Developing a Web-Based Instructional Module on the Transition from Elementary to Middle School

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Abstract: Youth will experience numerous transitions throughout their lifetime as they venture towards adulthood. Students completing the final year of elementary school are set for one of their first major life changing events as the move on to middle school. Alongside the academic concerns they will face, these youths will experience issues that may affect their physical, emotional, moral, and social well being. Though there is an abundance of evidence-based academic literature, there currently lacks content designed for children. Technology’s importance and presence is intertwined with our everyday lives and the ability to learn can be simply had within the grasp of your fingertips. Current educational climate emphasizes effective technology usage that promotes a student’s ability to be responsible for their learning while changing the teacher’s role as an advisor, coach, or facilitator. Therefore, in order to better prepare these learners, a web-based instructional design project was designed and evaluated in attempt to provide information to these students based upon common concerns many students face during this transitional period. The independent online module can be found at http://patrickdevega.wix.com/upwego. John Keller’s ARCS Model (Attention, Relevance, Confidence, and Satisfaction) was employed throughout development. The module features a fictional story involving a group of friends navigating middle school while encountering problems like academic pressure and concerns with appearance. Learners gain strategies to assist characters and receive feedback through embedded assessments.

Introduction

The transition to adolescence is often described as a tumultuous time for youth. This period of early adolescence is seen as a pivotal stage of development marked with normative biological, social, and physical challenges (Rudolph, Lambert, Clark, & Kurlakowsky, 2001). Millions of elementary school students nationwide make the transition to middle school annually. These transitions involve more than just new surroundings, and also mark a significant direction towards these students becoming adults. As preteens, these youths will also experience a number of developmental changes that affect their physical, emotional, intellectual, social, and moral well-being. During this transition, these students face an increase in expected independence along with newer and more complex social relationships and situations (U.S. Department of Education Mentoring Research Center, 2008).
Furthermore, these students will have to navigate a complex schedule of rotating classes filled with more teachers that carry with them higher expectations. There may be difficulty with the adjustment for students coming from relatively smaller, more personalized elementary schools to departmentalized, and at times impersonal, middle schools. Sixth graders can expect an increase in academic pressure from parents, teachers, and themselves (Chung, Elias, Schneider, 1998). Over the next three years, these students will need to learn to continuously balance academic and social successes and failures while steering through the individual changes they will be faced with.

The purpose of this instructional design project is to develop and evaluate a web-based instructional module intended to assist with the transition from elementary to intermediate or middle school for 6th grade students at a public elementary school on Oahu.

**Literature Review**

*Transitions from Elementary to Middle School.*

As students leave the familiarity of elementary school, they are often met with feelings of anxiety and anticipation as they move on to middle school. Research has found that students awaiting this move worry about three critical aspects of change: logistical, social, and academic (Akos, 2002). Logistical changes include the worries of how things at the brand new school work. Concerns stem from a different bell schedule, finding classrooms on a new campus, and the number of instructors for each subject can raise the anxiety these children experience. Changes socially with peers and fellow classmates are compounded as they enter adolescence, a time where their budding social independence leads to pulling away from parents. Academics in middle school are also of concern to the transitioning youth. The uncertainty of middle school increases as the challenging classes and higher academic expectations are combined with the previously mentioned logistic and social changes.

During this stage of change, youth may experience increased rates of psychological symptoms and behaviors such as anxiety, depression, substance abuse, and antisocial conduct. These impairments in functioning during this critical stage of maturation may compromise a child’s achievement of cognitive and social milestones that act as building blocks for future growth. Identifying the determinants of adolescent adjustment is essential to understanding long-term developmental pathways and outcomes (Rudolph, et. al, 2001).

Student motivation and attitudes toward school tend to decline during the transition to middle school, as students deal with the physical, social, and cognitive transformations associated with early adolescence. Common concerns and opinions expressed by pre-transitional students include getting to class on time, finding lockers, dealing with crowded hallways, and generally getting lost. Further concerns include their courses being more difficult and fear of receiving lower or failing grades. Others are afraid they will be picked on, teased, or even victimized by older students (Anderson, Jacobs, Schramm, & Splittgerber, 2000).
ARCS Model of Motivational Design.

John Keller designed the ARCS Model of Motivational Design. This motivational model is based upon the idea that there are four key elements in the learning process, which can encourage and sustain a learner’s effort, performance, confidence, and satisfaction (Keller, 2010). These elements combined form the ARCS acronym, which stands for Attention, Relevance, Confidence and Satisfaction. Attention refers to the interest displayed by the learner in taking in the content being delivered. Getting the attention of participants is the most important aspect of the ARCS model as the learner will be more willing to invest their time and efforts into the educational content. Keller explains relevance as the need for the content to have meaning and hold value for the learner. The third component of the ARCS model concerns a learner’s confidence. Developing learning objectives builds confidence because they know what is expected of them. The final cog looks at a participant’s satisfaction in learning. The learner must obtain some sort of satisfaction or reward from the learning experience. This model is touted for its ability to be a problem-solving approach to learning, thus being a popular choice for instructional designers to use to develop engaging learning activities (Clark, 2015).

Instructional Design.

According to a 2007 study by Reiser and Dempsey, instructional design can be described as “a systematic process that is employed to develop education and training programs in a consistent and reliable fashion.” It can also be defined as the framework for developing modules or lessons that aim to increase and enhance the possibilities of learning. Instructional design also intends to improve efficiency, effectiveness, and appeal of the acquisition of knowledge and skill. Additionally, instructional design strives for the engagement of learners so they learn at a quicker rate and gain a deeper level of understanding.

