A close-up photograph of a waterfall cascading over dark, wet rocks. The water is white and frothy as it falls. In the top right corner, there is a green triangular graphic element containing a stylized white 'if' logo.

Education for Sustainability approaching SDG 4 and target 4.7

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SDG Fortune Teller: A Tool to Promote the Sustainable Development Goals

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Abstract

The aim of 193 countries working toward 17 goals requires knowledge and involvement from every single person, and the SDG Fortune Teller is a good start. As Chair of Education of the United Nations Association in Orange County, California, U.S.A., the feeling of responsibility and urgency spreading this relevant message was clear. As a result, a tool was developed. An easy to use, affordable, colorful, and fun tool to help educators, and the public learn about and spread the 2030 agenda: The SDG Fortune Teller. By using the ancient art of origami, we can use paper to construct two SDG Fortune Tellers, where each fortune teller contains 8 of the 17 goals. Goal 17 is placed on the back to reinforce the concept of partnership. The Fortune Teller can be incorporated into any curriculum by any teacher and instructor, but also has the potential to be used in any presentation around the 2030 agenda since it taps curiosity, releasing dopamine, and activating long-term memory. The ultimate purpose of

this tool is to support the agenda, by people becoming familiar with the SDGs and eventually turning passions into actions by thinking globally and acting locally.

Keywords: SDGs, tool, Education for Sustainable Development, curiosity, agenda 2030.

The Sustainable Development Goals (SDG) Fortune Teller

The United Nations (UN) has been actively leading efforts toward international development since their inception in 1945. However, their approach has been shattered and disjointed until the 90s when finally, three main pillars were adopted to work collectively to promote economic, social, and environmental development. (Kumar, Kumar, & Vivekadhish, 2016). These three main pillars were key in the Millennium's adoption Development Goals (MDGs) in 2001 by putting people and their needs upfront.

According to Ban Kin Moon, the MDGs presented a variety of reasons for shortfalls in progress towards the 8 goals for 15 years. The main reasons are "lack of progress to unmet commitments, inadequate resources, lack of focus, and insufficient interest in sustainable development" (Fehling et al., 2013). For others, the MDGs cannot be fully met because of how the goals were designed (Clemens, Kenny, & Moss, 2007), lack of metrics, civil society was not involved, and the agenda was only designed for developing countries.

According to the United Nations, 193 countries adopted a new set of goals in 2015. The new agenda's primary focus was based on finding a

balance between planet and people considering prosperity in order to achieve the peace we all want.

According to the United Nations (2015) report, with this in mind, 193 countries gathered in the United Nations' Headquarters on September 2015 and agreed on a new set of global goals that will replace the Millennium Development Goals MDGs. A new agenda was born with a new set of goals: The Sustainable Development Goals (SDG). This new agenda will be effective for the next 15 years and it will be our road map, a new blueprint to achieve a better and more sustainable future for all of us and our upcoming generations (United Nations, 2015).

But how do the MDGs differ from the SDGs? The MDGs did not have an active role in the civil society organizations (Waage et al., 2010). Another flaw was that this agenda was conceived by government heads and leaders. In addition, the MDGs had little emphasis on social justice, equity, empowerment nor human rights (Fukuda-Parr, 2010). Meanwhile, the SDGs to begin with, its conception and design reflect the collective work from the beginning. Unlike the Millennium goals, the new agenda was not designed top down, but the community was fully involved from the beginning in a bottom-up manner. Popular consultations were held globally, and over 7 million people shared their priorities, challenges and what they face every day. The findings were collected using a platform - MY World 2015 (<https://vote.myworld2015.org/>). Similarly, to the MDGs, the new findings cover issues such as health, poverty, and education, but other elements were added, such as climate, life below water, peace, justice, and partnerships were incorporated to achieve the objectives. This agenda is inclusive, and its logo represents a circular system, which reminds us that all the goals are interconnected and there is no hierarchy but a symbiotic relationship between the goals.

The result is an agenda that reflects the intention and commitment of 193 member countries of the UN. The promise of working collectively

to forge a better future, by eradicating poverty and injustice, and instead working toward dignity for all while nurturing respect for our planet.

Another difference between the MDGs and the SDGs is that the new agenda has instruments to assess whether the goals are being achieved. There are metrics, 17 goals were adopted with 169 goals that serve as a guide for evaluating progress and compliance for 15 years. Unlike the MDGs, the civil society can contribute their suggestions on priorities and progress using Myworld 2030 - <http://myworld2030.org/>.

