Teaching International*, *49*(4), 427-436. doi: <https://doi.org/10.1080/14703297.2012.728879>
- Schulkind, L., & Sandler, D.H. (2019). The Timing of Teenage Births: Estimating the Effect on High School Graduation and Later-Life Outcomes. *Demography*, *56*(1), 345–365. <https://doi.org/10.1007/s13524-018-0748-6>
- Schwarzer, R. (2004). Documentation of the Self-Efficacy scale. Retrieved 10/20/20. <http://userpage.fu-berlin.de/health/selfscal.htm>

- Schwarzer, R. & Luszczynska, A. (2005). Self-Efficacy, Adolescent's risk-taking behaviors and health. In Parajes, F. and Urdan, T. (Eds.) *Self-Efficacy Beliefs in Adolescents*. (pp.139-159). Greenwich, CT: Information Age Publishing.
- Schwarzer, R. & Warner, L.M. (2013). Perceived Self-Efficacy and its relationship to resilience. In S. Princy-Emury & D.H. Saklofske (Eds.), *The Springer Series on human exceptionality: Resilience in children, adolescents and adults: Translating research into practice* (pp. 139-150). doi 10.1007/978-1-4614-4939-3_10
- Shail, M.S. (2019). Using Micro-learning on Mobile Applications to Increase Knowledge Retention and Work Performance: A Review of Literature. *Cureus* 11(8): e5307. doi: 10.7759/cureus.5307
- Shams, L. & Seitz, A.R. (2008). *Benefits of multisensory learning. Trends in Cognitive Sciences*, 12(11), 411-17. doi: <https://doi.org/10.1016/j.tics.2008.07.006>
- Snyder, R.A. (2016). *The Social-Cognitive Neuroscience of Leading Organizational Change*. New York: Routledge.
- Stott, T. (2013). Transitioning youth: Policies and outcomes. *Children and Youth Services Review*, 35:218–227. <https://doi.org/10.1016/j.childyouth.2012.10.019>
- U.S.ACF (Administration for Children & Families). (2019). Brief #7: Highlights from the NYTD Survey: Outcomes reported by young people at ages 17, 19, and 21 (Cohort 2). Retrieved 10/20/20. <https://www.acf.hhs.gov/cb/resource/nytd-data-brief-7>
- U.S.DHHS (Department of Health and Human Services). (1999). United States Public Laws The Foster Care Independence Act of 1999. Retrieved 10/14/20. <https://library.childwelfare.gov>
- U.S.BLS (Bureau of Labor Statistics). (2017). Median Weekly Earnings by educational attainment, 25 years and over, 2016 annual averages. Retrieved 10/20/20. <https://www.bls.gov/spotlight/2017/educational-attainment-of-the-labor-force/home.htm>
- Wieber, F. & Gollwitzer, P. M. (2017). Planning and Control of Action. Meusburger et al. (eds.) *Knowledge and Action*. doi: 10.007/978-3-319-44588-5_10
- Yardley, S. & Dornan, T. (2012). Kirkpatrick's levels and education 'evidence'. *Medical Education*, 46(1), 97-106. <https://doi.org/10.1111/j.1365-2923.2011.04076.x>
- Zelazo, P.D. & Carolos, S.M. (2012). Hot and cool executive function in childhood and adolescence: Development and plasticity. *Child Development Perspectives*, 6(4), 354-360. doi: <https://doi.org/10.1111/j.1750-8606.2012.00246.x>