

**Business Plan**  
**True Dimension Education Inc.**



Submitted June 1, 2016 via email.

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Nathan Simpson, Tenth Grade.

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### *Biography Sheet*

True Dimension Education, Inc. was founded in October 2015 by five co-founders consisting of four high school students and one award winning educator. The business was founded as a part of the Young Entrepreneurs' Academy program (YEA!). YEA! Is a thirty-week start-up accelerator where high school students plan and start a business or social movement. The founders chose education as their focus because they are all passionate about fixing issues surrounding modern public schools.

The idea for True Dimension's predictive software came about when the founders' technology instructor, Jason Clark, encouraged them to focus in the psychology of education, more specifically course selection. True Dimension's software takes a student's past academic, attendance, and behavioral histories to predict how well a student will do in a particular course. This software can accurately predict a student's end of course grade within one point.

Throughout the process of founding a start-up, the True Dimension team has adapted their roles to fit their individual and unique skill sets. Nathan Simpson, a previous start-up founder with a successful exit in a different ed-tech venture has taken the role of the CEO. Nick Walton, a dual enrollment student, has used his skills to assist in time and resource allocation and coordination of funding. Geoff Zdziebloski, a programmer and A+ certified technician, has led the development of the predictive software. Brian Rubio, an honor student and restaurant manager has helped to expand the company into the Spanish speaking market. Jason Clark, an award winning educator with over twenty years of classroom experience, has provided the team with a tremendous amount of invaluable advice and guidance.

**APPOMATTOX COUNTY HIGH SCHOOL**

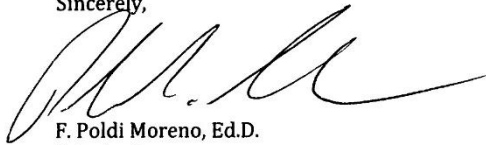
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PHONE: (434) 352-7146  
FAX: (434) 352-0822

April 25, 2016

To Whom It May Concern:

I certify that True Dimension Education was created by students of Appomattox County High School. I also certify that all content within this business plan is original, student work written for Skills USA.

Sincerely,



F. Poldi Moreno, Ed.D.  
Principal



**"ACHIEVING ACADEMIC EXCELLENCE"**

## *Executive Summary*

True Dimension Education, Inc. is an education technology business based in Appomattox, Virginia. The company will offer a software product which will determine a student's readiness and likelihood for success in a particular course by collecting the student's past academic history and comparing it against historical data. This software will use a machine learning algorithm which will analyze and manipulate nearly 500,000 data points in an average sized high school. True Dimension can predict a student's end of course grade accurately, within one point.

The software will use the collected data to provide suggestions that will assist students in making an informed course selection. True Dimension will also provide an equal opportunity for academic success to all students by adding an objective element to an inherently subjective decision. In other words, the product will provide the student, parent, and guidance counselor clarity in regards to course selection.

To develop and deploy the software, True Dimension will require an investment of \$15,000. This money will go towards development of the machine learning software application. The company has already signed one pilot school district with 2,000 students. Over the next month, True Dimension will be pitching the software to two more districts accounting for nearly 190,000 students.

### **Nathan Simpson**

- Visionary/Architect. Idea generation, shape features, repositioning, market fit, competitive landscape, research.
- Webmaster. SEO, analytics, domain registration, site hosting.
- Graphic Artist. Color coordination, logos, icons, image libraries, etc.
- CSS Designer. Usability, accessibility, layout, look-n-feel.
- Spokesperson. Outward promotion, product description, trade shows.

### **Nick Walton**

- Manager. Coordinates all team member activities.
- Tester. User interface / User experience.
- Graphic Artist. Color coordination, logos, icons, image libraries, etc.

### **Geoff Zdziebloski**

- Software development, agile, python, user stories.
- Integrations & API, Powerschool SIS/Interactive Achievement LDS.
- FERPA infrastructure, encryption, SSL.

### **Brian Rubio**

- Client side support, client-user training, customer relations. Spanish support.
- lead generator, sales, delivery.

### *Company Description*

True Dimension Education is a C-Corp registered in Virginia focusing in predictive analytics for education technology.

True Dimension's mission is to provide educators and administrators a way to enhance the classroom learning experience by playing a role in a student's course selection decision.

