

## IOT AND EDUCATION

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### ABSTRACT

*This article explores social class and gender differences in entry to the two main higher education sectors, universities and institutes of technology, among school leavers in Ireland over the period 1980–2006. A rational choice perspective is adopted, with participation hypothesized to reflect the costs and benefits attaching to attending the two types of institution. The initial expansion of higher education resulted in a widening of the participation gap between the higher professional and other groups, with some reduction thereafter as higher professional groups reached near-saturation levels. The removal of higher education tuition fees in 1996 was not sufficient to increase working-class participation in a context where other direct costs remained high and employment represented an attractive option. This article points to the value of taking a dynamic approach to analyzing higher education participation, unpacking the effects of expansion in provision and of the costs and benefits attached to higher education entry.*

**Keywords:** *Business sectors, Different ways of Education system, Higher education, Conclusion.*

### I. INTRODUCTION

The term was coined in 1999 by Kevin Ashton while working at P&G, he explains, “IoT is a network of physical objects that are connected to the internet. These objects such as sensors, smart phones, watches and electronics will transmit data via “The Internet” to the cloud providing a “smarter” service or experience for the user. This is what we mean by “smart technology.”

In a post by Huffington it is stated that, ***The Internet of Things (Iot) will soon be called the Internet of Everything (IoE). By the year 2020, it is predicted that more than 50 billion connected devices will be on the Internet. If Face book has its wish of connecting the other two-thirds of the world, this number could be predictably higher.***

We already know that technology and the Internet have been deeply rooted in the education sector. Thus, it won't take much long for this innovative tech to get a grip in the industry. In fact, some of the organizations have already started making good use of it. The Business Insider gives some examples of the technology being used in the education industry.



## II. HIGHER EDUCATION

Educational institutions are comprised of many moving parts. In order to succeed at what they do, they must be able to keep track of students. This can be done by leveraging the power of IoT that can easily keep track of people, assets and activities. The technology enables the educational institutes to track ID cards and wristbands storing the last-known location of a student or visitor, helping to ensure the right people are accessing the right areas on campus.

Tracking devices can ensure that students are accounted for in real time, minimizing time-consuming activities like recording attendance. With RFID (Radio Frequency Identification) equipped backpacks, students can be automatically checked in as they board the bus. Similarly, the proliferation of smart ID cards and wristbands means students can be automatically marked “present” when they walk through the classroom door.

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One example is of a school in Richmond, California that embeds RFID chips in ID cards to track the presence of students. Even if students are not present for check-in, the system will track and log their presence on campus.

## III. DIFFERENT WAYS OF EDUCATION SYSTEM:

### 1. Connect academies all over the map

Some of the latest IoT artillery in this field includes digital highlighters, smart boards, and even smarter boards. This means your printed text could be digitally transferred to your smart phone or any other app at an incredible speed through tools like C-Pen and Scan marker. Interactive boards can receive, acknowledge, and reciprocate information, simplifying and accelerating the overall learning experience.

Just imagine a scenario where students sitting in a classroom or at their desk at home can interact with their classmates, mentors, and educators scattered across the world. Now, let’s suppose the lesson of the day is focused on sea life. To give students a really exciting and highly educational experience, the teacher decides to access live information generated through sensors and live feeds monitoring a particular body of water.

### 2. Conserve and sustain to survive and flourish

With the aid of the IoT, a variety of options are possible in terms of environmental and energy conservation, ecosystem regulation, traffic, and transport, to name a few, that can help schools build up their budgets and offer better learning opportunities. For example, a school district in Pennsylvania saved a fortune on energy by using the IoT to support its energy monitoring and control program and reinvested the savings into its education programs. After all, living a green lifestyle is the way to go for all of us we might as well put it to work so we can invest in more critical areas.

### 3. Win over students (and parents) with a safe and secure learning environment

The safety and security of students are paramount – whether you are a parent, educational authority, security official, or concerned citizen. With empowered sensors, RFIDs, cameras, and connected devices, monitoring

and surveillance of entire buildings is possible. Instant notifications, alerts, and configured actions would be a significant addition to the security and safety of schools and other educational institutions.

#### **4. Grant parity for all**

The connected world of everything has a lot to offer students who need modified learning plans and exceptions. There are already a number of devices, tools, and apps that create appropriate learning experiences while bringing them on par with the rest of the class. One such example is the Local shoe project, which enables the visually challenged to better navigate the world through technology.

#### **5. Turn learners into creators**

The IoT indeed promotes and paves the way for creativity – and for children, there’s nothing better than learning the nuances and applications of hyper connectivity firsthand. After all the predictions regarding the enormous number of connected communication and decision-making devices in the years to come, this is an excellent opportunity for schoolchildren to understand, build, and control such systems themselves.

### **IV. BUSINESS SECTORS**

Companies like Lowe’s are realizing that standard ways of planning for the future won’t get them where they need to go. The problem with traditional strategic planning is that the approach, which dates back to the 1950s and has remained largely unchanged since then, is based on the company’s existing mission, resources, core competencies, and competitors. Yet the future rarely looks like the past. What’s more, digital technology is now driving change at exponential rates. Companies must be able to analyze and assess the potential impacts of the many variables at play, determine the possible futures they want to pursue, and develop the agility to pivot as conditions change along the way.

This is why planning must become completely oriented toward and *sourced from* the future, rather than from the past or the present. *“Every winning strategy is based on a compelling insight, but most strategic planning originates in today’s marketplace, which means the resulting plans are constrained to incremental innovation,”* says Bob Johansen, distinguished fellow at the Institute for the Future. *“Most corporate strategists and CEOs are just inching their way to the future.”* (Read more from Bob Johansen in the Thinkers story, “Fear Factor.”)

Inching forward won’t cut it anymore. Half of the S&P 500 organizations will be replaced over the next decade, according to research company Inn sight. The reason? They can’t see the portfolio of possible futures; they can’t act on them, or both. Indeed, when SAP conducts future planning workshops with clients, we find that they usually struggle to look beyond current models and assumptions and lack clear ideas about how to work toward radically different futures.



**Figure - Describes the usage of IOT**

## **V. CONCLUSION**

The Internet of Things is closer to being implemented than the average person would think. Most of the necessary technological advances needed for it have already been made, and some manufacturers and agencies have already begun implementing a small-scale version of it. The main reasons why it has not truly been implemented is the impact it will have on the legal, ethical, security and social fields. Workers could potentially abuse it, hackers could potentially access it, corporations may not want to share their data, and individual people may not like the complete absence of privacy. For these reasons, the Internet of Things may very well be pushed back longer than it truly needs to be.

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