PRISMPATH: AN INCLUSIVE MULTI-SENSORY PLATFORM FOR OVERHEAD COSTING EDUCATION

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ABSTRACT

PrismPath is a digital and hybrid educational innovation for teaching and learning overhead costing that provides an inclusive digital and hybrid learning experience based on Universal Design for Learning (UDL) principles. PrismPath offers a novel approach to teaching and learning overhead costing, utilizing color-coded diagrams, videos, interactive elements, and other digital tools to create a tangible and engaging learning experience. PrismPath employs a multi-sensory instructional model that combines visual, auditory, and kinesthetic methods to engage learners with diverse sensory and learning styles. PrismPath provides equal access to all users, regardless of their physical or cognitive abilities, ensuring that users with visual, hearing, or learning disabilities have the same opportunities as others. PrismPath is designed to provide full accessibility to its user base through several means, including high-contrast themes, screen reader-compatible content, structured digital documentation, and support for multiple languages. PrismPath adheres to all current international accessibility standards and is compatible for use worldwide. The platform is accessible from anywhere, anytime via a web-based interface and mobile applications compatible with any device. It allows users to clearly monitor their progress, with all data automatically synchronized across devices to ensure a seamless experience. In addition to its digital content, the PrismPath platform includes printable materials (such as flashcards) and physical tools (such as a cost-allocation board) to enhance learners; ability to apply concepts through hands-on learning. In terms of functionality, PrismPath offers role-specific, custom-designed paths for learners to follow along as they progress, pre-built templates and data analysis tools for educators to support instruction, and simulation-based training and certification options for working professionals. Ultimately, PrismPath adopts an integrated approach to inclusive education by combining technology and experiential learning to create a comprehensive ecosystem that enhances the learners; retention, engagement, and overall comprehension of overhead costing. Through a single platform that supports both education and

professional development, PrismPath offers a scalable model with the potential to significantly enhance the way costing education is delivered today.

KEYWORDS: Digital Accessibility, Inclusive Learning, Multi-Sensory Instruction, Overhead Costing Education, Universal Design for Learning (UDL).

PROBLEM AND OBJECTIVE

Traditional overhead accounting instruction has been problematic because of four critical reasons. The first reason is that the abstract concept of cost allocation creates difficulty in allowing students to see how costs are allocated, which leads to confusion and poor conceptual comprehension. The second reason is that most educational methods used to teach this subject matter (lectures, textbooks) are one-size-fits-all based on the learner's preferred method of learning (visual, auditory, kinesthetic), limiting each student's ability to learn effectively. The third reason is that most learning environments have limited accessibility for students with disabilities and other needs. This is evidenced by the fact that very few websites and platforms have features like screen reader compatibility or offer high-contrast interfaces. Finally, there is an apparent disparity between the theoretical understanding of overhead accounting and the actual application of that knowledge in a "real world" setting. It is evident that students experience significant difficulties when they attempt to apply their classroom knowledge to practical situations. The gap between theoretical knowledge and practical application is well documented, with studies showing that students often lack the ability to transfer accounting knowledge to real-world decision-making contexts without experiential or case-based learning approaches (Lawson et al., 2021).

DESIGN DESCRIPTION

PrismPath was designed using an understanding of four primary goals. The first goal is to make complicated overhead cost ideas easier to understand by using a colour coded structure. The second goal is to increase student interest in, and their ability to retain what they have learned from, PrismPath's multisensory education model which uses multiple senses (visual, auditory, tactile) to deliver educational content. The third goal of PrismPath is to be inclusive and available to people with different levels of abilities, and different ways of learning. The fourth goal of PrismPath is to develop a flexible, adaptable learning environment that can be used by students, teachers, or professionals within the industrial sector. Ultimately, the overall goal of PrismPath is to develop a more successful, and more enjoyable learning experience. Multisensory learning approaches that integrate visual, auditory, and tactile elements are associated with improved student engagement and long-term retention, particularly in technical and concept-heavy disciplines (Shams & Seitz, 2022). Furthermore, flexible and adaptive learning systems—especially those applicable across academic and professional contexts which have been found to enhance knowledge transfer and practical application, bridging the gap between education and industry needs (Bond et al., 2023).