During February of 2016, the True Dimension team completed the business plan, problem interviews, and solution interviews. True Dimension is following the systematic way to launch a startup as outlined in Eric Ries' book, *Lean Startup*. In addition, the team met with a panel of four school administrators in the area. This meeting helped the company to finalize the business model.

In March of 2016, True Dimension signed Appomattox County Public Schools as an early adopter. This district has 2,000 students. The company also was awarded a \$1,500 grant from the Lynchburg Chamber of Commerce and selected to compete at the Saunder's Scholars competition in May.

In April of 2016, the company hired a graphic designer to design a minimally viable product (MVP). This MVP allowed True Dimension to approach early adopting schools which will pilot the software in the fall. These early adopters give True Dimension credibility with the potential to obtain angel investors in the short term. True Dimension also presented at the Skills USA Virginia State competition and received a gold medal. The company was selected to move on to the national Skills USA competition.

In May of 2016, True Dimension received four outside, equity investments totaling \$7,000. These investments gave the company a post money valuation of nearly \$100,000. The company also completed an application for a provisional patent on the process of using machine learning to predict a student's end of course grade.

To be successful as a company, True Dimension will need to create a product that will provide significant value for school administrators. The hardest part of creating this product will be proving that the software delivers long term, tangible results. Once the software is developed, tested, and its value is proven, True Dimension will be a successful company.

The goal of True Dimension is to create an educational environment that is beneficial to students. According to government research provided by the Department of Education, over one million students drop out of high school in the United States annually. That is the problem that True Dimension wants to solve. True Dimension will market directly to school administrators and curriculum developers. Virginia schools will be able to pay for the software using state funds via the Project Graduation Grant.

### *Company Ownership*

True Dimension Education is a C-Corp registered in Virginia. The founders chose this entity structure to protect individual liability. This entity structure is also more attractive to investors and venture capital than an LLC or S-corp.

The company filed official Articles of Incorporation and Bylaws with the Virginia Corporations Commission on May 19, 2016. True Dimension Education filled for an Appomattox County business license on the same date. The founders plan on filing a trademark on the use of True Dimension Education's name a logo. A provisional patent has been filled with the help of an attorney protecting intellectual property associated to the software.

True Dimension Education is an employee owned company. The founders set aside a ten percent equity pool for all current and future employees of the company. All shares will be released to the employee after an 18 month vesting period. Currently there are nine shareholders in True Dimension Education, Inc. Below the names and total shares are listed.

Name	Shares
Nathan Simpson, CEO	5,000
Jason Clark	1000
David Gaydos	500
Nick Walton	1650
Geoff Zdziebloski	1650
Rich Guild	200

This company plans to strengthen community relations by being corporately responsible. True Dimension has established an education grant where ten percent of profits will be distributed to underprivileged schools for technology within the classroom to aid in student success.

### *Product/Service Description*

True Dimension will initially offer a software product based on machine learning algorithms, which will determine a student's readiness and likelihood for success in a particular course. This software will use different types of data such as historical grade, behavior, and attendance records to provide course selection suggestions.

Once the data is collected, it will be analyzed by the decision tree machine learning algorithm. This algorithm will compare a student's history with other historical academic records to predict the likelihood of course success. In addition, the results will also reveal potential course issues and course advantages for students. Ultimately, the goal of the software will be to provide a student with tools to make an informed decision regarding course selection.

Here you can see a simplified sample predictive set. An actual predictor algorithm would consist of about thirty to forty 'if' statements. Here you can see seven.

