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Education and innovation management: a contradiction? How to manage educational projects if innovation is crucial for success and innovation management is mostly unknown

Thomas Baumann , Kinsey Mantay, Alice Swanger, Gary Saganski , Sophie Stepke*

Orbitak International LLC, 31700 Telegraph Rd., Suite 250, Bingham Farms, MI 48025, USA

Abstract

Innovations are new combinations of means to reach goals (Hauschild, 2005). A program under the US DOL grant (December 2014) shows that industry innovation and project management can be transferred to education. The paper uses two cases to explain targets, project management, and cultural alignments (US/GER/JPN) to ensure this transfer.

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1. Introduction

Many industries, countries, and regions are recognizing a dramatic extant or upcoming gap (SVL, 2009) between the demand for and availability of skilled talent. In particular, the manufacturing industry is unable to fill vacant technician positions, due to a labor shortage of skilled workers (ROY, 2000). In 2013, Governor Rick Snyder addressed this issue (GAL, 2013) and indicated that he wanted Michigan to be a national leader in implementing innovative approaches to fill the skills gap. Because the future of American industry and its ability to compete in a global market is contingent on the competence and skill of its workforce, educators will play a pivotal role in its success or failure in their ability to provide innovative solutions for improvement (BHS, 2013; 2014, BHC, 2013).

In order to minimize training costs, industry relies on academic providers' ability to supply a high level of entry-level skilled workers. If educators are unable to meet industry's talent demands, manufacturers will increasingly view colleges as irrelevant (VW, 2013). If colleges are unable to find customers, (students and company sponsors), enrolments/revenue will decline. Additionally, companies and citizens will leave to more promising locations.

Innovative approaches in education are required. A holistic understanding and approach is required which encompasses the skills gaps, industry demand, existing academic products and delivery methods, communication gap between customers and providers, the image of technical careers, and the nature and role of public organization (LUB, 2009; 13). Because of the complex interdependencies the holistic “innovation approach” must include the relevant stakeholders (parents, companies, students, educational providers, communities, political organizations) and the innovation objects (mind-set, organization, products, processes, etc.).

2. Subject and structure of innovation in the private sector

To have an innovation, there must be a certain goal and the search for new possibilities to reach it. Karnowski (KAR, 2011:22) identifies innovations as ideas, actions or objects, which the adopter considers as new. Following these common and well-understood definitions of innovations, the “innovation result” can be “significantly” distinguished from the former status quo (ALB, 2005:25, (VES, 2010:13), and is “newly introduced” to the (educational) market, or to the adopter (company, college) (Vesshoff 2010:13).

2.1. Innovation significance

Innovations are crucial to create new products and processes, to increase profitability and market position, to outcompete rivals, and/or to enhance the benefit for the customer (innovation user).

An innovation can be seen from two perspectives. A “macro” perspective means the innovation is “new” to the world, industry or market, whereas a “micro” innovation is “new to the user”, (VES 2010:16, BED 2008:63, ALB 2005:6 & HAU 2005: 31, GAC 2002:112). Thus an innovation does not just new products/processes/procedures, but enhancements that will add to, open, or improve new approaches.

It follows that types of innovation can be divided into (1) “base innovations”, resulting from a completely new insight or experience, (2) “optimization innovations”, the development of new components or usage, (3) “adaption innovations” that integrate new ecologic, social, legal or technological standards into existing products, (4) “evolutionary innovation”, stepwise enhancements of key technologies, or (5) “revolutionary innovations”, which represent a significant change from the latest “status quo” of the product (BED, 2008, 62). We will use this structured approach when we discuss educational innovations. Hauschild (HAU2005:26) introduced “key dimensions” of innovations and suggested that they be used to evaluate products which might qualify as innovations by asking the questions indicated in Figure 1.

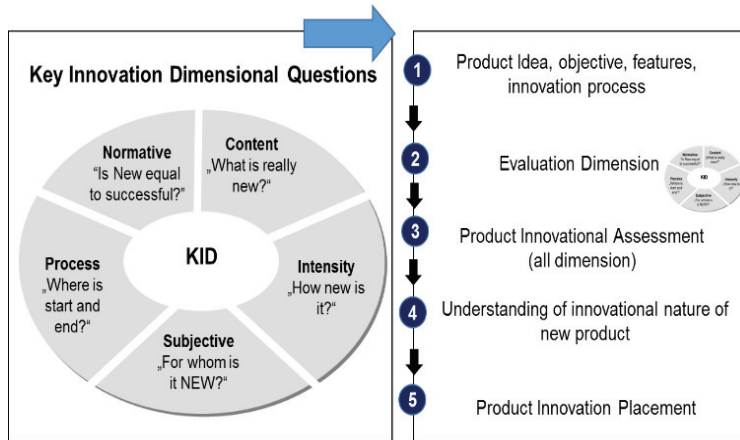


Figure 1: Key Innovational Dimensions and Assessment of product innovation nature (According HAU, 2005; 26-30)

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