

Assessment 2: Educational Online Community Analysis

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EDTC 816 Advanced Building Online Communities

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NEUROMAKER

1. Introduction

Neuromaker is a company that provides real-world examples and experience with project-based learning. They sell hardware, software, and ideas on modifying curriculum with new innovations in the field of STEM. The company provides content that introduces students to the foundation of engineering design, biomedical innovations, and artificial intelligence. The company offers webinars and classes in all STEM subjects (inclusive capstone), giving away prizes due to performance. This company has its vision and mission presented below.

Mission Statement

Prepare our youth to succeed in the global job market through industry-specific STEM education.

Vision Statement

The NeuroMaker Advisory Board will help ALL STEM/CTE educators and students in the NeuroMaker community prepare thoroughly for their future with leading-edge technology.

NeuroMaker is a company that connects its brands with online and real communities. A brand-owned community gives brands direct access to customers and fans without restrictions from large social platforms (Grunberg, n. d). The company has grown its online community with its brand through partnership personnel covering North, South, and Central America, Europe Middle East, and Australia.

2. The goal of their organization seeking to accomplish through their online community

NeuroMaker STEM aims to provide the current cutting-edge products and high-quality curriculum that school districts might supplement or add an entire program. Their goal is to connect with their community and assist them step by step with innovation that guarantees success in education. Many members of online communities are motivated because either effort toward the task or successful completion of the task is intrinsically rewarding, independent of other downstream consequences of performing the task (Kraut & Resnick, 2011). The company aims to assist students with real-world examples and project-based learning experiences.

Communities correlate in general with dynamic processes. They are constantly changing in response to outside forces and the contribution of individual members (Abe, 2020). Although they have a very professional team in partnership and sales, product and development, and user experience, their goal is to find interested people in sharing their innovative ideas regarding technology, engineering, and science. The goal is to grow their design competition, the neuromaker challenge, for middle and high school students and motivate them extrinsically by giving away prizes for the winners.

Another important goal that needs to be pointed out is that their team strives to increase their domain of activities by contacting and working directly with educators and administrators to develop customized pathways that expose students to industry skills and state-of-the-art technology. This is why our group did not experience difficulties contacting the company and getting some insights about the NeuroMaker for STEM. They figured out their goals; therefore, they know their brand, and they know their audience and customers.

3. The actions they have taken toward accomplishing these goals.

The company invented products from the real world to apply in the STEM field aiming for middle to high school level of education. NeuroMaker HAND (prosthetic device) and curriculum are derived directly from real-world prosthetic products to foster industry-specific skills while delivering a truly immersive experience (NeuroMaker, n. d). In this online product community, users talk about experiences, product details & services or share entertaining information about a product (W4, n. d). They introduce students to biomedical innovation, artificial innovation, engineering, manufacturing, etc. Also, they encourage students to participate in their complimentary inclusive capstone, The NeuroMaker Challenge.

In The NeuroMaker Challenge, students from different schools create their teams to sophisticate the application of NeuroMaker hand by modifying various sensors creatively. For instance, some students could add pressure sensors to the fingerprints of the Neuro hand; their purpose was to find out which sensor works the best (which sensor fits the best on the fingers and is more efficient). They were competing to figure out or sophisticate the hand, the robotic and coding skills are used to complete the work. They were able to fit sensors in the thumb and fingers to apply the level of touch. If someone in need uses this hand, it gives them the feeling of the touch or grip. Another group chose to put in the heat sensor and came up with a great solution. When the hand touches the cold object, the sensor indicates the blue color. When the hand touches the hot object, the sensor indicates the red color. The company reaches its goal of sophisticating the product through the creative work of students and other participants participating in The NeuroMaker Challenge.

As we mentioned in the introduction through networking, the company has grown its online community with its brand through partnership personnel covering North, South, Central America, Europe Middle East, and Australia.

4. The metrics they employ to understand their progress toward these goals.

Metrics have been crucial in the company's growth from 2015 until today. The company Bianco, 2015 was founded by student innovation in the lab at Harvard. In 2016, Bianco, a parent of NeuroMaker, introduced the hand to the STEM field. The NeuroMaker STEM team expands and begins to offer NeuroMaker HAND, head bend, BCI, and professional development solutions to key locations nationwide (NeuroMaker, n. d). The company was born in a lab by working few students and grew into a company that spread its activities to at least four continents.

Another invaluable metric to control the company's progress is Google Analytics which monitors the traffic of people who visit your website. Also, they can monitor where the traffic is coming from. Other metrics are monitoring and tracking traffic on social media, twitter analytics, and

Facebook insights. In addition, They send direct messages to their partnerships to ask for feedback and evaluate their comments. It is a poor business if they send many messages but do not get many comments. For example, If, of those 10,000 hits, only three comments were posted, the potential vs. actual engagement ratio is pretty poor (Mortier, 2019). The company keeps track and monitors testimonials and reviews from the participants, which is not an accurate instrument to measure the progress.