#### **COURSE: AP English 11**

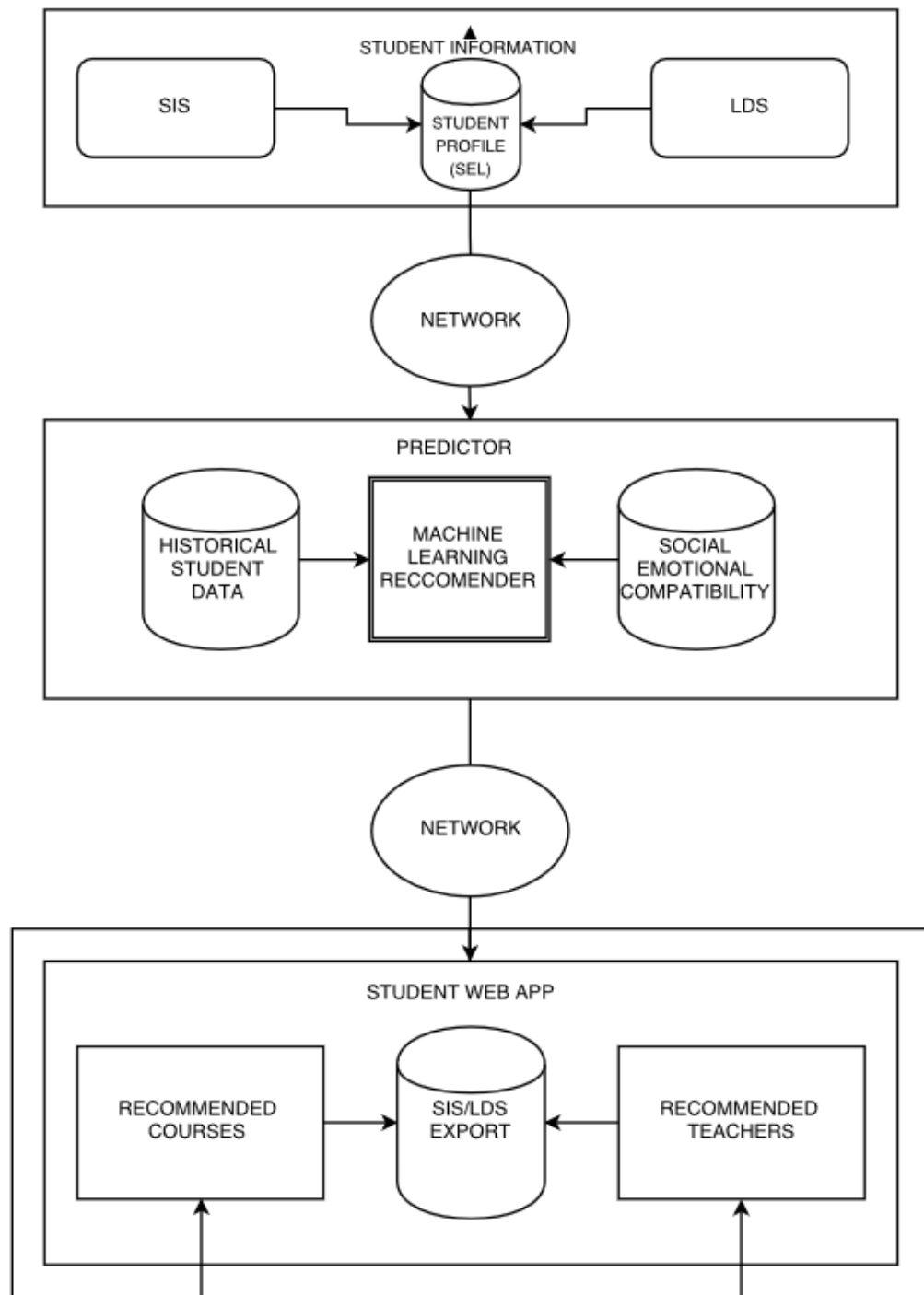
- IF student has 3.50 GPA: student success very likely.
- IF student is MALE with a GPA of 3.20: student success is likely.
- IF student is FEMALE with a GPA of 3.00: student success likely.
- IF student has no previous attempts at the course and a 3.25 in all GATEWAY COURSES: student success is very likely.
- IF student has STRONG compatibility with the instructor and a COMPOSITE GPA of 3.00: student success is likely.

#### **Contrarily,**

- IF student has a composite GPA <2.75: student success is unlikely.
- IF student has LOW compatibility with the instructor and a COMPOSITE GPA <2.9: student success is highly unlikely.



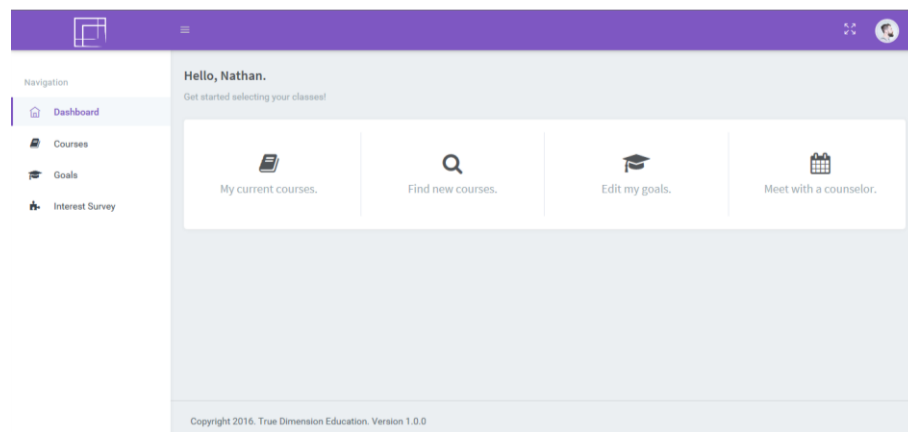
Below you can see a technical flowchart of how the software works.