In addition, it is critical to understand the 2030 agenda is not just another framework for governments and nonprofits to drive growth and purpose (Da Costa, 2019) but the SDGs are a critical step toward human development (Kwee, 2021) by enriching society in different fronts such as social, cultural, political, even technological, and economical around a human axis around nondiscrimination, equity, and human rights.

With this in mind, the private sector is a key stakeholder that could boost and speed up implementing the SDGs by 2030 (Rashed & Shah, 2021). More and more companies across the globe have incorporated the 2030 agenda as a cross-sector collaboration addressing global challenges, by meaningful partnerships and programs around the 17 SDGs (Coca Cola Company, 2022). Coca Cola, for instance, is a strategic partner to achieve the agenda, not just because of its commitment and contribution disclosing the advancement publicly, but also it is an entity that can help with the metrics. The United Nations only has presence in 193 countries meanwhile Coca Cola has presence and operates in 200 countries (Coca Cola, 2022).

Companies worldwide have discovered the power of sustainability by tapping into the SDGs through corporate social responsibility, environmental initiatives, and a circular economy. All these areas are required to support the implementation of SDGs. The SDGs tied well with

brands, since consumers today don't just buy a product or service; but they are looking for a deeper purpose. They want to build relationships with almost the entire supply chain; from manufacturers with values to producers. Users are constantly evaluating the dynamics of consumption and how it affects the environment (Lazebnikov, 2021), how responsible and ethical companies are with their vendors, clients and even workers.

According to the World Business Council, Colombia has done a decent job with the SDGs by incorporating them into the 2014-2018 National Development Plan. It was one of the 20 countries that publicly and voluntarily shared their progress in 2016. In collaboration with the Swedish government, a virtual platform was developed to publish and communicate the objectives, developments, progress, and metrics of each goal by promoting transparency (Reyes, 2022). According to the World Business Council for Sustainable Development in 2018, public and private companies in the sector were pioneers by incorporating the SDGs into their internal plan. This reflects the important role of the private sector in Colombia with the SDGs and the proper compliance with the 2030 agenda. This effort was led by 19 companies summarizing and breaking down their contribution toward sustainability by emphasizing their goals, management, and strategies (Reyes, 2022).

The companies that were part in this sustainability initiative were: Pavco, Postobón, Seguros Bolívar, Telefónica / Movistar and Tigo UNE, Amarillo, Bavaria, Cámara de Comercio de Bogotá, Cemex, Condensa y Emgesa (Grupo Enel), Constructora Bolívar, Corona, Davivienda, Ecopetrol, ElectroHuila, Findeter, Holcim, Itaú. (Reyes, 2022). (It is important to highlight the list does not have a particular order of contribution or priority).

As the years pass, the year 2030 looks closer, and the agenda gets a sense of urgency. According to the United Nations report in 2022, the proper progress toward the SDGs has slowed down, and the pandemic has disrupted our track (The United Nations, 2020).

That is why to reach the 2030 agenda. We need not just the work of governments, and the private sector, but also NGOs and civilians working collectively. Individuals must become change-makers. They require the knowledge, skills, values, and attitudes that empower them to contribute to the sustainable development goals, and education is key providing the proper competences to do so. According to Kwee (2021), students should be better equipped with self-directed learning, critical thinking, problem-solving and future-oriented skills that drive solutions to achieve environmental integrity, economic viability, and social justice. Educators have not been trailblazers promoting the SDGs. It is clear the educative system is falling behind spreading and advancing the 2030 agenda because of the lack of support, tools and training encompassing the SDGs. According to Kwee (2021), "instructors' personal beliefs are aligned with the proper incorporation of the SDGs if there is a school plan or curriculum reorientation supported by professional training with proper tools". As seen in Smith et al. (2016, p.37) publication, this is even more critical when teaching and mentoring designers since design can be understood as a powerful practice that takes part in giving form to the future" (Smith et al., 2016, p.37). There is no area more fundamental to sustainability future than design, specifically the balance between design and environment: "the story of design is the story of our relationship with the environment" (Skene and Murray, 2015, p.280).

So, if we think about our future as agents full of purpose capable of achieving environmental integrity, economic viability, and social justice, it can be very convoluted and almost utopian (Keith et al., 2019).

