

**American Galvanizers Association
Galvanize the Future: Richard L. Brooks Memorial Scholarship 2022**

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Essay Question 2: HDG Marketing and Advertising Proposal

Hot-dip galvanizing (HDG) education should not be a one-time passive impartation of facts to K-12 and college students. Instead, it should be a meaningful and periodical learning opportunity for them to utilize at different grades and in future design and research fields.

After studying the 6 articles and online course regarding HDG, I learned that this special zinc coating is very beneficial for various constructions in the U.S., such as on buildings, utility poles, and road barriers. HDG is versatile and applicable to fabrication, architecture, engineering, chemistry, and product design industries. It helps combat steel corrosion at a reasonable price and makes the national infrastructure more durable with a longer lifespan. Therefore, HDG technology can preserve tax dollars for citizens. Moreover, zinc is abundant, easy to find, and recyclable. Because the HDG process has been developed over a century, the production process is mature and efficient. Also, this zinc coating is aesthetically pleasing and creates smooth silver surfaces that cover up the uneven steel texture.

Since HDG has many advantages and became more popular, I want to design a composite marketing and advertising plan to educate the younger generation of America. The concept of my proposal is a periodic, diverse educational experience for a targeted group of the student body from K-12 to college in all major cities in America. The benefits of HDG should be shared from a student's perspective in an efficient, engaging, and fun way, and let them practice what they learned through rewarded activities. To create a positive, long-term impact on students, I decided to merge the marketing plan with the advertising campaign and let the two strategies complement each other. For positioning, the marketing plan is teaching and practicing based that generates active learning and interaction within the particular students, while the advertising campaign is mission-based and broadcasts the core message through well-designed visual presentation to the potential student group. Lastly, the complexity level of HDG education should adjust according to the school grade.

For the following step, I researched the current stage of American high schools and colleges to determine the targeted and potential students. Based on research, 16% of high school seniors are proficient in STEM (Science, technology, engineering, and mathematics) subjects, and 19% of college students are awarded STEM bachelor's degrees.¹ The ratio of STEM students in high school and college is similar, and those STEM students can be the targeted students, and the rest are potential students for the proposal. K-8 students can also be categorized as potential students.

Next, I designed a marketing plan that intends to increase the percentage of targeted students in high schools and colleges. Meanwhile, giving more in-depth learning opportunities to HDG and encouraging them to utilize their knowledge for personal benefits in real life. At first, both the time frame of the marketing and advertising plan is four years (2022~2026). Because elementary school to college are all designed in a four-year interval, I believe an annual HDG education would be more successful than a one-time event. In a typical school year, the fall semester is the most appropriate time for extracurricular events and outdoor learning because of moderate weather conditions. Thus, the specific time frame for the plan should be executed from August to September.

Although the benefits of HDG might not directly resonate with students' personal life, this could help high school students to make college and major decisions, and guide college students to make career and research decisions related to HDG. Therefore, all the media used in the marketing plan aim to entice STEM students to learn HDG actively and guide them to HDG related majors and careers.

The media for the marketing plan included the AGA student membership system, rewarded national contests, certificated training programs, HDG expert lecturing at schools, city HDG project tour, booklets, animation, real HDG samples, and related souvenirs.

The AGA student membership system is a good way for the existing STEM students in college to learn about HDG benefits. Just like the American Institute of Architects (AIA), their student membership system is free and constantly updated with information. Via direct email newsletters, AIA can send the newest contests, design precedents, and research to students and let them learn and participate in architectural activities. Therefore, by inviting college students to join the AGA membership, they are willing to learn more about HDG and stay informed. Even more, they can proudly put this membership in their CV/resume to apply for jobs for their career benefits. For the architecture students, they can also reference the precedents in the newsletter to design high-performance HDG buildings in their studio class.

¹ <https://floridarti.usf.edu/resources/format/pdf/STEM%20Snapshot.pdf>

For the rewarded national contests, it is divided into 3 types (essay, film, and design) to entice high school and college students of different skills to learn HDG and participate. For example, the essay competition can attract students who are good at writing; the film competition can attract students who are good at digital editing to make a film or animation regarding HDG, and the design competition can attract students who are good at visual presentation to design a sculpture or house that utilizes HDG. To grab students' attention faster, the competition news can be posted in school announcements, newsletters, or posters and distributed in STEM clubs. When a high school senior won one of the competitions, he can use it to apply to his favorite university and has a higher chance to get enrolled. Therefore, competition can be set up in the fall semester to entice more seniors to learn HDG.