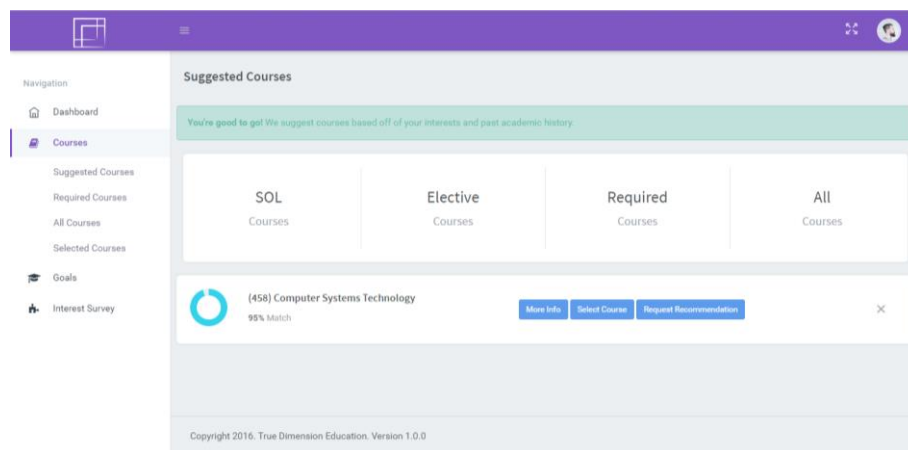
True Dimension will deliver the software through an online web application. This application will be fully responsive and mobile friendly. It will offer student and administrator dashboards. In the student dashboard, a student can view suggestions and select courses. In the administrator dashboard, a counselor or system admin can view, edit, and remove courses, students, and educators.

The software will be sold using a subscription model, also known as Software as a Service (SaaS). As previously mentioned, the software will cost \$2.00 per student per year for public schools and \$10 per student per year for private schools. The cost of this service was derived from the amount of value that it will provide. The software is priced lower than comparable educational software services.

**Here you can see screenshots of the web application:**



*Student dashboard*



*Course prediction display*

### *Product / Company SWOT Analysis*

#### Strengths:

- Founders' knowledge of the current way class placement is determined in schools
- Founders' age and connections with administrators
- The founders' past business experience and awards
- The company's mentors
- Agile and lean approach to building this start-up

#### Weaknesses:

- Lack of non-equity funding available
- Track record, or lack there-of
- Skill set of team members of developing a software in Node.js and Python

#### Opportunities:

- Educators are becoming much more forward thinking in their approach towards student personalities and how they fit into the classroom.
- Relatively low cost of entry into the market.
- Lack of competition in the market currently in this SaaS segment.

#### Threats:

- Established psychometric and educational companies could create a product similar if the concept is proven in the market. To prevent this, we will protect all intellectual property.

## *Market Analysis*

True Dimension believes that an objective class recommendation and placement tool is needed in K12 education. An analytical tool like this would allow administrators to make sure that the subjectivity of a teacher, parent, or student would not get in the way of the student's academic career by providing a road map for course planning.

In February of 2016, the True Dimension team met with a panel of four district level administrators. This panel consisted of curriculum directors for all levels of K12 in Appomattox County Public Schools. This panel provided valuable suggestions that allowed the True Dimension team to adjust the functionality of the software. This panel also gave advice on the sale of the software, allowing the company to adjust the business model.

Longitudinal analytics are very popular in modern K12 environments. Many school districts and state boards of education are putting out RFPs for data gathering and data analysis tools. The Ed-tech market totaled \$8.38 billion in the 2012-13 academic year, the most recent year the *Education Technology Industry Network* has such information available.