That is why it is imperative to provide better opportunities for Education for Sustainable Development (ESD) and social design capable of bridging the gap between theory and practice (Gaughwin & Ellice-Flint, 2021). We know instructors are pivotal agents bridging this gap by empowering students in the classrooms and properly engraving the SDGs. This knowledge will be carried on once the students are active

leaders and contributors to society (Rieckmann, 2017). In order to include the SDGs into the curriculums in ESD and social design, we cannot expect to incorporate a traditional approach but an interdisciplinary and holistic method (Biasutti et al., 2018) by considering the subject and students' learning outcomes (SLO) as well.

Desing process

The SDG Fortune Teller is a tool designed by Isabel Treidl, chair of education and young professionals in the Southern California, United Nations Association, to help spread the 2030 agenda. The goal was to support educators and instructors by providing a fun and engaging framework to introduce the agenda and generate projects around the 17 goals.

The idea was tested locally, and later at the division level. That is why this tool has been translated not only into the official languages of the United Nations (English, Spanish, Russian, Arabic, French, Mandarin, and Portuguese), but also Japanese, German, Hindu, and Farsi. Currently, working in Vietnamese, Ukrainian and Hawaiian; It is key to constantly adding more languages because it is believed that such a complex agenda needs collaboration in every corner of the planet (Treidl, n. d). By tapping into more languages, more collaboration can be brought into the table. According to the American Psychological Association, "collaborating across cultures and growing beyond the boundaries of self-interest offers a way forward for progress on the world's big issues" (Clinton, 2019).

Method

A tangible tool was created: The SDG Fortune Teller. Its purpose is to inspire and serve as an aid not just for educators but individuals to ensure

we become familiar with the 17 goals and “all learners gain knowledge and skills needed to promote sustainable development, including among others through education for sustainable development and sustainable lifestyles, human rights, gender equality, promotion of a culture of peace and non-violence, global citizenship, and appreciation of cultural diversity and of culture’s contribution to sustainable development” Teachers, instructors, docents and even presenters can access this tangible tool to teach the Sustainable Development Goals inside their classroom, workshops or any conference or event where this topic is relevant. (Treidl, n. d)

The idea is simple: two SDG Fortune Tellers. SDG Fortune Teller 1 has the first eight SDGs (Figure 1) and the other one has the remaining 8 SDGs (Figure 2). Both work together, you can play with one or both. The last SDG, #17, is on the reverse side of the paper as a large picture. This is because the fortune teller works with multiples of 8, but also because Goal 17 is Partnership for the Goals. This goal is vital, since it shows the importance of cohesive and coherent work among all governments, entities, and individuals. Finally, the reverse side of the SDG Fortune Teller (Figure 3), besides having SDG #17, has the UN SDG website as a reference resource. Teachers, educators, kids, and parents can access the website to learn more about the goals. (Figure 4) (Treidl, n. d). Find the tool Appendix A. Online <https://www.una-oc.org/fortune>

The SDG Fortune Teller idea is more than a colorful piece of paper that has the potential to create a fun, engaging experience that promotes the learning of the 17 SDG. It is a tool for joyfulness that increases curiosity, which is the primary fuel for deep learning. (Perry, 2000) By tapping curiosity, students learn more and learn better (Ostroff, 2016). Curiosity can release dopamine, which makes the hippocampus function better, or activates long-term memory (Ostroff, 2016 P. 5). The Fortune Teller has colors, numbers and images in a configuration that helps the

Figure 1. Fortune Teller 1 SDG (1-8)



Figure 2. Fortune Teller 2 SDG (9-16)



Figure 3. Fortune Teller Reverse SDG# 17



Figure 4. SDG Website



user to become more familiar with the SDG and eventually learn them by heart in a natural process.

The SDG Fortune Teller is also a metaphor for our future. Can we tell how it is going to be? Can we guess? Maybe not, but at least we all can work toward our future, a better future. That is why 193 countries agreed to work on 17 goals for 15 years. By 2030, we expect our future will be better. Over 2,000 SDG Fortune Tellers have been distributed. The SDG Fortune Teller has been in notable hands, such as the past president of the United Nations general assembly H.E. Peter Thomson from Fiji. Even Ban Ki-Moon and António Guterres have enjoyed the tool by tapping their curiosity and playfulness. The Fortune Teller has visited colleges, universities, and even Capitol Hill in Washington DC and the General Assembly in New York, promoting the SDGs and raising awareness of the 2030 agenda.