NOVELTY AND UNIQUENESS

The use of colour coding in PrismPath's visualization system represents one of the first uses of an abstraction of abstract concepts. The combination of all three senses (visual, auditory, tactile) as well as the ability for students to learn through a variety of modalities are also significant advancements. PrismPath was designed using an inclusive design process that provides multiple accessibility options as well as translations in order to enable individuals who may have previously been excluded from financial literacy programs to participate. PrismPath is unique compared to other products on the market because

of its focus on providing students and professionals with an entire ecosystem where they can access educational materials, training programs, and career development resources. Research indicates that color-coded visualization techniques improve learners' ability to process abstract information by enhancing pattern recognition and reducing extraneous cognitive load, particularly in complex domains (Ozcelik et al., 2021). Moreover, multisensory and multimodal learning environments have been empirically linked to higher engagement levels and improved knowledge retention, as they activate multiple cognitive pathways simultaneously (Fiorella & Mayer, 2022). Inclusive design approaches are also strongly supported in current literature, with studies emphasizing that accessibility features such as multilingual support, adaptive interfaces, and assistive technology compatibility significantly increase participation and learning outcomes among diverse and underrepresented populations (Seale, 2022).

BENEFITS TO MANKIND

PrismPath has multiple positive impacts on individual, educational and social levels. On an individual learner's level, PrismPath aids in better understanding of the subject matter, improves student engagement and builds students' confidence when they are able to understand how a subject is related to their own life. On an educator's level, PrismPath saves teachers' time by providing them with pre-made lesson plans that can be easily incorporated into a curriculum. Additionally, as a tool, it helps improve the quality of instruction provided to students. On a professional level, PrismPath acts as a bridge from theory to practice by allowing practicing professionals to learn by simulating real-world scenarios. At a social level, PrismPath fosters inclusive education. Inclusive education allows all people whether physically or cognitively challenged -- to have equal access to education. Through this, PrismPath will contribute to the development of a more skilled and competitive workforce which ultimately leads to increased economic growth and development and the ability to innovate. Finally, PrismPath works towards meeting the world's education goals by promoting equitable and high-quality learning experiences for everyone.

COMMERCIAL POTENTIAL

PrismPath has demonstrated strong potential in its ability to be commercially viable in the very rapidly expanding education technology space. This is evident due to its capabilities of being able to be monetized by means of subscriptions that allow students continued access to new digital content. Institutional licenses also provide PrismPath with an opportunity to make money from universities, colleges and other training entities. Other areas of revenue for PrismPath will be through professional certification programs, workshops, and branded educational kits including flash cards, and teaching tools. PrismPath's digital-first approach allows it to keep operational costs lower than a traditional brick-and-mortar business model. As well, it has been shown that PrismPath's digital first approach has provided it with the capability to scale quickly and effectively across global markets. PrismPath's focus on inclusivity, innovation, and practicality are all attributes that have positioned the company to compete at a higher level. Studies indicate that subscription-based and platform-driven digital education services have become one of the most sustainable revenue models in the ed-tech sector due to recurring income streams and continuous content delivery (Kumar et al., 2021). Institutional adoption of digital learning platforms has also accelerated significantly, with universities increasingly investing in licensed educational technologies to enhance teaching effectiveness and scalability (Bond et al., 2023). Furthermore, research highlights that digital-first education companies benefit from lower marginal costs and higher scalability, enabling rapid expansion across geographic boundaries without proportional increases in operational expenses (HolonIQ, 2022).

CONCLUSION

In conclusion, PrismPath will meet significant needs in the area of education, by being cutting-edge, and accessible as well as a practical method to learn about overhead costing. By utilizing a colour coding system, multi-sensory methods, and hybrid design, it will help improve students' ability to understand, be involved with, and apply overhead costing concepts in a real-world setting. The focus on inclusivity and scale also ensure that many different types of users can benefit from the product while contributing to the greater good of education and the economy. As such, PrismPath represents a new way for education to develop into the future.

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