There are several companies that offer aspects of True Dimension's software. What makes True Dimension unique is the none of the company's competitors pair longitudinal data with predictive machine learning technology. Knewton Education offers adaptive courses based off of a student's prior academic performance. They are a relatively expensive software being used mainly in private institutions. Panorama Education offers social-emotional learning tools which provide schools with actionable classroom environment data. Panorama just received \$12 million in round C funding.

The Ed-Tech industry is growing at a rate of 11.9% per year. This high growth rate lowers the barrier to entry for True Dimension. The company plans to expand within the state of Virginia using Virginia Standards of Learning and the State sponsored *Project Graduation* grant. Due to the low barrier to entry, True Dimension will file a patent on the machine learning algorithm in order to create a barrier to entry for future companies trying to enter this space.

Once True Dimension has positive cash flow, expansion to other states which use common core will begin. There are nearly fifty-million public school students in the United States. With a 10% use rate, True Dimension's revenue would be nearly \$10,000,000 per year.

### *Marketing Plan*

True Dimension Education will not need a commercial store front as it offers a B2B software product. Sales will mainly be handled through company sales representatives. Currently, the founders will act as sales representatives. The company currently operates out of a local co-working start-up environment. This start-up accelerator, KuduroX, provides access to basic office supplies and high speed internet which allows the True Dimension team to manage marketing campaigns remotely.

While signing early adopters, the True Dimension team went around to local public and private schools to gain interest. While at the Skills USA State event, the True Dimension gained interest from an administrator at Fairfax County Schools, one of the largest in the nation. The team will continue to use these methods to sign more early adopters.

In March, True Dimension hired a local graphic designer to create the official logo as pictured below:



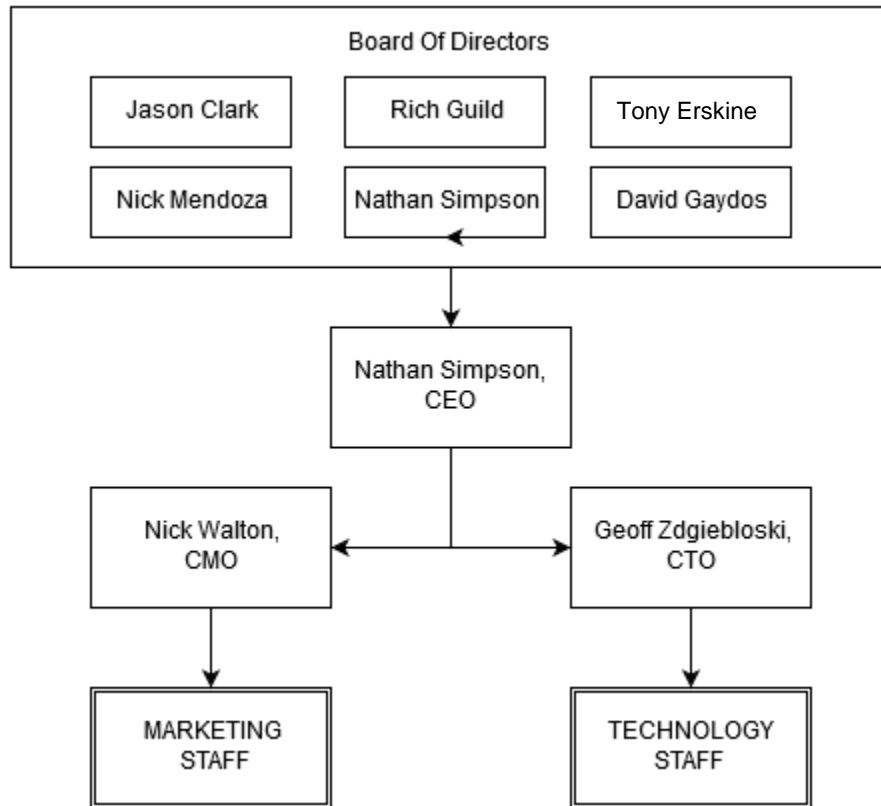
True Dimension's official slogan is:

*A revolutionary tool for the new classroom™*

## *Management and Operations Plan*

As mentioned previously, True Dimension operates out of a co-working office space provided by KuduroX.

Below is a leadership hierarchy.



Due to the nature of a C-Corp, True Dimension is required to have a board of directors and corporate officers. The company's board of directors currently consists of three co-founders and two equity investors, and one advisor. Nathan Simpson is the President of the corporation and Chairman of the Board.

