Odyssey of the Mind: Using a Creative Problem-Solving Competition to Promote Career Readiness in Elementary School

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Abstract

The career landscape has changed dramatically over the past two decades with the adoption of technology and an increasingly global and virtual workforce. As a result, schools and academic institutions must go beyond current curriculum to teach and develop the new skills and competencies that are required to keep pace with the demands of careers in the 21st century. This article examines the adoption of the Odyssey of the Mind program—a competitive creative problem-solving model—as a way to teach, develop, and demonstrate social emotional intelligence and other related soft skills that are necessary to master for current and future career success.

Keywords

career readiness, soft-skills, Odyssey of the Mind

Over the past three decades, the landscape of work and career has changed dramatically. "Technological and organizational changes have increased the importance of interpersonal interactions in the workplace" (Borghans, Weel, & Weinberg, 2006, p. 2). Skills and competencies for career success have had to evolve to keep pace with the introduction of technology and the implementation of an increasingly global workforce.

Aside from standard academics, there is growing evidence of need for the development of soft skills when educating students and preparing them for the world of work.

> Soft skills refer to a broad set of skills, competencies, behaviors, attitudes, and personal qualities that enable people to effectively navigate their environment, work well with others, perform well, and achieve their goals. These skills are broadly applicable and complement other skills such as technical, vocational, and academic skills. (Lippman, Ryberg, Carney, & Moore, 2015, p. 11)

In a study conducted by Hart Research Associates, "more than three in four employers say they want colleges to place *more emphasis* on helping students develop five key learning outcomes, including critical thinking, complex problem solving, written and oral communication, and applied knowledge in real-world settings" (Hart Research Associates, 2013, p. 22). Furthermore, there are

> five critical skills most likely to increase odds of success across all outcomes and which employers expect employees to have: social skills; communication; and higher-order thinking skills (including problem solving critical thinking, and decision-making); supported by the intrapersonal skills of self-control and positive self-concept. (Lippman et al., 2015, p. 4)

It is these five identified key soft skills that researchers believe will most enable youth (15-29) worldwide to be successful in the workplace (Lippman et al., 2015).

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There is also increasing evidence of a soft skills gap in today's workforce coupled with substantial growth in the number of people performing job tasks requiring soft skills from 1970 to 2002 (Borghans et al., 2006).

> Today's worker has to listen and speak well enough to explain schedules and procedures, communicate with customers, work in teams, understand customer concerns, describe complex systems and procedures, probe for hidden meanings, teach others, and solve problems. . . . and, schools today only indirectly address listening and speaking skills. (U.S. Department of Labor, Secretary's Commission on Achieving Necessary Skills, 1991, p. ix)

With the introduction of technology along with the growing presence of a global and virtual workforce, the need for soft skills in the workforce has never been more relevant.

The Currency of Soft Skills—What Employers Look for in Candidates

The National Association of Colleges and Employers (NACES) Job Outlook 2016 survey asked 201 employer members what they look for when they are seeking new college graduates for jobs. According to the survey, although written communication skills, problem-solving skills, verbal communication skills, and a strong work ethic were reported as important candidate attributes, it was the evidence of leadership (80.1%) and ability to work on a team (78.9%) that were cited as most important candidate attributes by responding employers (NACES, 2016).

> New post-industrial jobs in industries like business services, education, health care and office service jobs require higher levels of interpersonal and problem-solving skills because the work entails higher levels of human interaction and personalized responses to people's wants and needs. (Carnevale & Smith, 2013, p. 493)

The importance of social skills and being rewarding to deal with (teamwork) "is different from I–O psychology's emphasis on cognitive ability and education for career success" (Hogan, Chamorro-Premuzic, & Kaiser, 2013, p. 9). According to the National Research Council (2013), jobs increasingly require employees to work collaboratively with colleagues from different cultural, educational, and technical backgrounds making the need for employees to have social-emotional intelligence and the ability to successfully work in a team even more relevant (Hogan et al., 2013).

Evidence in the literature which highlights what employers look for in job candidates supports the notion that interpersonal skills and competencies such as teamwork, collaboration, leadership, responsibility, self presentation, and social influence are important 21st-century skills needed for success in the world of work. Furthermore, "an overview of empirical literature on wage returns to soft skills shows that soft skills are connected with significant wage returns and contribute to closing of the gender wage gap" (Balcar, 2014, p. 13).