Next, the certificated training programs, HDG expert lecturing at schools, city HDG project tours, booklets, animation, real HDG samples, and related souvenirs could cooperate in middle and high school. A typical middle or high school offers a science class that is mandatory for all students, and this class occasionally invites guest speakers and takes students on field trips. Therefore, this is the ideal opportunity to bring HDG education to middle and high school students. For instance, a science teacher can assign the certificated training programs in class or online as their homework before the next day's lecture and field trip (city HDG project tour). On the next day, the HDG expert can come into the classroom, give a lecture, watch an HDG cartoon, pass out HDG samples (let students compare and contrast the quality of the same material with and without HDG coating), and take the students to a city HDG project tour to look at several HDG projects. After the trip, the lecturer can pass out HDG booklets, handouts, and souvenirs for students to keep. This is an education process taught from a student's perspective. Younger students often learn things through senses, like touching, seeing, and hearing. Therefore, this holistic education experience with multiple media can help students to know how and why HDG is sustainable, durable and protective to the national infrastructures.

As previously mentioned, this marketing plan above would be better with advertising support. The advertising campaign is designed to display core HDG messages to the general student body for all levels of schools. It also aims to attract non-STEM students to learn HDG. The HDG marketing and advertising plan are categorized as extracurricular STEM education. Because it contains detailed information with specific terminologies, it is difficult to arouse the non-STEM students' interest to learn about the benefits of HDG. However, most students, especially in K-8 schools, can understand things easier with strong visual presentations. Therefore, the barrier needs to be solved so a regular student can also be willing to learn about HDG.

A successful advertising campaign occurs in the right place and time and through the right media. Also, it can grab the immediate attention of the audience through thematic design. To advertise HDG to students, the media should be aesthetically pleasing and engaging to young people between 4~22+ years. In 2014, researchers found out that 7 in 10 shoppers agreed that packaging design can influence their purchasing decisions.² Therefore, a good visual design can attract more students of different grades to look at the advertisement and study HDG. Meanwhile, it can raise HDG awareness, aggrandize conversation, and invite them to participate in HDG activities. Because the advertising campaign complements the marketing plan, it should also be held in the same fall semester period.

The advertising strategy is divided into digital and traditional media. Generally, digital media is suitable for college students ranging from 18 to 25 years old; the traditional media is suitable for all school levels and concentrates from 4 to 17 years old. For the digital advertisement context, it includes keywords (texts), images, videos, links to membership, courses, and competitions. It can be displayed on campus through billboard screens in public space (cafeteria, dorm lobby, classroom hallway, etc.), and displayed in school email newsletters, AGA official website, and social media. Most American young adults use social media such as Facebook, Instagram, Snapchat, TikTok, and Twitter to acquire various news and chat with their friends and classmates. The advertising campaign can take advantage of these platforms and post positive and fun HDG knowledge.

For traditional paper media, the layout design must have a unique style. Because presentations with visual aids were found to be 43 % more persuasive than unaided presentations,³ the paper media (booklet and handout) should read like a comic book rather than a document. A comic book tells a story through exciting illustrations and narrative plots. Thus, linking the core message of HDG with well-designed illustrations and photos through a sequential narrative will captivate the young students. Other traditional media, like a series of items, can also be kept as souvenirs while allowing students to recognize HDG. HDG and related keywords can be printed as logos on pens, t-shirts, and post-it-notes, etc. Many colleges give out free t-shirts to attract high school seniors to apply to this school, so this campaign can also use it to entice students. In this way, HDG could become a fashion icon on campus.

In the end, HDG technology is important and worthy to be spread out to the younger generation. By creating a composite, periodical marketing and advertising plan will provide a thorough education experience to K-12 and college students. Through quality media, students can understand quicker and clearer why HDG is valuable and useful, and how it could relate to their future.

² <https://www.globenewswire.com/news-release/2018/05/04/1496881/0/en/New-Survey-Unveils-7-in-10-Consumers-Agree-Packaging-Design-Can-Influence-Purchasing-Decisions.html>

³ <https://www.seyens.com/humans-are-visual-creatures/>