True Dimension operates in the ever-changing education technology industry. The company plans to solidify its place in the industry by establishing a standard for predictive student analytics. True Dimension plans to expand its product offering each year to provide school districts value in more ways than its initial release software. This expansion plan ultimately consists of an analytical product suite which will allow schools to collect, manipulate, analyze, and segment student data in a way that has never been possible in the past.

## Financials

### Start-up Costs

<i>Item</i>	<i>Cost</i>	<i>Provider</i>
<i>Software Development</i>	<i>\$14,000</i>	<i>Sharp Top Software</i>
<i>Server (12 Months)</i>	<i>\$480</i>	<i>Digital Ocean</i>
<i>Cloud Flare (Security)</i>	<i>\$240</i>	<i>Cloud Flare</i>
<i>Provisional Patent</i>	<i>\$1,000</i>	<i>Parker Law</i>
<i>Incorporating</i>	<i>\$199</i>	<i>H. Evans Thomas</i>
<i>Marketing materials</i>	<i>\$400</i>	<i>Various</i>
<i>Total</i>	<i>\$17,319</i>	

*Current Start-up costs – Seed funding requirements.*

### Seed Round Funding

During the month of May, True Dimension began seeking seed funding for the launch of the company. The bulk of these funds would go directly to Sharp Top Software to develop to minimally viable software. By the end of May, the True Dimension team had successfully closed the funding round raising \$7,000 at a \$100,000 valuation.

### Monthly Operating Costs

With 25,000 students, True Dimension can be managed by the founders with very little outside, contracted help. At this level of sales, the company will operate out of a local co-working space. As noted in the cost of goods sold section, all hosting fees will be calculated into operating costs.

<i>Type of operating cost</i>	<i>Monthly Cost</i>
<i>Digital Ocean Hosting</i>	<i>\$99.00</i>
<i>Inbound Marketing</i>	<i>\$200.00</i>
<i>Software Improvements</i>	<i>\$500.00</i>
<i>PR, Blog, Social</i>	<i>\$200.00</i>
<i>Total operating costs</i>	<i>\$999.00</i>

*Tier One (25,000 students).*

### Pilot Year Sales Projections

Projected Monthly Income Statement		Projected Yearly Income Statement	
Units Sold	2,083	Units Sold	25,000
Selling Price Per Unit	\$2.00	Selling Price Per Unit	\$2.00
Total Sales	\$4,166	Total Sales	\$50,000
COGS per unit	\$0.00	COGS per unit	\$0.00
Total COGS	\$0.00	Total COGS	\$0.00
Gross Profit	\$4,166	Gross Profit	\$50,000
Fixed Costs	\$1,099	Fixed Costs	\$13,188
Variable Costs	\$0.00	Variable Costs	\$0.00
Total Operating Costs	\$1,099	Total Operating Costs	\$13,188
Profit Before Taxes	\$3,067	Profit Before Taxes	\$36,812
Estimated taxes @ 20%	\$766.75	Estimated taxes @ 25%	\$9,203
Net Profit	\$2,300.25	Net Profit	\$26,609

*Projected income with 25,000 Public School students.*

### Record Keeping System

True Dimension currently keeps all financial records in excel sheets available to all co-founders and the board of directors. The company is completely transparent with all finances to maintain a friendly and open work environment. Access to funds are restricted, with direct access only available with a purchase order signed by at least two members of the company. One debit card is issued to True Dimension Education. This card is kept in the safe at KuduroX and is only available when a purchase order is submitted and approved.

True Dimension has also built a relationship with a local accounting firm through the Young Entrepreneurs' Academy program. This accounting firm helps the company to prepare required investor disclosure and tax documents.



**Seed Round Investment Terms (Sale of Securities)**

Due to the nature of a C-Corp, True Dimension is required to issue securities in exchange for an equity investment. The company used the Securities and Exchange Commission Regulation D Rule 506 to raise funding. This rule allows corporations to raise funding from accredited investors. Accredited investors have either a net worth greater than \$1 Million or make over \$250,000 annually.

In this Regulation D (506) funding round, the True Dimension team raised \$7,000 from outside investors. This funding will allow True Dimension to fully develop the minimally viable software. The company plans to raise an additional \$100,000 in a Series A funding round after the launch of the minimally viable software.