Table 1 summarizes some competences that can be developed by using the SDG Fortune Teller with projects around the 2030 agenda (Van Norren & Beehner, 2021).

Table 1. Competences for Sustainability defined by UNESCO

Competences	Description
1. System thinking competency:	The ability to recognize and understand relationships to analyze complex systems; to think of how systems are embedded within different domains and different scales; and to deal with uncertainty.
2. Strategic competency:	The ability to collectively develop and implement innovative actions that further sustainability at the local level and beyond.

Competences	Description
3. Self-awareness competency:	The ability to reflect on one's own role in the local community and global society to continually evaluate and further motivate one's actions; and to deal with one's feelings and desires.
4. Collaboration competency:	The abilities to learn from others to understand and respect the needs, perspectives, and actions of others (empathy); to understand, relate to and be sensitive to others (empathic leadership); to deal with conflicts in a group; and to facilitate collaborative and participatory problem solving.
5. Critical thinking	The ability to question norms, practices and opinions; to reflect on own one's values, perceptions and actions; and to take a position in the sustainability discourse
6. Problem-solving integration	The overarching ability to apply different problem-solving frameworks to complex sustainability problems and develop viable, inclusive and fair solution options that promote sustainable development
7. Normative competency:	Understand and reflect on the norms and values that underlie one's actions; – negotiate sustainability values, principles, goals, and targets, in conflicts of interests and trade-offs, uncertain knowledge and contradictions. (UNESCO, 2017)
8. Anticipatory competency	The abilities to understand and evaluate multiple futures—probable, and desirable; to create one's own visions for the future; to apply the precautionary principle; to assess the consequences of actions; and to deal with risks and changes.

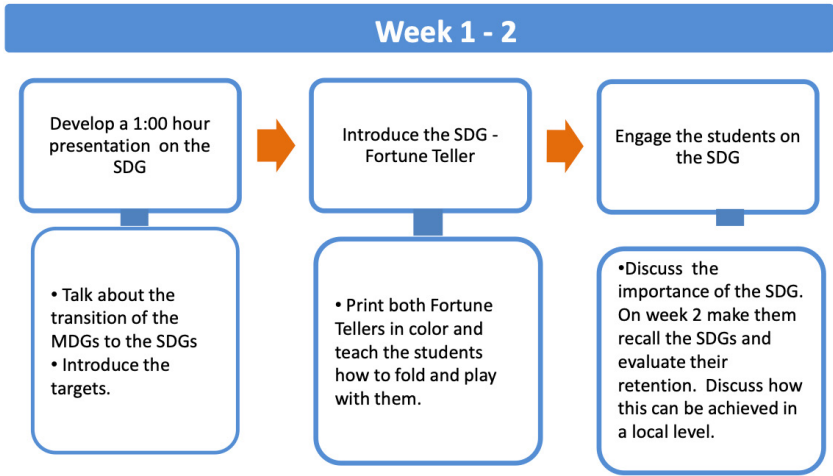
Source: UNESCO (2017).

Ways of Using the SDG Fortune Teller:

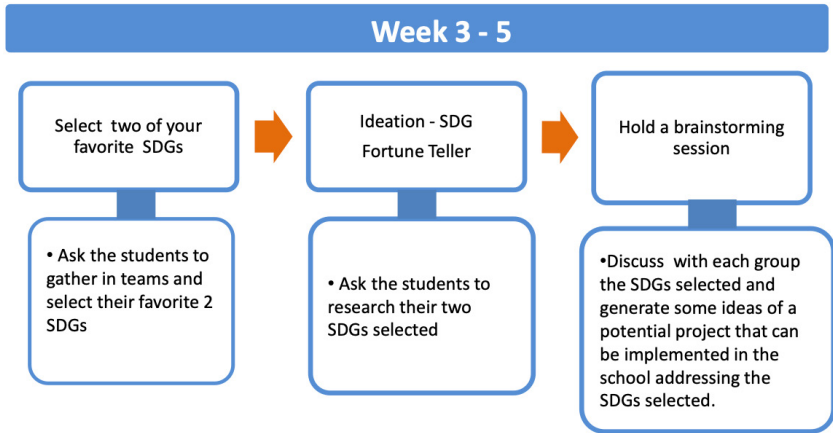
- Introduce the transition from the MDGs to the SDGs.
- The SDG's Fortune Teller tool can be downloaded at no cost <https://www.idea-dispenser.com/public-speaking-and-storytelling>. Once the students are familiar with the agenda, they can select a specific goal (s) and work around it.
- The selected goal (s) can be the foundation to develop a project at a school level with the support of teachers and educators. This is a good way of teaching research, critical thinking analysis, and social responsibility skills. The most urgent mission now lies in turning knowledge into action to address the world's most serious sustainability challenges (Cheng, 2020).
- Socialize the projects and achievement done in schools thanks to the Fortune Teller and SDGs projects by using social media and videos through the power of storytelling using some hashtags: #sdgs #USAforUN #sdgfortuneteller @unasoutherncalifornia
- Scale the model to other schools, neighborhoods, and other entities, such as museums and institutions, in order to advance our agenda for 2030.
- Create videos and tutorials to inspire others and spread awareness of the 2030 agenda. The charts 1- 4 show the method adopted in some institutions in Southern California when introducing the SDGs and using the SDG Fortune Teller. The institutions use a quarter system that has 10 weeks.