Aside from the need to master and apply standard academic subjects such as English, math, and social studies, "business and political leaders are increasingly asking schools to develop skills such as problem solving, critical thinking communication, collaboration, and self-management" as well as related soft skills (National Research Council, 2012, p. 1).

The Partnership for 21st Century Learning (P21), a non-profit organization by a coalition that includes members of the national business community, education leaders, and policy makers, concluded that "a focus on creativity, critical thinking, communication, and collaboration is essential to prepare students for the future" and is among the most important skills, knowledge, and expertise students should master to succeed in work and life in the 21st century (P21, 2017). In addition, "enhancing emotional abilities in early years may provide children with a useful tool in achieving success during adulthood" (Ulutaş & Ömeroğlu, 2007, p. 1371).

In a study conducted on behalf of the Association of American Colleges and Universities, employers who are hiring recent college graduates say they "place the greatest priority on a demonstrated proficiency in skills and knowledge that cut across majors" and that "written and oral communication skills, teamwork skills, ethical decision-making, critical thinking skills, and the ability to apply knowledge in real-world settings are the most highly valued" (Hart Research Associates, 2016, p. 4).

"In the twenty-first century, mastery of the basic skills of reading, writing, and math is no longer enough. Almost any job . . . now calls for employees who know how to solve a range of intellectual and technical problems" (Wagner, 2014, p. xxii). For schools, colleges, and universities to respond accordingly to this evidence, the

> development of the full range of 21st century competencies within the disciplines will require systematic instruction and sustained practice. It will be necessary to devote additional instructional time and resources to advance these sophisticated disciplinary learning goals over what is common in current practice. (National Research Council, 2013, p. 5)

Teaching Soft Skills in School Settings

In an effort to standardize career readiness in U.S. schools for Grades K-12, the Common Core was developed in 2009 by experts and teachers from across the country as means to define the "knowledge and skills students should gain in order to graduate high school prepared to succeed in entry-level careers, introductory academic college courses, and workforce training programs" (Common Core State Standards Initiative, 2017). This is accomplished primarily by focusing on "developing the critical-thinking, problem-solving, and analytical skills students will need to be successful" through the established guidelines around the teaching of English language arts as well as mathematics (Common Core State Standards Initiative, 2017). Although the standards require that students "systematically acquire knowledge in literature and other disciplines through reading, writing, speaking, and listening," the Common Core Standards pay less attention to developing the necessary social and soft skills competencies that 21st century employers are requiring (Common Core State Standards Initiative, 2017).

According the American School Counselor Association's *Mindsets and Behaviors for Student Success Standards* on K-12 college and career readiness, there are certain skills and attitudes that today's students need to develop and demonstrate to be successful in college and in careers in the 21st century that go beyond Common Core Standards and encourage a holistic development of soft skills across a curriculum (American School Counselor Association [ASCA], 2014). Many of these skills and attitudes focus on the social/emotional development of students via the domains of Learning Strategies (demonstrating critical-thinking, creativity, and time-management), Self-Management (ability to delay immediate gratification for long-term rewards, perseverance, and ability to adapt to changing situations and responsibilities), and Social Skills (ability to demonstrate empathy, effective communication skills, and to successfully collaborate) in various settings (ASCA, 2014).

There seems to be a "current relative neglect of fostering students' creativity and problem-solving capabilities in traditional schooling" (Barak, 2013, p. 657). Despite attempts to standardize education to better align with the skills and competencies that employers look for, there are still gaps in academic curricula that need to be addressed in helping students become more career ready when gaining specific soft-skills and increasing overall social emotional intelligence. Current academic standards, priorities, and cost concerns play a major role in the adoption of new programs around career readiness. This article examines the Odyssey of the Mind (OotM) program as a potential solution in helping students gain more transferable soft- and social-emotional skills while also attaining current standardized academic requirements.

Adopting the OotM Program to Promote Career Readiness

Although there is much work needed to update educational policy and standards to sufficiently address the soft skills gap in public education, there are educational school-based programs that show promise in their ability to help students develop the social/emotional intelligence competencies and related skills necessary to succeed in today's workplace. OotM is one such program.

OotM is an international creative problem-solving program and competition created for children Grades K-12. OotM was first founded in 1978 as a way to engage students in learning by encouraging and rewarding teamwork, divergent thinking, and public performance via the creative solving of problems and projects.

