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## Product-Oriented Learning

### *What Is It?*

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**P**roduct-oriented learning (POL) is one of the three essential elements of the entrepreneur-oriented education paradigm, together with personalization and global campus. While *personalization* is to transform the *what* of education (i.e., the curriculum dimension), and *global campus* transforms the *where* of education (i.e., the context and setting), *POL* is to transform the *how* of education (i.e., the pedagogy dimension). Product-oriented learning spurs substantive shifts changing learning from just-in-case to just-in-time, teaching from knowledge transmitting to facilitating product making, and learners from consumers to creators.

### POL vs. PBL

POL stems from project-based learning or problem-based learning (PBL), but it differs significantly from how PBL has

been practiced in most settings. The differences occur in the following five ways: (1) developing the entrepreneurial mindset vs. mastery of content, (2) initiated by student vs. initiated by teacher, (3) strength based vs. deficit driven, (4) quality of final product, and (5) use of final product.

### **Developing the Entrepreneurial Mindset vs. Mastery of Content**

The first significant difference is purpose. PBL is typically about mastery of predetermined academic content and skills. It is used to provide a more engaging learning experience to help students better master the desired learning knowledge and skill as implied by such phrases often associated with PBL as “learning by doing,” “learning by making,” and “invent to learn.” POL is about developing the entrepreneurial mindset, habits, and skills, which can only be developed through authentic entrepreneurial activities. Thus POL is practiced to engage students in producing meaning and valuable works, works that matter to someone. To create a product would certainly result in learning, but what is learned may not fit government-sanctioned standards or curriculum. The PBL phrases would be changed to “learn to do,” “learn to make,” and “learn to invent” in POL.

In other words, PBL’s primary concern is the content and skills prescribed in the curriculum. The project or product is only a vehicle to get to the curricular expectations, thus of secondary concern. Therefore, in most PBL practices, teachers start designing the projects by asking what projects are best suited to teach the desired content and skills. Even when they have an excellent project in mind, they work hard to find a way to demonstrate how it supports acquisition of the prescribed content.

Under POL, the primary concern is the product, the outcome of the project. The extent to which the project may help teach the prescribed content is of secondary or little importance. POL is not constrained by a preset curriculum or standards, so teachers do not have to force a project to fit the curriculum.

### **Initiated by the Student vs. Initiated by the Teacher**

The different purposes lead to the second significant difference between POL and PBL: Who is the initiator? Since PBL's concern is about ensuring all students learn the same prescribed content, teachers typically initiate the projects. They start with what needs to be taught and develop projects deemed most appropriate for teaching the content. They then ask students to participate in the project.

In contrast, POL gives students the opportunity to initiate projects because it is designed to develop entrepreneurial thinking. One of the most important qualities of entrepreneurs is alertness to opportunities or the ability to identify needs. To develop the alertness, POL starts by asking students to identify unmet needs or opportunities to improve existing conditions in a given situation. It then asks students to propose a solution to meet the needs or bring improvement. The proposed solution becomes the driving force for projects to be implemented.

### **Strength Based vs. Deficit Driven**

The third significant difference between POL and PBL is that POL is strength based, while PBL typically is deficit driven. Successful entrepreneurs often capitalize on their strengths and outsource their weakness as a way to differentiate themselves from competitors and maximize the effects of their resources. Thus POL focuses on helping students identify and develop their strengths by asking them how their strengths (passion, ability, social connections, and other resources) contribute to the project. In contrast, PBL aims to ensure that all students learn the same content and meet the same expectations, which often means to fix their deficit—what they are not good at.

### **Quality of the Final Product**

The fourth significant difference is in the process to ensure quality and rigor of the final product. Since PBL is concerned

about learning prescribed content, the quality of the final product may not matter at all, provided that the content is covered. POL, on the other hand, aims to develop in students an aspiration to be great instead of just meeting some artificial standards. It also aims to help students understand that greatness comes from sustained and disciplined efforts. Thus POL activities encourage students to be engaged in a process of seeking feedback and continuous revision to improve the quality of their products.

### Use of Final Product

Finally, POL differs from PBL in how the final product is used. Very often, PBL products end in a class presentation, school exhibition, or being sent home. But POL products should end with an authentic audience. In other words, POL products have real consumers—people can use the products to improve their lives.

## POL: AN ENTREPRENEURIAL EXPERIENCE

POL experiences mimic a typical entrepreneurial activity that includes the following essential steps.

### Identify Needs

Alertness to opportunity is an essential element of entrepreneurship. Thus in our attempt to cultivate entrepreneurs, it is essential to help students develop a habit of looking for and the ability to identify opportunities. Opportunities lie in unmet needs and dissatisfaction with the current condition. To develop the habit of discovering opportunities is to cultivate curiosity, unorthodox thinking, and an attitude to challenge the status quo. It is also to cultivate the ability to be empathetic about other people's conditions. Moreover, it is about seeing problems as opportunities and assuming responsibilities for proposing solutions to problems rather than complaining or waiting for someone else to come up with a solution.

To start, the teacher could ask students to make a list of things they are unhappy with in the school, or a condition they are not satisfied with, or an unmet need someone else may have. The teacher could also present a set of unsatisfying conditions, unsolved problems, or unmet needs in different communities. The specific situation can vary, but the overarching idea is to provide context in which children can find an entrepreneurial opportunity.

### **Come Up With an Idea**

While some students may have an idea right away, many would need to conduct extensive research and work on the need for a while before they can come up with a possible product or service to meet the need. Thus the second essential element is to engage students in the creative and research process that would result in a possible product or service.