The greatest asset in measuring the company's progress is the demand and profit for its product. Companies do not share private information about the profit of their company. Based on the company's growth and its product's sophistication through its professional team and advisory board, the company thrives in its partnerships or online community. The product sells (revenue) such as : the hand NeuroMaker (prosthetic device), BCI Modules, curriculum, The NeuroMaker Challenge, and professional development is a precise metric or powerful instrument that measures the company's progress.

5. Conclusion: Is this organization successful? What recommendations would you make?

Yes, Neuromaker is a successful, privately funded for-profit organization. The company provides real-world examples and experience for project-based learning and ideas on how to modify curriculums with innovations in the field of STEM. Each of us comes from a different angle (Wegner, et.al, 2012). Their target audience includes middle to high school students, STEM educators, CTE educators, and Computer science educators. NeuroMaker views STEM in a holistic approach, particularly since they understand the value of each letter and the interdisciplinary nature of their programs. They note that fostering 21st-century skills makes the most significant impact within the community.

Metrics have played a crucial role in the company's growth. The company was born in a lab by working with a few students and eventually grew into a company that spread its activities to at least four continents. The parent of NeuroMaker was Bianco. Bianco was founded in 2015 by student innovation in the lab at Harvard. In 2016, Bianco (NeuroMaker) "potential" promised to redefine STEM programs and provide current cutting-edge products and high-quality curricula to school districts. Their ultimate goal is to connect with a school's community and assist them step by step with current, relevant, and transformative offerings in STEM education. In addition to students being immersed in first-hand experience with the engineering design process,

The company motivates students extrinsically to receive prizes for their performance and participation. Comparative performance feedback can be incredibly motivating for some people who may enjoy the thrill of competition and the feeling of beating a competitor (Kraut & Resnick, 2011). In addition, they are instrumental in developing and customized pathways that expose students to industry skills and state-of-the-art technology

Although Neuromaker does not consider its staff as founders or owners but as employees, NeuroMaker has a professional goal-oriented team in partnership with sales and product development. A joint task involves inputs from all group members. Cooperatively interdependent members tend to be more cohesive and committed to the group (Kraut & Resnick, 2011). The team continues working collaboratively to provide technology, engineering, science, AI, and BCI

(brain/computer interface) technology through scalable hardware, curriculum, challenges, and more. Digital systems make it possible to create an unlimited variety of virtual worlds, which exist in parallel with physical reality [documents \(psu.edu\)](https://www.psu.edu/documents/psu.edu). In the next ten years, their goal includes

- making prosthetics accessible for people with limb differences,
- delivering brain training for better mental wellness, and
- building a STEM learning platform that allows students to unlock new opportunities for their futures.

We chose NeuroMaker based on their goals, long-term vision, and intentional hands-on pursuit to increase their domain. Contacting and collaborating directly with students in the middle to high school level of education, STEM educators, CTE educators, and Computer science educators is a prime reason we chose NeuroMaker for STEM.

Member Contribution Table

1. Collaboration- One page listing each team member's area of responsibility

Members	Contributions
Duli Pllana	● Contributed on generating several questions for the interview. ● Contributed in several sections of the paper. ● ZOOM MEETING
Atiba Buckman	● Vetted multiple companies to see what aligned to group member interests. ● Conducted primarily correspondence ● Identified an organization, conducted the interview. ● Followed up with written Q&A (the questions were generated by the group members). Appendices attached.
Patricia Peterson-Bland	● ZOOM MEETING ● Email threading with team members on project ● Edit document ● Contributed to Conclusion

References:

Robert E Kraut and Paul Resnick, 2011. Building Successful Online Community, retrieved from, Free ebooks ==> www.Ebook777.com.

Jason Grunberg, Why Brands Should Build Online Community, retrieved from, [Why Brands Should Build Online Communities](#)

NeuroMaker, retrieved from, <https://neuromakerstem.com/en/neuromaker-challenge/>

Sarira Mortier, January 7, 2019. What to Measure and Why: How to track Community Engagement, retrieved from, <https://cmxhub.com/what-to-measure-and-why-how-to-track-community-engagement/>

Stephanie Abe, 2020. Why Brands with Online Communities Dominates in 2020, retrieved from, <https://www.adroll.com/blog/why-brands-with-online-communities-dominate-in-2020>

W4, WHAT TYPES OF ONLINE COMMUNITIES ARE THERE? Retrieved from, <https://blog.marketingblatt.com/en/why-should-a-company-create-an-online-communit>

Wenger, E, White, N. and Smith, J. (2012). Digital habitats: stewarding technology for communities. CPsquare.

APPENDIX A



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Appendix B

Our Goals



Educate

Our materials are designed to bring in cross-discipline knowledge and skills into tangible results. Students can create their own self-guided projects, creating an engaged and balanced learning experience.



Engage

NeuroMaker students are constantly engaged in the world of assistive technology assisting people with different abilities.