Each year, OotM offers teams a choice among five different predefined long-term problems to solve. The long-term problems fall into five general categories which are mechanical/vehicle, technical performance, classics, structure and performance in nature, and whose specific problem criteria change each year (Creative Competitions, 2017). Through the solving of these problems, students have the opportunity to actively gain skills and experience in various aspects of technology, engineering, history, the classics, and performance art.

Students learn how to successfully work as a group by finding a solution to a complex problem with several limitations (that does not have one "right" solution), while on a strict budget, on a deadline, and without any adult/outside assistance. Solutions are performed in front of judges and involve theatrical performance, design elements, and set and prop construction. In addition, teams also compete in spontaneous creative problem solving by generating answers to never seen before problems which are delivered in either verbal, verbal/hand-on, or hands-on formats. Teams can be judged on creativity of their answers as well as on their teamwork ability.

> By working in teams, participants learn teamwork, the appreciation and understanding of others, and that a group is a more powerful thinking force than an individual. They develop a sense of self-respect and respect for others through preparatory activities such as brainstorming and role-playing. (Creative Competitions, 2017)

Another important feature of this program is that team members develop all of the ideas for their solutions. Students are required to do all the work themselves without the outside assistance of adults, thereby creating a unique sense of

ownership of the process and solution. The coaches may help teach skills and educate the team on ways of approaching and evaluating the problem, however, may not provide direct outside assistance. "Coaches must remember that Odyssey of the Mind is a 'hands-on' activity for students and 'hands-off' for adults" (Creative Competitions, 2017).

The OotM program is based on the premise that creativity can be taught and is designed as a competition around the creative problem-solving process. To be successful in the OotM program, students are encouraged to "identify the problem, brainstorm ideas, evaluate the ideas, choose the best idea, then develop and evaluate it" (Creative Competitions, 2017). As a result of this process, students who participate in the OotM program have opportunities to regularly engage in the development and practice of many of the soft skills that employers are looking for in their candidates including the ability to demonstrate teamwork, critical thinking empathy, effective communication, problem-solving, collaboration, perseverance, adaptability, creativity, and time-management to name but a few.

Adoption of the OotM program requires availability of parent and teacher volunteers who coach teams of seven students from varying grade levels throughout a season. Teams are coached to solve complex long-term problems as well as practice performing spontaneous verbal, verbal/hands-on, and hands-on problems. At the end of a 9-month season, teams from across a region convene for a formal competition. Teams from various schools compete against one another via the performance of their solutions which are judged by trained volunteers. All teams are given the opportunity to present their solutions at a regional completion, with top scorers advancing onto state and the world competition levels. In 2017, more than 850 teams from around the world competed at the OotM World finals (Creative Competitions, 2017).

There are several benefits for students participating in the OotM program. Aside from the creative aspects of this competition, OotM teams have valuable opportunities to learn and engage in social emotional intelligence by learning how to work effectively in diverse groups, respect the ideas of others, while also gaining greater multicultural awareness. Multicultural competence is demonstrated by not only working with (and competing against) diverse teams at local, regional, state, and global levels, but also through the various themes of long-term problems being solved which often require students to research classics and global items of interest to incorporate into their long-term problem solution.

Successful communication is one of the key components of an effective OotM team. When student teams are assigned, it is not unusual to have a variety of different personalities and communication preferences among team members. Learning how to navigate varying communication styles while accomplishing a team goal is a powerful and highly transferable soft skill in the workforce.

> It is important for workers to understand and value communication approaches that are different in style from their own, as well as adjust their style when in communication with someone who has a style that is different from their own. (Carnevale & Smith, 2013, p. 495)

Regardless of the score rankings of a team on competition day, developing, negotiating, and experiencing effective teamwork and learning to successfully collaborate around a common goal over the course of the OotM program are a few of the potential benefits of participation. Furthermore, the OotM experience provides an educational and experiential platform for students to learn, practice, and develop skills and competencies around adaptability, critical thinking empathy, time and money management, creativity, and perseverance. Given the scope of the program, ease of adoptability into a school, and relative cost-effectiveness, the OotM program offers a unique and affordable solution where students learn, develop, and create highly transferable skills, experiences, and competencies helping them become more career-ready and better prepared to engage into the global workforce.

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