Charts 1- 4 summarize the SDG Framework to use the SDG Fortune Teller.

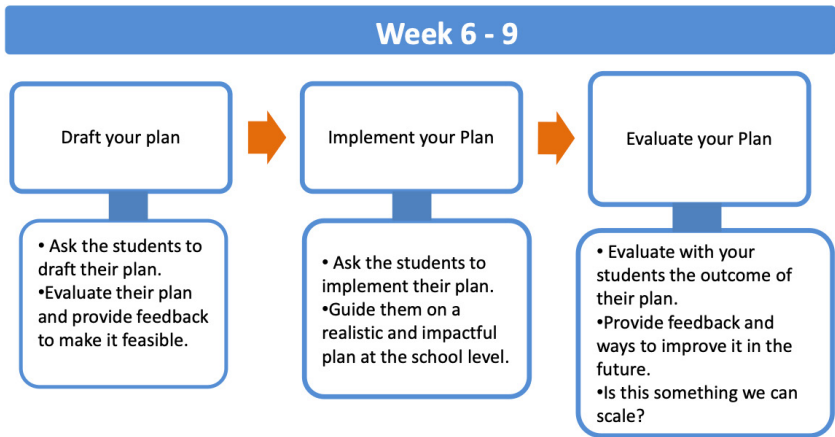
The chart 1. Framework to use the SDG Fortune Teller week 1- 2



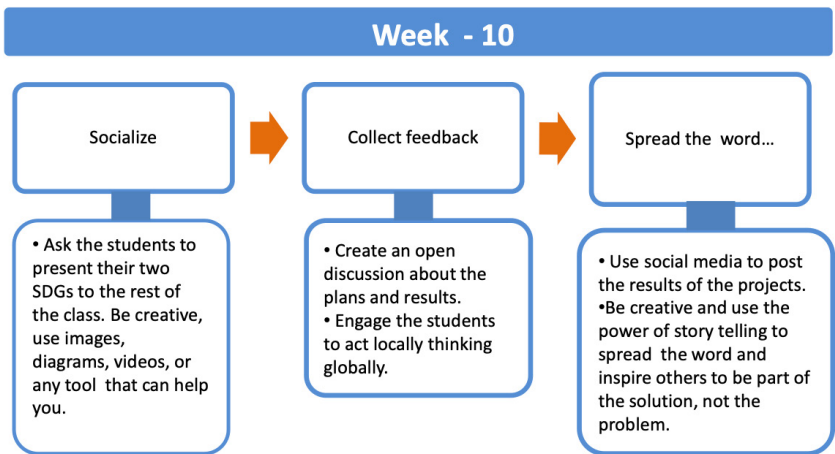
The chart 2. Framework to use the SDG Fortune Teller week 3- 5



The chart 3. Framework to use the SDG Fortune Teller week 6- 9



The chart 4. Framework to use the SDG Fortune Teller week 10



Document the results, including the institution, number of students, age of the participants. We want to evaluate the impact. Do the students remember the SDGs? How were the outcomes of the local plan activity? Did you receive any feedback from the students, parents, or any stakeholders? Collaboration is key. Socialize with other educators who

are teaching the SDGs to get a better idea of how to reach this agenda and share your students' plans as well.