Ideas can come from different sources. Students could consult with experts, examine the problem in depth, discuss with peers, or study comparable examples. To stimulate idea creation, the teacher could organize brainstorm sessions, field trips, or expert presentations. The teacher should not assume the entire responsibility for coming up with the idea. In fact, the student should always bear the responsibility for coming up with the idea. The teacher only serves to facilitate the process, create the context, provide resources, and make suggestions.

### **Assess Strengths and Resources**

Once a need is identified and a solution is suggested, entrepreneurs should assess whether they have the capacity and resources to meet the need. This is essentially a process of identifying one's strengths. But the strength does not mean what the student can do at the moment himself or herself. Rather it is what he or she can learn to do and with the help of others. It is also to determine if the need or problem is beyond the capacity and resources available to the student.

Understanding one's weaknesses and strengths is key to entrepreneurial success. We cannot expect all students to have the same abilities. It is thus an important step to provide the opportunity for students to learn how to identify and further enhance their strengths, while avoiding their weaknesses. It is also important to help students understand that they do not have to be equally good at everything, because what is missing in them could be "outsourced" to others, that is, partners. Hence, identifying one's strengths and weaknesses is also to learn about the strengths and weaknesses of others.

### Convince Someone

All entrepreneurs need to convince others of the value of their products or services, be it an investor, a partner, or someone who may work for them. Thus the product-oriented learning experience should include the requirement for students to convince others that the needs they identified are significant, the products they proposed are of value and feasible, and someone will "buy" what they produce. To do so, they may need to develop a business plan and make a public presentation in or outside the school to "sell" their ideas.

The stage of convincing someone may go beyond one single session because if the students fail to convince, they will need to revise their ideas and plans. The idea of multiple drafts, critique, and peer review is applicable at this stage as well as at the stage of product making.

### Make the Product or Service

Once the proposed idea is accepted, students move on to the product-making stage, which is similar to the project enactment stage in traditional project-based learning. At this stage, students work on their products as proposed, individually or in teams. To help improve the quality of the final product, the same process of "multiple drafts and critique" should be used. It is also desirable to seek the involvement of professionals as

reviewers and mentors and to apply professional standards to all products and services.

### **Market the Product**

Once the product is made, the students need to market it to its intended audience. Learning to market their products can help students better understand what is required to be an entrepreneur as well as the real needs of the world. The results may be a huge success or a complete failure. Either way, the experience can help students develop essential entrepreneurial competences—reflection, resilience, confidence, communication, and perseverance.

Marketing is also the stage when students learn marketing skills and marketing tools. Depending on the specific product and intended customers, students need to engage in marketing activities using a variety of media and venues. They could use social media such as Twitter and Facebook, traditional media such as posters, or talk to the customers face-to-face.

### **Post-Product Management and Maintenance**

The product-oriented learning cycle does not end with marketing. In some cases, students have to manage the sales and maintenance of the product. They may also need to upgrade the products, for example, in cases of software (e.g., a computer game). Or they may have to manage an online store that sells their products and maintain communication with users.

### **POL: SUMMARY**

To summarize, because it aims to cultivate entrepreneurial spirit and skills, the POL places more emphasis on the end products or services. They must not only be of high quality but also have appeal to an external audience. In POL, the students are in more control of the project. They propose and initiate the project. They need to convince the teacher to approve the project and, if needed, convince their peers to become partners.

And for that, they need to create a business plan, complete with documentations and analyses of targeted audience and needs, a feasibility analysis, and marketing strategies. The teacher, in this model, serves as the “venture capitalist,” who helps decide if the project is needed and feasible; the consultant, who provides suggestions and resources on demand; the motivator, who encourages at times of disappointment; the focus group, which provides feedback and critique on prototypes; and the partner, who provides complementary expertise and skills. The teacher or other adults could bring opportunities, help identify needs, make connections to potential customers, or make suggestions for potential projects because of the expertise and social capital—but ultimately, it is the students who should decide what products to make. In the mixed model, projects are often group based, that is, a group (an entire class, for example) of students works on the same project. In the entrepreneurial model, projects can be group based, but they can also be individually initiated.

The setting for POL can be individual classes, but more often than not, it requires a platform and culture at the school level for a number of reasons. First, in order to create high-quality products, students will most likely need large chunks of time beyond what a typical class period can offer. Second, the students will also need to have access to expertise beyond what one individual teacher could have. In some cases, such expertise may reside outside the school. Third, the knowledge and skills required to create authentic products would not fit nicely with one single school subject. Fourth, students will need some platform or venue to have access to potential customers. Finally, some students may be engaged in a project or service that is exceptionally time consuming, which would necessitate making special arrangement in terms of school scheduling.

### POL: CHALLENGES

POL shows a significant departure from traditional teaching, even from the new model of traditional teaching: PBL. It undoubtedly presents tremendous challenges to teachers and



schools. This book brings examples to illustrate strategies and recommendations to help schools and teachers interested in adopting POL to cultivate entrepreneurial students.

### QUESTIONS FOR YOU TO CONSIDER

Here are a few questions adapted from a World Class School Report Card (Zhao, 2012) for you to consider as you create a climate and culture of POL in your classroom and school.

- Is there an infrastructure in your school for students to develop, display, or market products and services?
- Are relevant policies that govern student products in place? For example, policies regarding ownership of intellectual property, patents, etc.?
- What products and services have students created?
- In what ways have the products and services of students been used?
- To what degree are students engaged in product-oriented learning?
- What percentage of student enrichment activities is product oriented?
- Is there an established process for reviewing proposals and products?
- Is there an established process and protocol for product improvement?
- Is there an established process to engage external experts from the broad community to participate in proposal and product review?
- Are there established criteria for products and proposal review?

### REFERENCES

Zhao, Y. (2012). *World class learners: Educating creative and entrepreneurial students* (1st ed.). Thousand Oaks, CA: Corwin.