Appendix C

Questions for **NEUROMAKER**

1. Do you consider your organization as an online community?
 2. Is your organization profitable or non-profitable?
 3. Do you consider your staff founders or owners?
 4. If your organization is an online community, how many members do you have?
 5. When was your organization founded?
 6. What was the goal of your organization?
 7. What is your goal now?
 8. What is your goal in the next ten years?
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1. How do you reach your memberships/partnerships?
 2. How do you motivate your members to participate in your program?
 3. How did you grow your partnership so fast and so great?
 4. How do you keep in touch with your partnerships (facebook, instagram, Email,...)?
 5. In which field of STEM your innovation finds a greater application Science, Technology, or Science?
 6. Do participants in the NeuroMaker 'challenge design competition' come up with creative ideas that lead to your educational innovations?
 7. Who represents your products in educational settings?
 8. Do you pay your members for the work?
 9. Literally, how do you consider your participants in your organization: members or workers of the company?
 10. Are you funded by any grant?
 11. Do the registered students in your classes pay tuition?
 12. Do schools pay for all your products?
 13. Do you sell the material from your webinars?
 14. Do you pay for the speakers in webinars?
 15. Do Participants in capstone have to pay tuition?
 16. How do you know your company is progressing?
 17. The Website shows a team of three groups; Who presents your product application in various schools to your partnerships?
 18. What is an adjective that describes **NEUROMAKER**?
 19. What are ways to motivate participation and contribution? What are some of the pitfalls?

Appendix D

(Questions with the answers from Neuromaker)

1. Do you consider your organization as an online community?

a. no

2. Is your organization profitable or non-profitable?

We are a for-profit company.

3. Do you consider your staff founders or owners?

a. They are employees. Not founders or owners

4. If your organization is an online community, how many members do you have?

a. We are not exclusively an online community.

5. When was your organization founded?

a. 2015

6. What was the goal of your organization?

To unlock the potential of BCI in areas that can impact billions of people.

We do this to spark the expansion of human potential. Our work unlocks the potential of BCI. We develop new BCI applications through our business units and have a long-term vision to build a company that has the potential to impact every person on the planet.

7. What is your goal now? Our goal is to empower our community with access to amazing resources that provide an interdisciplinary approach to learning.

8. What is your goal in the next ten years?

a. By making prosthetics accessible for people with limb differences, delivering brain training for better mental wellness, and building a STEM learning platform that allows students to unlock new opportunities for their futures, we are helping humanity evolve. Having a long-term vision to build

a company that has the potential to impact every person on the planet

1. How do you reach your memberships/partnerships? We work with our educators via our curriculum portal and our LinkedIn post.
2. How do you motivate your members to participate in your program? By providing educators access to high-quality content and curriculum. Including a wide variety of student activities and access to a free national competition
3. How did you grow your partnership so fast and so great? By providing our communities with a flexible STEM solution. As we know, STEAM looks different within every community. Our resources reflect the reality of the challenges faced by our partners. We also do not have any licensing or fees around access to our curriculum resources.
4. How do you keep in touch with your partnerships (facebook, instagram, Email,..)? (Same)
 - a. Direct email to educators
 - b. Virtual meetings with partners
 - c. LinkedIn post
 - d. Online resources and updates
5. In which field of STEM your innovation finds a greater application Science, Technology, or Science?
 - a. We, as an organization, view STEM with a holistic approach. We see the value of each letter due to the interdisciplinary nature of our programs. However, fostering 21st-century skills makes the greatest impact within the community.
6. Do participants in the NeuroMaker 'challenge design competition' come up with creative ideas that lead to your educational innovations?

a. We always love to see how students view and leverage our technology.

We always value students' feedback and ideas and love to share them on our NeuroMaker Challenge webpage to be shared with our community.

7. Who represents your products in educational settings?

a. STEM educators

b. CTE educators

c. Computer science educators

8. Literally, how do you consider your participants in your organization: members or workers of the company?

a. Employees

9. Are you funded by any grant?

a. No, we are privately funded.

10. Do the registered students in your classes pay tuition?

a. No, there is no cost for students

11. Do schools pay for all your products?

a. Schools only pay to access our hardware and professional development.

Though - they don't pay for the curriculum, software or the capstone entire

12. Do you sell the material from your webinars?

a. No

13. Do you pay for the speakers in webinars?

a. No

14. Do Participants in capstone have to pay tuition?

a. No

15. How do you know your company is progressing?

a. Number of users on our curriculum platform

16. The Website shows a team of three groups; Who presents your product application in various schools to your partnerships?

a. Sales

17. What is an adjective that describes NEUROMAKER?

a. Innovative

b. Interdisciplinary

c. Collaborative

d. Inspiring

18. What are ways to motivate participation and contribution? What are some of the pitfalls?

a. We provide our educators with all the resources they need to succeed and save time.

b. We provide students with access to a competition that takes place in the Fall and Spring.

Some of the pitfalls we face is getting educators comfortable with new technology.