Be active in supporting your student's passions and guide them when they are researching and creating their plan for the two selected SDGs. Guide them on a plan that is impactful, realistic, and workable, but also think big. Contemplate the idea of a plan that can be scaled into other classrooms locally, regionally, nationally, and even worldwide. Remember, this agenda requires the work of everyone on all levels and your work is crucial and valuable to achieving the goals.

Finally, the SDG Fortune Teller is a tool that can bring us closer to achieving the SDGs. This tool has the potential to generate awareness, remembrance, but above all concrete actions. In the United States, it has already permeated homes, sparked dialogue, and led projects around the 17 Sustainable Development Goals in Southern California. Colleges and Universities such as Santa Ana High School, Heritage High School - Orange County, West Coast College, SOKA University, Fashion Institute of Design and Merchandising and UC Irvine to name a few, have already used the SDG Fortune Teller (Figure 5).

Challenges and recommendations

A challenge encountered when creating the tool was to introduce it properly; however, in 2016, the tool was presented to a large audience at the Ronald Reagan building and International Trade Centre in front of over 800 people during the Leadership Summit of the United Nations Association. Many chapter leaders of the association took the tool home and started working with the English version. Another challenge was to distribute the tool physically. Thanks to a donor in Los Angeles, it was possible to print out over 1,000 SDG Fortune Tellers in the U. S and South America.

Figure 5. SDG Fortune Teller users



Other challenge has been finding more channels of communication. The idea is to bring the SDG Fortune Teller to more people, by tapping into more collaborations. A recommendation is to find more partners that can benefit from it and believe in the agenda's importance. In this order of ideas, the SDG Fortune Teller has been introduced to the Global Network for Sustainable Development (GNSD) during summer 2022 and by Fall 2022, the idea is to work actively, as the goal is to teach youth

about sustainability using the principle of “learning by doing”. The GNSD implements its mission by creating sustainability and Peace Clubs in schools. Members of these clubs can be involved in local community projects, as well as in the Sister Schools Project, creating partnerships between schools in different countries. The plan is to create 20 such partnerships between schools in Ukraine, Poland, Nepal, India, and the USA (GNSD, n. d). With this in mind, the tool is now being translated into Ukrainian and Hindi; however, Bengali needs to be introduced as well considering the number of speakers which is actually 265 million speakers (Bangla ranked at 7th among 100 most spoken languages worldwide, n.d.) and finally, Polish, and Nepali, also called Gorkhali will be added to the languages considering the GNSD potential partnership.

Conclusion

To conclude, it is important to highlight that the SDGs are not just another framework for governments and nonprofits to drive popularity and engagement; but it is critical to understand that the 2030 agenda reflects the needs of governments, the private sector, NGOs, academia, and civil society's necessities. The SDGs are rooted in basic pillars for economic, social, political, and environmental development with a common axis around nondiscrimination, equity, and human rights. Hence, it is an ambitious and robust approach because it defines and reflects us as developing and complex creatures. It is easy to fall into the tendency of complaining about what is not working, but yet; we forget our role in bringing solutions. To execute a plan, it is key to have both a blueprint and a map; the SDGs are exactly that. So, in order to address complex problems, we need a holistic approach with thorough solutions involving everyone on all levels and all corners. The path to reach the 2030 agenda has been challenging, and the pandemic added an extra layer by disrupting the advancement and slowing down progress around the 17 goals. One sector won't be able to fulfill the agenda and reach

all the goals. Synergies are important and education is strategic to not just cultivate skills in students, but to also grow mindsets and develop positive and sustainable behaviors through ESD. That is why instructors and professors are pivotal agents supporting the future designers and future generations that will lead and shape society, while protecting our planet and respecting each other. The SDG Fortune Teller provided an easy and engaging tool that promotes creativity and curiosity by fueling deep learning. The goal is to turn passions into actions by learning the agenda, selecting a goal, and working on realistic projects around the 17 goals. The ultimate scope is to think globally, act locally and the SDG Fortune Teller is a good start. In the U.S., the SDG Fortune Teller has permeated some schools, homes, and institutions, but the 2030 agenda needs more and better channels to spread the message and engage everyone. Finally, the recommendation is to create more tools and methodologies to support the SDGs. We cannot afford another pandemic or WWII to understand that united we achieve more, by working together we can bring the best of each other every day, and eventually will create impactful, lasting change collectively.

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