

Innovation and Entrepreneurship Attitudinal Study with Elementary Students

Dustin Bailey

Hanover College, USA

Paul O'Daniel

Hanover College, USA

Abstract: Academic literature and extensive studies indicate that a small fraction of incoming first-year college or university students have a foundational understanding or appreciation of entrepreneurship. Even fewer have the disposition or inclination to pursue an entrepreneurial path. The purpose of this proposed study is to measure the level of innovative and entrepreneurial (I&E) attitudes in elementary students and assess how nurturing activities over time affect those same students' I&E mindsets. Students will be in the fifth and eighth grades in the public-school systems in Jefferson County, Indiana. The study will use quantitative descriptive and explanation research design and will utilize a control group. This study will investigate the correlation of elementary I&E mindset growth and age appropriate I&E leaning activities in order to actively promote and nurture future entrepreneurial intentionality. Presenters will discuss hypotheses related to how nurturing activities over time affect those students' attitudes towards innovation and entrepreneurial thought. Attendees will have an opportunity to engage with presenters.

Keywords: Innovation, Entrepreneurship, Elementary, Attitudinal, Research

Introduction

Policymakers in the United States see, and fully understand, the importance of Innovation and Entrepreneurship (I&E) as a means of growing GDP and maintaining global economic competitiveness. The United States Government has invested nearly a trillion dollars since 2018 for research and development in private I&E initiatives. (Kelly & McCabe, 2021). However, 95% of that research investment is undertaken on behalf of the largest corporations. However, the most significant breakthroughs that have had the greatest impact on the economy and technological progress have come at the hands of small, newly founded ventures, individual inventors, and entrepreneurs, not by major corporations (Baumol, 2004).

Academic literature and extensive studies indicated that only a tiny fraction of incoming first-year college or

university students have a foundational understanding or appreciation of entrepreneurship. Even fewer have the disposition or inclination to pursue an entrepreneurial path (Bliemel, 2014). Recent research has shown that the United States lags behind most industrialized countries for student entrepreneurship intentionality. The Guess Survey shows student entrepreneurship intentionality across 54 countries places the United States at 43rd. The US has work to do to maintain its status as a global economic power. (Sieger et al., 2019) It is incumbent upon K-12 to introduce, nurture and promote I&E mindsets and understanding in our youth so that entrepreneurial interests and intentionality can continue to grow.

Scope of the Study

Participants will be selected based on their responses to a short questionnaire designed to identify initial indicators of both interest and disposition towards innovation and entrepreneurship. Some sample probing questions would include:

- I like to find ways to help others.
- I like challenging activities that solve big problems
- I like to be a leader.
- I like to push a group to be their best.
- I would like to own my own business.
- I would like to be my own boss.
- I want to change the world.

Additional probing questions would be intermixed to allow for participant freedom in association. Two groups of approximately twenty participants each will be formed. Students in grades 5 and 8 are highlighted, primarily because those grade levels typically include transition-related activities that allow students to begin thinking about their future endeavors. The authors will serve as principal investigators, securing Institutional Review Board approval before implementing the questionnaire selection instrument. The authors will have established relationships with the selected school locations in Jefferson County, Indiana. Students will be invited to participate in the I & E group once the questionnaire responses are screened for a predisposition to Innovation and Entrepreneurship; students will be invited to participate in the I & E group. Prior to group orientation, a parent/guardian permission form will be sent home. The authors will collaborate with the local school district to host the student groups on the Hanover College campus. These special activities will occur around and in accordance with the school calendar and schedule parameters, functioning like an extracurricular activity.

Group Interaction and Initial Discussion

Once groups are vetted, the authors will begin hosting I&E sessions that will focus on curriculum that is both age-appropriate and designed to feed student interest in I and E. Within the scope of this curriculum, students will be given access to Project-based Learning opportunities that mimic an I&E environment. Not only will this serve to orient students into what it is like to be innovative but highlight how entrepreneurial activities can be

fun and engaging.

Student participation will be evaluated by both surveys and interaction tools, both formatively showing the depth of impact the program may have on an I and E mindset. As the program expands, the authors will incorporate new and innovative designs based on the pedagogical data.

Potential Next Steps

The authors hope to eventually expand their research to include multiple school districts and the addition of high school students. This continued research hopes to shed light on the necessary processes and teaching techniques to nurture long-term student entrepreneurial inclination. The ultimate goal is to increase I&E-focused university study and assist in driving more new business startups in Indiana.

I&E concepts are messy, nonlinear, and filled with uncertainty. A student's fear of failure is fatal to successful I&E outcomes. Therefore, it is necessary first to introduce I&E mindsets, design thinking, and open creativity early in an elementary student's academic career, all wrapped around the tenacity to question, explore and discover. Fruitful, long-term investment in I&E education requires introducing and nurturing design thinking and entrepreneurial mindsets to teachers and students in primary and secondary schools.

There is little academic literature or research focused on I&E education at the elementary or high school level. It should come as no surprise that our present-day digital global economy has created unique real-world challenges, demanding distinct problem-solving skillsets and novel ways of thinking (Cachia et al., 2010; Hassi, 2016). The K-12 educators of tomorrow must be equipped with the foundations of entrepreneurial teaching methods and steeped in innovation-oriented mindsets to develop the thoughtful, creative, and entrepreneurially centered university students of the future, not to mention productive citizens of the world (Cachia et al., 2010; Komarkova et al., 2015).

There are over 1,800 colleges and universities in the United States that offer Education Majors and teaching certifications. Higher Education offers a natural springboard to introduce I&E concepts and principles to future elementary and high school teachers and students. There is no clarion call to completely re-write or re-develop elementary and high school curricula from the ground up in order to seed valuable I&E concepts. Instead, integrating design-thinking, co-creativity, and collaborative concepts into current cross-disciplinary curricula offers a solid beginning (Androutsos & Brinia, 2019; Hassi, 2016).

Conclusion

University Schools of Education can and should develop local after-school, age-appropriate programming for young students to introduce and promote I&E concepts. Entrepreneurially oriented activities can foster future I&E intentionality and provide invaluable exposure to higher education paths for elementary and high school

learners. The successful entrepreneurs of tomorrow are grade school students today. True I&E cannot be relegated to prescriptive, adult-only training. Entrepreneurship is a mindset, a holistic way to view the world, and can only be fully leveraged through life-long learning. Much work, investment, and research must be done in K-12 I&E development (Hassi, 2016). This ground is fertile for the substantial introduction of the concepts of innovation, co-creation, open collaboration, design thinking, and entrepreneurship to our youth so that future entrepreneurial inclinations can ultimately take root (Aparicio et al., 2020). Life-long I&E education is relatively meaningless if it does not have the opportunity to result in value creation. “Entrepreneurs innovate. Innovation is the specific instrument of entrepreneurship. It is the act that endows resources with a new capacity to create wealth. Innovation, indeed, creates a resource” (Drucker, 1993, pg. 30). I&E is a lifelong learning endeavor.

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