Project Design and Development

After identifying the need to address my students’ transition to middle school, the development of a learning module seemed like the logical course of action. In the past, the concerns about transitioning to middle school were done informally with just a number of class lectures. In order to better engage the students, involve them more in their own learning, and make a meaningful learning experience, the designer creates an interactive website.

Once an instructional design project was selected, the platform in which to present information on the topic was next. An electronic book (e-book) was originally chosen because of the familiarity and perceived ease of use for the learner. Hoping to offer something different for the learners, a website was chosen as it allowed for interactive and graphic features. Brief research of examples led to the decision of developing the ID project using Wix, a cloud-based website development platform. Wix was chosen because it is free and fairly simple as a drag-and-drop tool to build websites. Presenting the module through a website would allow participants the ability to access the module at anytime. The ability to select from an assortment of templates allowed the module to come together fairly quickly. Through a number of discussions with critical peers, the layout of content was finalized early on. The instructional module can be found at http://patrickdevega.wix.com/upwego. As shown in Figure 1, this was designed with
the intention of enhancing user satisfaction by improving the usability, accessibility, and pleasure provided in the interaction between the user and the module.

![Homepage of the website.](image)

**Figure 1.** Homepage of the website.

Having the students identify with the fictional characters was important so Avachara, a free web-based avatar maker, was used to design the characters. The characters in the online module are diverse in gender and ethnicity, similar to the diversity found with the intended audience. Figure 2 gives an introduction of the storyline, the students moving from Belltown Elementary to Stumptown Middle School.
Figure 2. Introduction page of story and characters.

A user can click on a character’s picture to view a brief biography as seen in Figure 3 and Figure 4. Students form an idea of how the characters begin to form a group of friends with each back story.

**Figure 3. Biography of Hector, a main character.**

Hector McKinley

Hector is a 11 year old who absolutely loves action sports like BMX and skateboarding. If he isn't in school, he’s usually practicing tricks at the local skate park. Hector looks forward to middle school but is worried he may be bullied because he’s shorter than his peers. Always described as a “good-guy” by his closest friends, Hector always has their back by being supportive and loyal. He doesn't have much interest in school because he finds it boring, so he often daydreams of when he’ll land his next big trick.

**Figure 4. Biography of Jen, a main character.**

Jen Martinez

Jen is also an 11 year old middle school student at Stumptown Middle School. Her family recently moved to town and transferred schools at the end of last year. Jen is often described as shy and quiet and became friends with the group before the start of summer. She’s unsure of where she stands with the group as Hector, Richie, and Wes have been friends since kindergarten. Jen didn’t have many friends at her old school and was picked on for being overweight. At this new school, Jen is worried what others will think of her. She isn’t happy with her looks and appearance and wishes she was more model-like, like her older sister Becky.

*Up We Go!* is a scenario-based module designed using John Keller’s ARCS Model of Motivational Design. As shown in Figure 5 and Figure 6, prior to implementation, participants of this study will take an assessment to establish baseline data. After completion, another assessment was given. An attitudinal survey was designed to solicit feedback from the module. Presenting participants with information, strategies, and tips concerning the transition to middle school is the desired learning outcome. At the completion of the project, learners will know tips and strategies that address and offer solutions to common concerns. These students will also know to apply their knowledge and problem-solving skills to evaluate real life scenarios. The elements of Keller’s model were addressed through the systematic design process of the online module. Attention of the participants is achieved through the use of an online
module as a learning tool. The transition from an elementary to middle school is highly relevant for these participants as they enter the last semester of 6th grade.

Figure 5. Attitudinal survey given prior to implementation.

Figure 6. Webpage of the attitudinal surveys and tests.
As shown in Figure 7, the module follows a main character’s journey through his first days of middle school as he faces typical situations that a new student would encounter. The character interacts with a supporting cast that offers advice, tips, and strategies for navigating through middle school issues.

![Figure 7. The scenario has a character navigating a new campus.](image)

Numerous concerns of new middle school students are addressed in this online module. These concerns include navigating a brand-new campus, the stresses of a changing physical appearance, and dealing with increased academic pressures. Also included within the module are student concerns with social relationships including peer pressure and “fitting-in”. Figure 8 shows the tips and strategies page for dealing with stressors involving physical appearance.
Embedded questions are included right after the tips and strategies page. This is intended to check for understanding before moving on to the next scenario. Figure 9 shows an example of the embedded questions that follow scenarios and strategies.

As the learners progress through the module, the interest and motivation to properly steer the online characters through the scenarios will increase. At the conclusion of the fifth and final
scenario, the students are greeted with a page congratulating them with their efforts as seen in Figure 10.

![Congratulations!](image)

**Figure 10.** Final page of instructional module.

## Conclusion

Instructional Design is a continuous process with changes being made to ensure the product best serves the intended user. Therefore, next steps in this project include gathering data from a targeted audience and making needed modifications. Feedback from peers sees a future version of this module including audio and video features to further engage and meet the diverse learning needs of the audience.

The entire process of designing the online instructional module was challenging yet rewarding. Being a novice in using online tools like websites to facilitate and present curriculum, the researcher found the process worthwhile in identifying new ways to incorporate technology appropriately into the learning environment. *Up We Go!* aims to be a relevant tool for educators to facilitate and ease the transition for 6th grade students as they move onto middle and intermediate school. In addition, this module intends to be a valuable resource for students to refer to as they move into their new learning environment next year, addressing their common concerns in hopes of increasing their confidence through the scenarios and information presented in the module.

## References


